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Editorial.

A HEALTH SERVICE FOR WALES.

AN ambitious scheme for a health service has been drawn up by the Welsh Consultative Council of the Ministry of Health, and is presented to Parliament in the form of a second report. The members of the Council are to be congratulated upon their boldness in suggesting health reforms at a time when most public bodies, from Parliament downwards, are disposed to regard more critically a fourpenny rate spent upon health services than a four shilling rate spent upon roads and education. Their recommendations, moreover,

are remarkable for the courageous way in which obvious defects and deficiencies in the present service are dealt with. In fact, the Council has been over courageous, and has made recommendations which are not likely to be adopted until other more obvious and less drastic methods have been given a trial.

The report is unquestionably the result of a most thorough investigation into the health problems of Wales, and, as these problems do not appear to differ in any important particular from those in England, it is welcome as a valuable national guide on the subject. In Wales, as in England, it is notorious that health services have been for several decades administered by competing and overlapping authorities which have, on the whole, done remarkably well in the past, but which have now reached a stage of development in which any further progress on the old lines would be too obviously wasteful to be entertained seriously. The only reason why Wales appears to need special consideration and separate treatment is that, except for Glamorgan and Monmouth, the county units are, in respect of population and assessable value, exceedingly small as compared with the county units in England. A judicious combination of county areas would, however, remedy this defect without the formation of a new "Government department." The proposed "Welsh National Council of Health" would deal with too large an area for it to be considered a local body, and it would possibly be found in practice to be just as expensive a failure as all "Government departments" are when they attempt to control administrative and executive details in localities.

Our chief criticism of the form of local government proposed in the scheme is the fact that a similar proposal for England is unthinkable, and that it would be far better for the

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Ministry of Health to evolve some plan of co-ordination and simplification of health services which could be applied uniformly over England and Wales alike. The main reason for the creation of the Ministry was the need for such a scheme, and its production is overdue.

When the report is analysed, however, it is clear that the creation of a Welsh National Council of Health is by no means indispensable for the carrying out of most of the suggestions. The report contains a mass of convincing material, as well as proposals with which every experienced administrative officer will be in general agreement. The need for the amalgamation of the various local medical services, improvement of existing means of dealing with the aged and infirm, amalgamation of existing small pox and fever hospitals, and the abolition of the medical side of poor law administration has been widely recognised for twenty years or more, and such reforms could be carried out without any increase in total expenditure by a rearrangement of areas and authorities.

CHARGES AT MUNICIPAL CLINICS.

The wave of alleged economy has caused many public bodies to consider the question of making some charge for treatment at their respective maternity centres, school clinics, etc., and it appears to be forgotten that this experiment has already been made in several localities with always the same result, *i.e.*, the fees received have been disappointingly small and the usefulness of the clinics has practically disappeared.

The essential reason for the existence of public clinics is that they may be regarded as *preventive measures for the protection and improvement of the public health*, and if this is to be done there must be no obstacle to attendance on the part of the public. Most essential of all is the obvious fact that poverty and lack of provision for illness must be no bar to treatment: if treatment is to be part of the public health machinery it should be open and free to all.

In a report on this subject to his Council Dr. G. F. Buchan, the Medical Officer of Health for Willesden, endeavours with some

ingenuity to avoid the obvious result that if charges are made there will certainly be an increase in the number of people needing treatment and not getting it, and also a number who will not appear at the clinics until they are really ill. The principle he applies is the method of insurance or registration whereby an annual payment of half-a-crown will secure for mothers and children a great variety of out-patient treatment, while a scale of moderate charges will be applied to in-patient benefits. The report outlines an interesting experiment and anticipates an income of £2,362, a sum which is arrived at by assuming that on account of the charges the number of persons attending the clinics will diminish only by 25 per cent.

The report refers to many difficulties that are inevitably introduced with any system of payment for such services, and so the Willesden Council will not go blindly into the experiment, but previous experience has shewn pretty conclusively that public health services of this description are organised most effectively and with greatest economy by keeping the doors open to all comers without any question of fee. We arrived at this solution in connection with elementary education many years ago and there seems every reason to believe that the principle will be equally sound when applied to health.

THE "ROTA" MUDDLE.

In spite of the proved impossibility of success, the suggestion for continuous public work to be carried out by a rota of private practitioners crops up again and again. Fortunately most public bodies are capable of disposing promptly of such unbusiness-like proposals, and there is an almost unanimous preference for the whole-time officer on the grounds of efficiency and economy. Apparently Hammer-smith Borough Council is one of the exceptions, and application was made to the Ministry of Health for approval of a scheme involving the medical supervision of the Park-side Maternity Home by a rota of doctors. The Ministry has declined to sanction such an arrangement, and has expressed the opinion that the general supervision of a maternity

home should be in the hands of one officer, and that the appointment of an assistant medical officer of health, whose duties would include the supervision of the home, would be the economical way to secure the required services.

The general opinion of the health service of the country is undoubtedly on the side of the Ministry in this matter. Part-time services by private practitioners are always expensive, and at the best are difficult to organise and control, but the suggestion that there should be a constantly changing head of a public institution is one that few public bodies would entertain for a moment.

THE DENTAL OFFICERS' GROUP.

On the Monthly Agenda Paper will be found the announcement of the first general meeting of the Dental Officers' Group recently formed within the Society of Medical Officers of Health. Very few Health and School Medical Departments are now without dental officers, and it was felt that a group in connection with public health dentistry was a necessary complement to the other groups of the society. The proposal was brought before the School Dentists' Society, a body which has accomplished an enormous amount of pioneer work since its foundation in 1898, and was very favourably received. Mr. William Fisk (President), Mr. Sidney Spokes and Mr. R. Denison Pedley (Ex-Presidents), original founders of the S.D.S., generously supported the proposal that their society should form the nucleus of the new group, and the whole body of members have since been duly elected as associates of the Society of Medical Officers of Health. The new group will have Mr. Fisk for its first President and Mr. Rupert H. Cumine as Hon. Treasurer, in which capacity the latter gave most loyal service to the S.D.S. for many years. The Hon. Secretary of the group will be Mr. Grantley Smith, municipal dental officer for Bermondsey. The group starts with a membership of 162, but it should be largely increased as its existence becomes known. At present it consists almost exclusively of school dental officers, but it is hoped to make it

thoroughly comprehensive of the whole dental service, including Naval and Military dentists, and dental officers engaged in tuberculosis, maternity and child welfare and other departments of public health work. Everything points to a great future for the group, and we hope that many members of the society will be present to hear the inaugural address by Lt.-Col. F. E. Fremantle on October 20th. The formation of the group was one of the most important events in Col. Fremantle's year of office as President, and it is fitting that he should be responsible for the launching ceremony.

FOOD POISONING INQUIRIES.

Fuller investigations are to be made by the Ministry of Health into the conditions which give rise to food poisoning. Medical officers of health throughout the country have been circularised urging them to make the fullest use of certain new arrangements that have been made for bacteriological examination in cases of food poisoning in their districts. Investigation is to be made by medical officers of the Ministry, and the bacteriological work is to be concentrated in the Pathological Department of the University of Bristol under Dr. W. G. Savage. The inquiry will be under the direction of Dr. MacFadden, of the Food Section of the Ministry, and the Medical Research Council has appointed Mr. Bruce White to assist in the work.

CANCER INCIDENCE.

The medical officer of health for Edinburgh, Dr. Maxwell Williamson, who has formerly called attention to this increase, returns to the subject in his newly published report for 1920. He says that the latest figures of cancer mortality are the highest ever recorded in Edinburgh. During the last twenty-three years the number of deaths in Edinburgh due to this disease has increased from 267 to nearly double this figure—471. All the deaths due to tuberculosis—including lungs, bones, bowels, etc.—only amounted to 417 deaths.

Cancer appears to be unaffected by environment, and is actually found, so far, at any rate, as Edinburgh is concerned, to be more frequent

in better-class districts than in slums. Its commonest site seems to be the bowel, which, according to Dr. Williamson, may suggest some influence exercised by present-day habits of feeding.

SHELL FISH AND ENTERIC.

Dr. J. T. C. Nash continues his anti-cockle campaign in his annual report for the County of Norfolk, and claims that one of the main factors in the marked and continued reduction in the incidence of enteric fever in England during the present century has been the persistent warfare on boiled cockles from polluted layings which he initiated when he was M.O.H. for Southend. It will be remembered that Dr. Nash demonstrated the inadequacy of the "boiling" process to which the cockles were subjected in order to kill them, and that as a result of improvement in the layings and in the boiling the incidence of enteric in Southend and also in London and other towns to which the cockles were sent fell rapidly. Other sources of the disease suggested by Dr. Nash included small fish caught near sewers, the contamination of other fish on the same stall as infected shell-fish, and the fouling of cooks' hands in gutting fish. Attention to food pollution has undoubtedly played an important part in the decrease in enteric fever.

With great regret we record the death of Dr. Arthur King, medical officer of health for the Watford urban district. For the last twelve months he had been in failing health, and at the end of May he was obliged to give up his work. Dr. King was appointed part-time medical officer of health in 1900 and he devoted such energy to his duties that in 1917 he was invited to become a whole-time official. Since his death the district council have placed on record their appreciation of the valuable services he rendered to the district. A memorial service, largely attended, was held at Watford parish church, and after cremation of the remains at Golders Green the ashes were conveyed to Norwich for interment in the family vault.

Dr. M. C. R. GRAHAME has been appointed deputy medical officer of health and tuberculosis officer for Burnley at a salary of £650, rising to £750 per annum.

SOCIETY OF MEDICAL OFFICERS OF HEALTH. NOTICES.

With this issue of "Public Health" every Fellow, Member or Associate of the Society should receive the *Roll of Members for 1921-22*.

Great care has been taken in revising the Roll, but it can hardly be expected that no mistakes have been perpetrated. Members have only themselves to blame when they fail to notify the Executive Secretary of change of address or appointments, or when they notify one and not the other. Mistakes for which the head office is responsible will no doubt be regarded with lenience in view of the gratifying length of the Roll.

A less agreeable accompaniment of this issue is the annual notice regarding *Subscriptions*. Fellows, Members and Associates are requested to note carefully the scale of subscriptions, so that each may send a cheque in accordance with his or her category. In these days of expensive printing and postage, members can help the Society by prompt remittance of their subscriptions, thus avoiding the necessity for further notice.

The *Annual Dinner* of the Society will be held at the Café Royal, Regent Street, W., on Friday, October 21st, at 7.30 p.m. 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 remittance of 12/6 for each ticket should be sent with applications before October 14th. After that date the cost of tickets will be 15s. each. Amongst those who have already accepted invitations are the Minister of Health (Sir A. Mond), the Attorney-General (Sir Gordon Hewart), the Bishop of London, Viscount Burnham, Sir Aston Webb, P.R.A., Sir Norman Moore, P.R.C.P., Sir Anthony Bowlby, P.R.C.S., Sir George Newman, and Sir Philip Magnus, M.P. The accommodation at the Café Royal is limited so that tickets must be allotted in order of application.

It is hoped that the enrolment of new members will be vigorously pressed during the new Session, until it can be said that no member of the Public Health Service remains outside the Society. Those members intending to nominate friends and colleagues are asked to do so early, so that those elected may have the full benefit of the sessional programme.

THE WASSERMANN REACTION.

*A consideration of some findings from routine reactions done in the Pathological Department of the University of Manchester.**

BY
RAYMOND M. PEARCE
AND
GEORGE J. LANGLEY, M.D.LOND., M.R.C.P.

The continued appearance of articles in the medical press discussing the reliability of the Wassermann Reaction is considered a sufficient excuse for this paper.

The persistence with which results are stressed which are at variance with the clinical findings is perhaps the best compliment to the trustworthiness of the reaction, for such differences are rare, and the closer the co-operation between the clinical and pathological work, the rarer they become.

Much has been said before with regard to two factors of the greatest importance and these must again be referred to here:—

- (1) The technique employed. Nothing short of the full Wassermann method with all its controls is likely to yield trustworthy results.
- (2) Great care and attention to detail by all concerned, clinical and pathological workers alike, to ensure that the risk of confusion of specimens is reduced to a minimum.

An analysis was undertaken of the Wassermann reactions done in this Pathological Department, at the suggestion of Professor H. R. Dean, with a view to extracting such information as might be available.

These cases are unselected and come from almost all classes of the community, but a predominant number reach the laboratory from the Venereal Clinics. And further, it was found that repeat examinations, yielding two or more reactions on the same patient, at varying intervals, were done in one third of the cases.

The figures obtained yielded no information as to the incidence of disease beyond showing that a very large proportion belonged to the period of early adult life. No evidence was held by the Laboratory to show whether any individual case really was or was not a case of syphilis, for there are so many possible reasons for requesting a Wassermann reaction. Any combination of the following reasons may render a reaction desirable:—

- (1) to clinch the clinical diagnosis of syphilis;
- (2) to exclude syphilis as an aetiological factor;
- (3) to differentiate luetic from other closely resembling diseases;
- (4) to elucidate the aetiological possibilities of a lesion;
- (5) as a routine measure;
- (6) to determine cure;
- (7) to satisfy the syphilophobe.

From this it follows that a considerable proportion of cases were not syphilitic at all.

In spite of these limitations much that is of interest can be extracted from the data.

"And not by eastern windows only
When daylight comes, comes in the light.
In front the sun climbs slow, how slowly,
'But westward look, the land is bright."

A. H. Clough.

The following table includes 24,500 results which have been dealt with and give the main findings and percentages.

TABLE I.

	Negative.	Delayed lysis.	Positive 1 in 5.	Positive 1 in 40.	Totals.	Positive percent.
Male	7509	749	3004	3226	14488	42
Female	6393	572	1808	2676	8749	51.3
Married	4593	622	2270	3077	10562	49
Single	6087	682	2172	2841	11782	42.5
<i>Primary untreated:</i>						
14 days	222	17	42	66	347	31
28 days	264	28	110	280	682	57
Under 3 months	306	22	132	730	1190	73
Extragenital	48	6	23	88	165	67
Genital sores	896	110	331	723	2060	52
Secondary	894	108	441	1418	2861	65
Tertiary	521	32	176	510	1239	55
<i>Treatment:</i>						
Old	88	31	78	92	289	58
New	3548	657	2132	861	7198	41
Inadequate	1366	196	733	738	3033	48
None	4285	283	960	3189	8717	49
<i>Previous reactions:</i>						
Negative	2335	151	243	245	2974	83
Delayed lysis	296	56	85	24	461	11
Positive 1 in 5	927	342	930	129	2328	36
Positive 1 in 40	375	141	757	560	1833	27

Delayed lysis indicates a degree of fixation of complement less than complete but more by a considerable degree than is found in the control tubes, it therefore indicates a reaction less than one in five but yet showing some degree of fixation. These

*Paper read at Meeting of the N.W. Branch in Manchester on 8th April, 1921.

cases nearly always have a repeat examination done within short time.

Treatment. Some simple arbitrary line was necessary to enable an analysis of various treatments to be done. The following was therefore fixed not with any idea of expressing an opinion, but for analytical purpose only:—

Old—not less than two years continuous mercurial treatment;

New—not less than six injections of some recognised arsenical compound given intravenously;

Inadequate—all treatments falling short of the above.

Further analysis of these cases was made with a view to determining whether sex or age showed any definite variation in the severity of the disease, but no definite evidence was obtained beyond such as is included in the following small table.

TABLE II.

ALL REACTIONS.

Table showing percentage of positives.

	MALES.			FEMALES.	
	M.	S.		M.	S.
Under 10 ...	32	...	...	28	...
10 to 20 ...	44	...	...	45	51
20 to 30 ...	46	36	...	52	51
30 to 40 ...	45	41	...	52	54
40 to 50 ...	53	51	...	54	58
50 to 60 ...	50	42	...	55	10
60 to 70 ...	42	33	...	40	20

Males form 62% and females 38% of the total reactions.

42% of all males are positive.

51.3% of all females are positive.

49% of all married are positive.

42.5% of all single are positive; in the analysis of these figures.

Untreated primary genital sores.

These cases had received no treatment whatever.

The duration refers to the length of time the lesion had existed, and bears no relation to the incubation period of the disease.

A very large proportion of these cases were in men, and therefore the rise in the percentage of positives may be due to two factors:—

- (1) the progress of, and the increasing reaction to, the disease;
- (2) the weeding out, probably by recovery, of the nonspecific sore.

No separation of these groups was possible from the available evidence.

TABLE III.

UNTREATED PRIMARY VENEREAL SORES.

Two or less than 2 weeks duration.

Negative ...	197	
Delayed lysis ...	16	213 negative.
Positive 1 in 5 dil.	31	
Positive 1 in 40 „	49	80 positive.
Pos. 1/40=17%.		27% positive.

Over 2 weeks but under 4 weeks.

Negative ...	178	
Delayed lysis ...	25	203 negative.
Positive 1 in 5 dil.	80	
Positive 1 in 40 „	120	200 positive.
Pos. 1/40=30%.		50% positive.

Over 4 weeks but under 3 months.

Negative ...	179	
Delayed lysis ...	11	190 negative.
Positive 1 in 5 dil.	65	
Positive 1 in 40 „	283	348 positive.
Pos. 1/40=52%.		65% positive.

Unfortunately no figures were available to show the result of tests at various times in those cases in which the typical spirochaetae were actually found in the lesion.

The following figures, irrespective of the duration of the lesion or of the treatment received, are of clinical interest since the diagnosis was a clinical one. They suffer of course from the defects of the other figures quoted in that it is not possible to say whether the clinician used the results to corroborate a diagnosis or to exclude a possibility.

Primary venereal sore—

2111 cases ... 52% positive.

Secondary rash—

2897 cases ... 65% positive.

Tertiary lesions—

1242 cases ... 55% positive.

It is difficult to answer the question as to how far the drop in the percentage of positives in the tertiary stage may be due to the diagnostic difficulty between gumma and malignant growth, both of which are more likely to occur in the later decades of life.

This inherent defect in the records, the inability to know whether the diagnosis sent in with the specimen was the final clinical finding or a suspicion which required excluding, is less obvious when dealing with individual diseases; but at the same time even these results are known to include many exclusion reactions.

The following table of Congenital Syphilis is vitiated by the fact that many of these reactions were done as a routine upon the children in Maternity Homes. Also many were done on children whose parents were known to have positive Wassermann Reactions. The high percentage of positives in girls age 10-20 would suggest that they are more liable to suffer than boys.

	MALE.			FEMALE.	
	Pos.	Neg.		Pos.	Neg.
Under 10 ...	39	82	...	33	89
10 to 20 ...	20	30	...	47	22
20 to 30 ...	4	3	...	13	13
30 to 40 ...	1	1	...	2	2
40 to 50 ...	...	...	...	1	1
50 to 60 ...	...	...	...	...	1
Total	64	116		96	128

Extragenital Chancre.—154 of these cases afforded sufficient information for analysis. 122 were found to be lip chancres, the remainder being distributed as follows:—

Finger, 9; tongue and tonsil, each 3; hand, forearm, eyelid, face, nipple, each 2; neck, thigh, leg, nostril, and breast, each 1.

Occupations which might legitimately account for such infections were midwife and nurse two each, student, dentist and rescue-worker one each.

The large proportion of single females under thirty and of married men over thirty with lip chancres is to be noticed.

EXTRAGENITAL CHANCER.

Of 154 cases examined, 122 were found to be lip sores, i.e., 80%.

Lip cases on dissection yielded the following results:—

	MALES.				FEMALES.			
	Single.	Married.	Single.	Married.	Single.	Married.	Single.	Married.
Under 30	9	7	7	2	40	14	4	—
Over 30	2	3	15	6	2	—	7	2
Total	11	10	22	8	42	14	11	2

EXTRAGENITAL CHANCRES OTHER THAN LIP.

Under 30	2	2	1	—	5	1	4	—
Over 30	—	1	4	4	2	1	3	2
Total	2	3	5	4	7	2	7	2

PARTNER POSITIVE.

	MALES.			FEMALES.	
	Pos.	Neg.		Pos.	Neg.
10 to 20 ...	—	—	...	1	3
20 to 30 ...	18	13	...	27	32
30 to 40 ...	17	17	...	22	29
40 to 50 ...	3	2	...	8	9
50 to 60 ...	—	2	...	3	1
Over 60 ...	1	—	...	—	—
Totals	39	34		61	74

Males 53% positive, females 45% positive.

It is possible that the difference in percentage is due to the fact that men come under observation and are warned as to infectivity in the primary stage, whereas women are not usually seen and warned until the more infectious secondary stage.

PROVOCATIVE SALVARSAN.

Much has been written on this head.

The following figures have been extracted from the records. The nature of the lesions, stage of the disease, and degree of treatment received are alike unknown.

Previously negative remaining negative	50 cases
„ unknown „ „	12 „
„ negative becoming positive	...
1 in 5 ...	3 „
„ positive 1 in 5 remaining	...
positive 1 in 5 ...	5 „
„ positive 1 in 40 remaining	...
positive 1 in 40	2 „
„ unknown remaining positive	...
1 in 40 ...	4 „
Total	76 „

TONGUE CASES.

All cases of disease of the tongue which have been examined were extracted and analysed.

These cases were sent to the laboratory for various reasons which cannot easily be differentiated from the request forms. It is not always possible to tell when the reaction is required:

- (a) to complete the diagnosis of syphilis;
- (b) to exclude syphilis;
- (c) to decide a doubtful case.

In these lesions above all others we should perhaps expect a fall in the percentage of positives at the age of incidence of carcinoma; were it not that the value of the reaction in differentiating the gumma from the carcinoma has been a matter of grave doubt for some time past.

One hundred and forty five cases were dealt with and were divided into:—

Leucoplakia, 57 cases ... 74% positive
Gumma of Tongue, 88 cases 55% positive

The gumma cases have been further analysed and those cases known to present a lingual ulcer have also been collected in the following table.

The known frequency of carcinoma of tongue in the higher age decades of male life and the absence of any marked fall in the percentage of positives renders it tenable that one of the predisposing factors in lingual carcinoma is an antecedent syphilis, and it therefore follows that a Wassermann Reaction is of no help in differentiating gumma from carcinoma in this situation.

GUMMA OF TONGUE.

	MALE.		FEMALE.		ULCER	
	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.
Under 20	...	—	1	—	—	1
20 to 30	...	5	1	5	—	7
30 to 40	...	10	5	2	1	7
40 to 50	...	10	10	3	1	5
50 to 60	...	9	4	1	1	7
60 to 70	...	1	1	—	1	—
70 to 80	...	—	1	—	—	—
	35	23	12	4	26	19

DISEASES OF THE NERVOUS SYSTEM.

A large number of reactions were done on such cases. They have been divided into the following groups, in accordance with the diagnoses on the request forms.

CEREBRAL TUMOUR

Some of these cases were known to have single or double optic neuritis while in other cases the fundal condition was quite unknown.

Taken together reactions were done on 29 females, 6 being positive; 64 men, 18 being positive.

CEREBRAL TUMOUR.

	Neuritis Present.		Condition of diseases unknown.		MALE.		FEMALE.	
	MALE.	FEMALE.	MALE.	FEMALE.	MALE.	FEMALE.	MALE.	FEMALE.
	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.
Under 20	1	—	—	1	...	—	3	1
20 to 30	—	4	1	3	...	1	5	—
30 to 40	1	4	1	—	...	4	9	2
40 to 50	1	3	—	2	...	5	10	—
50 to 60	—	—	—	—	...	1	4	1
Over 60	2	1	—	—	...	2	3	—
Total	5	12	2	6	...	13	34	4

It would appear that syphilis is not so commonly a cause of cerebral tumour as physicians might have hoped.

Reactions were also done on cases diagnosed as Disseminated Sclerosis, and many request forms were also dealt with where the diagnosis as sent to the Laboratory was Paraplegia without any indication as to its causation.

The high proportion of positives in males in both groups is to be noticed, as forming part of the large number of males showing signs of central nervous disease who give a positive reaction. The male percentage as compared with the females is very striking.

Disseminated Sclerosis.

Reactions were done on 18 cases, 15 in males with 6 positives, and three in women all negative.

Paraplegia.

Reactions were done on 63 cases, 48 in men with 25 positive and 15 in women with 2 positive.

In both the above groups sixty per cent. of the cases were between 30 and 50 years of age.

HEMIPLEGIA.

Forty cases were examined.

The wide difference in age incidence in males and females is well shown.

Probably the earlier incidence in females is due to the well-known frequency of mitral stenosis.

Average age incidence, males, 52 years

" " " females, 42 "

Percentage positive, males ... 63%

" " " females ... 22%

HEMIPLEGIA.

	MALES.		FEMALES.	
	Pos.	Neg.	Pos.	Neg.
Under 20	...	—	—	2
20 to 30	...	—	—	2
30 to 40	...	6	2	3
40 to 50	...	2	3	—
50 to 60	...	4	2	—
60 to 70	...	2	1	—
Total	...	14	8	4

TABES DORSALIS.

Reactions in this disease were done on either the cerebrospinal fluid or the blood.

Only six reactions were found to have been done on the cerebrospinal fluid.

2 in males, between 40 and 50, both positive.

4 in females, ... only one positive.

The small number of reactions on the cerebrospinal fluid in this disease is possibly due to the fact

that the tabetic patient is usually satisfactorily diagnosed before he is confined to bed, and the blood examination results are so commonly positive that the patients are not subjected to the additional trouble of a thecal puncture.

The very high proportion of positive results at the commonest age of incidence is to be noted.

TABES DORSALIS.

	MALE.		FEMALE.	
	Pos.	Neg.	Pos.	Neg.
Under 20	...	—	1	—
20 to 30	...	2	2	1
30 to 40	...	14	17	3
40 to 50	...	26	7	7
50 to 60	...	13	16	2
Over 60	...	2	5	1
	57	48	14	12

GENERAL PARALYSIS OF THE INSANE.

Reactions were done on the blood in ten cases and on the cerebrospinal fluid in 79 cases.

These cases were sent for help in diagnosis and are therefore in no way comparable with the well-known statistics published by Mott and others.

These reactions are of interest for two reasons:—

(a) The disease is notoriously difficult of diagnosis in its early stages.

(b) It has a limited age incidence.

The highest proportion of positives is found at the age period known to be the elective one for the disease concerned.

Of the ten blood examinations nine were in males with five positive, all those in the 40-50 group being positive, the one female was negative.

Cerebrospinal fluid examinations.

	MALE.		FEMALE.	
	Pos.	Neg.	Pos.	Neg.
Under 20	...	—	1	—
20 to 30	...	—	2	—
30 to 40	...	8	13	2
40 to 50	...	15	12	2
50 to 60	...	5	7	1
Over 60	...	—	6	—
Total	...	28	41	5

DISEASES OF THE EYE.

Keratitis.

The high proportion of positive results in the known period of age incidence gives some index of the reliability of the reaction as compared with clinical knowledge acquired long before the test was introduced.

Iritis.

It is questionable how far the proportion of positive findings really represents the cases due to syphilis, since gonorrhoea is also a frequent cause of iritis and the reaction may be positive owing to double infection without the luetic taint being the cause of the iritis in question.

The small number of cases of retinitis and choroiditis sent for examination is probably due to the fact that these diagnoses are largely reserved for the consulting ophthalmologist who will rely to a considerable degree upon the character of the changes for the diagnosis of syphilis. So much is this the case that retinal changes have been used to check the reliability of Wassermann results.

KERATITIS.

	MALES.		FEMALES.	
	Pos.	Neg.	Pos.	Neg.
Under 10	...	4	1	5
10 to 20	...	8	1	14
20 to 30	...	6	1	5
30 to 40	...	—	1	2
40 to 50	...	—	1	1
50 to 60	...	—	2	—
Over 60	...	—	—	—
Total	...	18	7	27

IRITIS.

	MALES.		FEMALES.	
	Pos.	Neg.	Pos.	Neg.
Under 10	...	2	—	—
10 to 20	...	3	—	3
20 to 30	...	4	3	4
30 to 40	...	2	4	11
40 to 50	...	7	5	6
50 to 60	...	2	2	1
Over 60	...	1	—	—
Total	...	21	14	25

Optic Atrophy.—9 cases, 8 male and 1 female.

Males. 2 cases under 10, both negative

1 case age 32, positive

4 cases 40-50, 3 positive and one negative

1 case age 54, negative

Females. 1 case age 21, negative

Retinitis.—Eleven cases five positive.

7 males age 11-55, 3 positive, 4 negative

4 females age 30-50, 2 positive, 2 negative

Choroiditis.—17 cases, 6 positive.

11 males age 20-50, 5 positive, 6 negative

6 females, age 18-32, 1 positive, 5 negative.

TREATMENT.

A great deal of extracting under various heads has been done in an attempt to show the results of

modern treatment, and much difficulty was found in utilising the information available.

No cases could be extracted details of which were full enough to prove conclusively that cure had been effected, but the number of cases in which the reaction had changed from positive to negative in the course of treatment was considerable. Yet evidence was not wanting that a large proportion of of these cases relapsed, becoming positive again after a comparatively short time, especially where the reaction had been carried out immediately on completion of a course of treatment.

Although such cases as have been converted from positive to negative by treatment cannot be regarded as cured, yet they do show that the tendency is in the right direction, and from the clinical side there is no doubt of the benefit derived from this new method of cure.

Cases were investigated in which, the reaction having been previously found negative, was later found to be positive, and the results obtained were as follows:—

Previously negative, later found to be positive one in forty sixty cases in which full details were known, these had all received six or more intravenous injections and thirty-three were known to have been positive one in forty previously. Fifteen of them showed definite clinical relapse symptoms.

The average lapse of time between the negative and positive findings was nine months.

Previously negative later found to be positive one in five. Seventy-eight cases were found in which the information was full, all of them had been treated with six intravenous arsenical injections or more. Forty-eight cases had given a positive Wassermann reaction prior to treatment, while eleven cases showed definite clinical relapse. The average time interval between negative and positive was six months.

In neither class did any age or sex group dominate.

If the change of Wassermann reaction from positive to negative be taken as an index of cure, a presumption by no means justifiable but giving some indication of the benefit derived from treatment, then the results obtained from such cases as afforded the necessary evidence are:—

RESULTS OF TREATMENT.

Mercury for two or more years.

58% still positive and of these 32% pos. 1 in 40.

Six or more intravenous arsenical injections.

41% still positive and of these 12% pos. 1 in 40.

Either of the above but in less quantity.

48% still positive and of these 24% pos. 1 in 40.

No treatment at all.

49% still positive and of these 38% pos. 1 in 40.

CLINICALLY CURED CASES

(Dr. Gibson's Clinic).

Cases collected under this head are such as have had at least two negative Wassermann Reactions at periods not less than six months after the cessation of all treatment.

Here again, it is not intended to express any opinion as to when a clinical case should be regarded as cured, but merely to establish a hard-and-fast line along which analysis might be carried out.

Even in a large Clinic it was found that the number of cases which could be collected which satisfied the above conditions was very small.

Age.	MALE.		FEMALE.	
	Cured.	Uncured.	Cured.	Uncured.
20 to 30	27	17	28	11
30 to 40	31	13	17	6
40 to 60	12	2	4	3

There can be no doubt that the regularity of attendance of patients at a Clinic has an important bearing upon cure, and the following figures give some index of this:—

	Age.		Age.	
	20-30	30-40	20-30	30-40
Attended irregularly	15	15	2	4
Total cases	59	54	46	27

From the age groups concerned it would appear that the possession of a fixed abode has an important bearing on attendance.

In this connection it must be remembered that patients cannot be reminded to attend by a simple postcard as they can in ordinary Hospital work, owing to the pledge of secrecy under which this work is at present done.

Analysis was made wherever adequate information was available, of those cases originally found positive, but later becoming negative and where the treatment adopted was known.

These cases were grouped for purposes of investigation into the following:—

Inadequate	= less than 6 intravenous injections.
1 course	= over 6 but less than 10 "
2 course	= " 10 " " " 15 "
3 course	= " 15 " " " 20 "
4 course	= " 20 " " " 25 "

The time which elapsed between the last positive Wassermann reaction and the negative reaction averaged 3½ months.

It was found very difficult to obtain any idea of the proportion of those cases converted from positive to negative by adequate treatment, compared with those not so converted.

The question of treatment not being considered, the figures obtained were:—

Positive remaining positive 2376.

Positive becoming negative 1791.

Which would seem to be a very fair vindication of the treatment.

TABLE.

		MALE.	FEMALE.	AGE.
Inadequate	...	1	4	Under 20
1 course	...	21	30	"
2 "	...	4	11	"
3 "	...	—	—	"
4 "	...	—	1	"
Inadequate	...	32	21	20 to 30
1 course	...	245	189	"
2 "	...	53	69	"
3 "	...	4	10	"
4 "	...	—	2	"
Inadequate	...	24	13	30 to 40
1 course	...	142	90	"
2 "	...	40	20	"
3 "	...	9	8	"
4 "	...	1	—	"
Inadequate	...	11	—	40 to 50
1 course	...	48	31	"
2 "	...	14	7	"
3 "	...	1	3	"
4 "	...	4	—	"
Inadequate	...	—	—	50 to 60
1 course	...	7	2	"
2 "	...	2	1	"
3 "	...	1	—	"
4 "	...	—	—	"

Some index of facility or refractoriness to cure may be obtained perhaps by a calculation of the percentage of cases in each age group which yielded to only one course of treatment.

	MALE.	FEMALE.
Under 20	84	71
20 to 30	81	70
30 to 40	47	70
40 to 50	71	76

From which it would appear that the disease is rather more curable in men than women, but against this must be set off the fact which is undoubtedly true with regard to these figures

that treatment is instituted in men most frequently in the primary stage, whereas in women it is not usually undertaken till the secondary stage is well established. This is evidenced by the very small number of primary venereal sores in women found in the records.

The explanation of the low percentage of change in reaction in males age 30-40 may be that cases which occurred fifteen or more years ago had not the advantage of modern treatment and may now be again showing signs of activity, in which case it might be expected that they would not respond as readily to treatment as more recent infections. This group would also include a large proportion of parasyphilitic cases which have proved disappointing in the results obtained by intravenous treatment.

INDICES OF REACTION RELIABILITY.

From time to time articles appear in the medical journals enquiring into the reliability of the Wassermann Reaction.

Our statistics show that:—

- Of 2974 negative findings which were re-examined 2341 cases were again found to be negative. The 20% in which the reaction was found to be altered are accounted for by the acute progressive new infections where the reaction rises *pari passu* with the disease.
- The number and disposition of the positives found in diseases which are known to have relatively fixed age incidences, fall where they would be expected, *vide*

Tables - G.P.I. - Interstitial Keratitis - Hemiplegia.

- The rise in the percentage of positives in the primary untreated cases according to their duration.
- The large proportion of positives in cases showing a rash, probably the easiest period of the disease in which to make a correct diagnosis.

Very sincere thanks are due to all those who, having sent blood samples to the Laboratory, also filled in the many facts asked for on the request forms: Also to Dr. R. Gibson, of Salford Royal Hospital, for his great kindness in putting his excellent clinical records at our disposal for analysis. To Dr. M. Greenwood also for much criticism and advice with regard to the statistical work we would acknowledge our indebtedness.

CO-OPERATION BETWEEN THE CIVIL AND MILITARY SANITARY AUTHORITIES DURING A GRAVE NATIONAL EMERGENCY.*

BY
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In this short paper I propose first to enumerate a list of subjects or matters in which co-operation between the civil and military sanitary authorities is desirable or necessary, and secondly, to indicate or suggest measures that might be taken by the authorities concerned to establish a liaison on a sound working basis between the civil and military in public health matters.

We are all agreed on the importance and value of co-operation between the civil and military but many of us probably do not realise to what extent this co-operation was developed in the United Kingdom during the war, and what a far reaching influence it had in simplifying administrative problems in public health, which at first seemed so formidable.

I have put together a few notes and suggestions which may be useful in promoting discussion, and be of some help in speeding up arrangements for co-operation, if ever a grave state of national emergency should again arise.

It is obvious that co-operation will be simplified and much loss of time saved when both the military and civil sanitary authorities have a good working knowledge of each others administrative machinery and organization. When steps have been taken to ensure that the civil and military sanitary authorities are in practical communication with one another, not only at headquarters but in the outlying areas and districts of a command, then the task of safeguarding the health of the community is made easier and a higher standard of comfort will be possible for the troops through the practical application of local knowledge.

The following is a list of subjects which would require consideration:—

- (a) Inter-notification of infectious disease.
- (b) Water supplies, including extension of water mains.
- (c) Drainage and conservancy arrangements.
- (d) Control and accommodation of cases of infectious disease.

- (e) Disinfection of clothing and blankets.
- (f) Arrangements for ablution.
- (g) Destruction of refuse.
- (h) Supervision over the preparation of the food supplies for the Army.
- (i) The prevention of the spread of infectious disease.
- (j) The treatment of soldiers discharged from the Army on medical grounds.

The above list covers a very wide field but is capable of still further extension.

11. Measures to be taken to establish and develop co-operation.

One of the first steps would be to arrange a conference between representatives of the Ministry of Health and the War Office.

Bearing in mind that the secret of success in organization lies in decentralization, the main object of that conference would be:—

- (a) To bring the civil and military health organization and administrative machinery into practical communication throughout the length and breadth of the country.
- (b) To bring to the notice of all concerned the importance and value of co-ordinated action in anticipation of problems arising in public health matters; in other words to have the outlines of arrangements for dealing with these problems prepared and ready for action in case of necessity.

Other arrangements would include the appointment of liaison officers in London and in the provinces. A representative of the Ministry of Health should undoubtedly be attached to the staff of the Director General, Army Medical Service at the War Office, and an officer of the Director General's staff should be similarly attached to the Ministry of Health. The nature of the duties of these officers would have to be defined.

In the provinces, in addition to the various county and district medical officers of health, the Ministry of Health would allot medical inspectors as liaison officers to certain administrative areas or counties. These medical inspectors would visit counties where troops were quartered, and assist co-operation between military and local authorities in any matters affecting the public health or the health of the troops. These medical inspectors would be provided by the Ministry of Health with instructions regarding procedure to be followed when making inspections, a list of the more important

subjects to be dealt with, and details regarding the methods to be adopted in compiling reports for the information of the civil and military authorities, and to facilitate easy reference.

Other measures would include the issue of instructions by the Army Council to Commands, and circular letters from the Ministry of Health to the civil sanitary authorities, pointing out the objects, necessity for, and means to be adopted to ensure co-operation, and enjoining all concerned to do everything in their power to assist in the matter.

The circular letter which was issued by the L.G.B. early in the war to sanitary authorities, county councils, port sanitary authorities and medical officers of health included a precis of the duties of the medical officers of health under the Board's General Order of December, 1910, also a note on the duties of the medical officer of health of a sanitary district in which troops are quartered. These duties included bringing to the notice of the civil sanitary authorities any conditions in which sanitary services can be rendered by them to the military population—by extending watermains, opening or extending sewers, providing latrines and baths, hospital accommodation for infectious diseases, and arrangements for the systematic inspection of billets. Instructions were given regarding procedure, and stress was laid on the importance of liaison with the county medical officers of health with special reference to the question of accommodation for cases of infectious disease. The letter stated that "Existing civil resources should be made available to the greatest practical extent for infectious cases among troops, care being taken not to diminish the accommodation for the civil population unduly. The duties of the county medical officers of health were then outlined as follows: "This officer will be in consulting relation with the medical officers of health of each district within the administrative county, and he should also make inspections of places in military occupation, acting in close co-operation with the district medical officer of health. The county officer can also render great service to the military authorities by placing at their disposal information as to localities which, for public health reasons, are undesirable for military occupation, as to water supplies in the county, as to district and county boundaries and other matters. The assistance of county laboratories or laboratory arrangements

should also be given or obtained where practicable. A survey of the isolation hospital arrangements in the county would be particularly desirable, in other words, the county medical officer of health can be of the very greatest assistance, by compiling a schedule of medical intelligence for the mutual information of various sanitary authorities. The letter also includes a note on the establishment of billets and points out, that the assistance desired by the War Office on this matter is of great importance, and directs the medical officer of health to communicate with the Chief Constable or Superintendent of Police, and obtain information regarding impending billeting of troops. As the question of billeting is an important one from many points of view I will refer to it again in another part of this paper.

Reference was also made to visits of medical inspectors of the Board, and the memorandum concluded with a note regarding the adjustment of expenditure resulting from sanitary services, rendered.

At the end of the communication was attached a copy of a War Office letter to Commands, directing General Officers Commanding-in-Chief to communicate with medical officers of health of districts, before billets are arranged, and that these officials are to be consulted when camps are formed and maintained, and that their visits should be encouraged.

That complications should arise as regards co-operation in public health matters, is only to be expected during the confusion of a great national upheaval. During the late war difficulties occurred in bringing military and civil sanitary officers into touch, as military officers were unaware of the boundaries of the civil sanitary areas, and similarly medical officers of health lost much time in tracking down the military officers. These troubles could easily be overcome if the military and civil authorities were furnished with an outline of the civil and military sanitary organizations respectively.

These organizations differ very widely. In the Army there is a direct chain of control from the War Office to Commands, Military Districts, and formations, such as divisions, brigades, and units, down to the private soldier. There is no such chain of responsibility in the civil community, the outstanding feature in whose organization is the number of independent sanitary authorities in every county, each of which is entirely responsible for the health of the population in its own district.

* Paper read at Meeting of Naval, Military and Air Force Hygiene Group.

In order to avoid confusion and overlapping it is essential for a military command to realize the principles on which the civil sanitary organization of an area is based before this desirable co-operation can be put on a working basis and decentralized. Otherwise much time will be lost through referring matters to possibly a central civil authority who may have little immediate jurisdiction over the matter in question.

I would direct your attention to figure 1, which shows how a county may comprise a number of independent sanitary authorities which are not under the control of the county.

Latterly, there has been a tendency to transfer the centre of gravity as regards matters of public health, from the small urban and rural authorities, to the county council, who now control and administer measures in regard to tuberculosis, small-pox, venereal disease, maternity and child welfare, and the pollution of rivers.

It would undoubtedly be an advantage if the county authority would take up the question of co-operation with the troops in matters of public health, in addition to its other activities.

Figure 2 is a copy of a map of the County of Essex showing the unions, rural and urban districts, municipal and county boroughs and parishes. Similar maps are available for every county in the United Kingdom and they are on sale to the public.

These publications would be of great assistance to the military sanitary authority in a command, as they give a bird's eye view of the civil health organization in any given area. The key to the information that is contained in these maps is the Local Government Directory in which will be found a complete list of various civil bodies including urban, rural and port sanitary authorities, with the names and in some cases the addresses and telephone numbers of the officials.

You will notice that the County of Essex is divided up into 16 sub-areas (outlined in red), which are known as unions. The union is the outcome of the amalgamation of a number of parishes. It is not, however, a sanitary administrative area, but is purely for convenience in administering the poor law, the authority being the Board of Guardians. Within the area of the Union there may be one or more sanitary authorities.

Civil sanitary authorities are divided into Urban and Rural. Urban include County and Municipal

Boroughs and Urban districts, and examples of all can be seen on the map already referred to.

The civil sanitary authority or council consists of representatives of wards and parishes elected by the ratepayers.

For the sake of convenience the council distributes various duties to special committees, the chief of which, from our point of view, is the public health committee, whose principal adviser is the medical officer of health.

The clerk to the Council is the principal official, to whom all official communications should be addressed.

The other officials include a surveyor and inspectors of nuisances or sanitary inspectors.

In ordinary times the establishment of a liaison between the civil and military sanitary authorities in a Command, does not present much difficulty, but during a state of grave national emergency the military organization would expand and the number of local military authorities would multiply to such an extent that confusion and misunderstanding, due to mutual want of knowledge of each others organization, would be certain to occur, unless the higher authority in the Command took suitable measures to prevent the difficulties arising.

Early in the war local arrangements for billeting gave rise to much temporary embarrassment. Large numbers of troops often arrived after only an hour's notice, and consequently it was impracticable to utilise the information possessed by civil sanitary authorities.

Later on during the war a special organization was devised on the following lines:—

Each command was divided up into definite quartering areas, and military committees were appointed with permanent presidents to supervise, co-ordinate and be responsible for all arrangements in connection with the quartering of troops. These committees were not responsible for the provision of billets which was in the hands of the police. An R.E. officer and a sanitary officer were included as members of these committees.

The quartering areas were again sub-divided into sub-areas under the control of local or formation quartering committees with a field officer as president and an engineer officer, medical officer and from time to time the quartering officer of each unit concerned, as members. In this manner a very complete organization was developed for

dealing with the important question of accommodation for troops and, incidentally, opened up another avenue for facilitating co-operation between the civil and military authorities:

As an example of how a Command expanded during the late war: the number of troops in the Eastern Command increased from 22,000 in 1914 to 600,000 in 1915, the area, however, of the Command, which comprises 12 counties, remained unaltered.

There are no serious obstacles to the development of this co-operative movement because the object will be to the advantage and mutual benefit of the soldier and civilian alike.

My thanks are due to Dr. Thomas Carnwath, D.S.O., of the Ministry of Health, for many valuable suggestions which were a great help when compiling this paper.

THE RELATION OF THE LABORATORY TO PREVENTIVE MEDICINE.

BY

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One hundred years ago our notions about the pathology of disease were primitive, and fifty years ago we knew practically nothing about those minute plants and animals which cause many sicknesses. In these early days of bacteriology, all disease was attributed to the soil; and in that much abused word "sanitation" our fathers and grandfathers hoped to find the panacea for all their ills. "You know," writes Joseph Conrad, "you know the power of words. We pass through periods dominated by this or that word—it may be development, or it may be competition, or education, or purity, or efficiency, or even sanctity. It is the word of the time." In the days of Chadwick the word of the time was "sanitation," and we still feel the effects of it, although to-day our national parrot-cry happens to be "economy." We might well wish that the word science was in the mouths of the people; for in all the businesses where the voice of the scientist has been heard, economy and thrift have followed on his teaching. And I feel to-day that if the people marked and learned the words of their scientific advisors, the health, and therefore the

prosperity, of the community would be vastly bettered.

Although the word sanitation was on the popular tongue and held the popular ear, very little general interest has been taken by the people in the growths and triumphs of the science of bacteriology. True, the daily press sometimes contains marvellously ill-informed articles on micro-organisms; but the micro-organic and infective nature of almost all diseases is not generally appreciated. The triumphs of applied bacteriology are almost unknown to the people at large. They know that the Panama Canal exists, but they are ignorant of the work of the scientists who conquered disease and made possible the construction of the canal. They know little of our triumphs over malaria, over plague and cholera; they are dimly becoming aware that inoculation against certain diseases, such as the enteric fevers, is desirable if the nation is in a state of war. They have no idea of the value of the antitoxin treatment of diphtheria, of anthrax or of tetanus; nor of any of the other practical and life-saving results of bacteriologists.

I believe the first person to realise practically the every-day value of the laboratory to the health department was Dr. D. S. Davies, the Medical Officer of Health for Bristol. He really was the first to examine on a large scale swabs from the throats and noses of diphtheria contacts, and in this he did the pioneer work for us who regard this proceeding as a commonplace to-day. How much opposition and derision he encountered at the time I do not know; but no doubt in this, as in every other reform, people did not appreciate the value of his efforts. Of the use of wholesale swabbing, I had thought until last week that there could be no difference of opinion; but I have heard recently that some of the hospitals of the Metropolitan Asylums Board are discharging their diphtheria cases without previously taking swabs of them. My experience has taught me how dangerous a practice this may be; for a small percentage of cured cases of diphtheria for many weeks or months carries the organisms and harbours bacilli that are virulent to laboratory animals. While I am discussing this subject of swabbing, may I be allowed to make a personal note? It has always been my object in my borough to swab or cause to be swabbed every school child who is found to be ill, to swab all cases of sore throat, of purulent nasal

discharge and all cases of discharging ears. By this intensive swabbing some carriers are discovered and isolated, and the majority of cases of diphtheria are diagnosed early. In 1919 my case mortality from diphtheria was only 3 per cent., and last year, out of 114 cases, there were no deaths. This I attribute almost entirely to the swabbing, which renders possible an early diagnosis and therefore an early administration of antitoxin. Although in many ways our laboratories help us in the prevention of disease, they are perhaps most useful and used in two directions, namely, in the examining of swabs for the presence of the *B. Diphtheria* and in the detection of tubercle bacilli in natural and morbid products.

The position to-day in England and Wales regarding the relation of laboratories to the service of preventive medicine, is, broadly speaking, as follows:—Practically all the counties and county boroughs have their own laboratories or arrangements with some reputed laboratory at a hospital or university. Many of the smaller towns which have whole-time Medical Officers have their own laboratories, or have arrangements for sending specimens to other and larger centres. Many of the smaller towns and practically all the rural districts have, apart from their county, no laboratory facilities which can be said to be really in practical working order, although on paper many of these would no doubt claim that they had access to the help of some laboratory.

It is doubtful if it is a desirable thing to multiply small laboratories in small towns and in rural districts over the kingdom. This, in my opinion, depends on whether or not there is a whole time medical officer of health who has a diploma in public health or a knowledge of laboratory technique. These little laboratories properly staffed under these conditions can be most useful. They save time. They can be established very cheaply for dealing with diphtheria specimens alone; and any rural medical officer of health will appreciate their use, as I have done, when faced in a rural district with an outbreak of diphtheria.

In larger towns, and in connection with the county and county borough administrations, a reasonably efficient public health laboratory, or easy access to such a laboratory, is essential. Every whole time medical officer of health should establish such a laboratory, however small his area. In the smallest of such laboratories might be undertaken the examination

of swabs from suspected cases of diphtheria, of sputa, of ringworm hairs, of bloods and faeces and of water samples. In the larger laboratories of counties or of county boroughs every variety of pathological examinations might be undertaken, including morbid histology and animal inoculation. It is remarkable what use the general practitioner, in a district will make of a laboratory such as this; for they know they will not be kept waiting for results, and they know too that the local laboratory is not run by a profiteer who will charge fancy prices for a trivial examination. It is desirable, I think, to make a small charge in certain cases for the examination of specimens. In Poole we charged a flat rate of one shilling and sixpence for each specimen examined: the money received went to the relief of the rates, and last year the laboratory was almost a paying concern.

Although our public health laboratories to-day have a large scope, they might in the future undertake other and different work. I would suggest, for example, that the fully equipped county laboratory might well undertake agricultural bacteriology. The food supply is essentially a matter of public health interest, and agricultural bacteriology, as yet an undeveloped science, would receive a tremendous stimulus by being taken up by our counties all over the country. The work of chemical analysis might, however, I think, except in special instances, be left to the public analysts, in order to save duplication of staff.

In the "Dawson Report," laboratories at the primary health centres (those Nirvanas of the practitioner) are foreshadowed. I yield to no one in my respect for the family doctor; but he himself will be the first to tell you that he is not a bacteriologist, nor is he generally at all keen on doing laboratory work, nor has he the time to devote to it. He is essentially a very honest man and knows his limitations. Here and there, especially of recent years since the war, we find doctors in general practice who are competent to administer a small laboratory, but the number of these is not many. Surely, as laboratories already exist in so many of our towns, it is better to use these than to institute others. We all of us, middle-aged and older men, know how inadequate was our training in bacteriology before we were turned out to practice the art of medicine: since our day the position regarding the training of students is not very much improved in this respect, and

before the suggestions of the "Dawson Report" could become operative, even if they are desirable, the medical student will have to be a much better trained bacteriologist than he is to-day.

Already the laboratories have done much to help the science of preventive medicine. When we have discovered the cause of a disease we can do much to prevent it. But of many diseases we are ignorant of the cause. It is to the laboratories that we must look now and in the future to help us in the elucidation and prevention of such conditions as cancer, acute and chronic rheumatism, diabetes, insanity, and a host of other diseases, perhaps even of old age; and the closer that the co-operation is between the statistician, the epidemiologist and the laboratory, the quicker will be the coming of new and great discoveries to benefit the race of man.

The crying need to-day is for research. The admirable work being done at the present time by the Medical Research Council is known to us all. It is work of the utmost importance to preventive medicine—research workers are forging slowly but certainly the weapons with which later we shall be able to fight. But no one should think that research is the privilege only of the Research Council. Every medical officer of health who has a laboratory might easily undertake some research there, and so add to our total of knowledge—for there is work enough waiting to be done. What is lacking, unfortunately, so often is the enthusiasm to begin and the courage to carry through the necessary labour; and it is this apathy which especially we need to guard ourselves against. To us now as medical officers of health the opportunity is given: it is for us to take the opportunity and to use it; for if we neglect it we may be sure that someone else, at a primary health centre perhaps, will do the work that we ought to have done, and we shall then only have ourselves to blame "when we have failed and another has succeeded, when we have stood by and another has stepped in." Many of our assistant medical officers of health are trained bacteriologists and pathologists, and it seems a thousand pities that their labours should not be utilised for research work throughout the country. Each piece of honest work completed in the public health laboratory helps to make more accurate the science of preventive medicine.

NOTES FROM THE BRANCHES.

METROPOLITAN BRANCH.

CITY OF WESTMINSTER REPORT.

"In reviewing the various activities of the public health department, one cannot help being struck by the great increase in the number of duties which have been placed upon local authorities in the last twenty years." Thus Dr. Francis J. Allan, in introducing his report on the health of Westminster during 1920. Apart from the usual returns and statistics required by Government Departments, the report contains an interesting review of the work accomplished under the maternity and child-welfare scheme in operation in the City. In the latter connection Dr. Allan observes that statistics show that a child born now has an increased expectation of living 11 years more than if it had been born 20 years ago. It is noted also that the City Council, having received information of the discharge of women from lying-in hospitals ten days after their confinement and while still in need of medical attention, passed a resolution asking the Ministry of Health to consider the question of the desirability of making it, in future, a condition of their grant that mothers shall not be discharged from such an institution until 14 days have elapsed following confinement, or such further period as may be necessary in cases requiring medical treatment.

DINNERS FOR SHOREDITCH MOTHERS.

Dr. L. T. Fraser Bryett, in the maternity and child-welfare section of his report, records the success achieved in the provision of dinners for nursing and expectant mothers in Shoreditch. The meals, varied daily, are supplied free or at a cost of 3d. per dinner, and must be eaten in the dining room at the centre. For confinement cases special "invalid dinners," to be called for by persons from the homes of the lying-in patients, are also provided. Towards the end of 1920 from 60 to 70 dinners were served daily in the centre dining rooms, in addition to some 20 "invalid dinners."

HOSPITAL ACCOMMODATION FOR MEASLES.

In the Annual Report for Woolwich, Dr. J. Macmillan refers to the need for a change in policy with regard to the method of dealing with infectious diseases. He states that though scarlet fever and diphtheria appear to be becoming less virulent,

little or no diminution is taking place in the case of measles, a disease which still seems to be treated somewhat casually by the public. The provision of adequate hospital accommodation for children suffering from a severe attack of measles is overdue, and Dr. Macmillan would like to see more of the existing accommodation made available for measles cases, at the expense of reducing the number of beds maintained for the isolation of scarlet fever, many cases of which he considers can be adequately and safely treated at home.

AIRCRAFT AND INFECTIOUS DISEASE.

In the St. Marylebone Health Report (Dr. Charles Porter), a new channel of attack by infectious disease is foreshadowed in the details of a case in which the patient was found to have acquired infection in Copenhagen and to have arrived by aeroplane at Croydon aerodrome a few hours after the onset of the symptoms. The rate of travel through the air being so rapid, sources of infection in other countries have been brought very much nearer than formerly, and unless the same or greater precautions are exercised at the air ports as at the sea ports, with a view to preventing the importation of infection, this country may quite easily come to share in a variety of diseases that at present are counted foreign. A person having acquired an infection just before leaving a foreign country, if he travels by land or sea, has time to develop recognisable symptoms and can be dealt with on his arrival. The traveller by air, however, makes his passage in a few hours and sickens after his arrival. Until the signs are recognised he is a source of infection and may do a considerable amount of damage. The Air Ministry appear to have appreciated this possibility and have appointed a health officer to at least one aerodrome. That the school medical work of London, now carried out entirely by the County Council, should be placed in the hands of the local health authority (the borough council) is also suggested. According to the writer, in no part of the kingdom is the divorce between general public health work and school medical work so complete as in the Metropolis, where the local medical officer of health receives no direct information in regard to the results of medical inspections, and where the existence of the two authorities leads to frequent duplication of work and unnecessary correspondence—all of which, besides being wasteful, is detrimental to the best interests of the public health locally.

ANNUAL REPORTS.

The month of August invariably heralds the arrival of the bulk of annual reports on the Health and Sanitary Condition of the various districts, and from the many excellently—yet economically—produced volumes received this year from the Metropolitan Boroughs it is evident that the scrappy resumé of recent years has given place to a report which in form and arrangement goes some way towards doing justice to its subject. Some attempt has already been made to secure a certain amount of uniformity in annual reports, and the matter will doubtless receive further consideration in the near future.

WARRANTY DEFENCE.

In the Stepney report, Dr. D. L. Thomas refers at some length to the unsatisfactory state of affairs in regard to the warranty defence pleaded in prosecution for milk adulteration, and quotes a glaring instance of its abuse. A milkman who had been convicted 17 times—11 summonses were for adulteration and five for refusing to serve the inspector with milk—was prosecuted for obstruction. The inspector actually saw him adding water to the milk, and when a sample was demanded from the mixture, the milkman tried to upset the can. A struggle ensued and most of the milk was spilt, but sufficient remained in the can to be analysed, with the result that it was found to contain 22% of added water. He was prosecuted on several occasions after this occurrence and although convicted several times the summonses were dismissed on a warranty on six occasions, once when the milk showed 21% of added water. Eventually the man was caught red-handed deliberately adding water to milk, and was prosecuted under the Milk (Amendment) Order, 1917, No. 1317. He was sentenced to four months imprisonment, and his name removed from the register of milk sellers. Dr. Thomas concludes with a general review of the warranty question, and recommends the putting into force of the Milk and Dairies Bill, and such orders under it as the Ministry of Health may think desirable to put an end to the scandal that now exists.

Dr. P. Caldwell Smith also makes reference to the subject in his report, and quotes a case

in Wandsworth where warranty was proved and proceedings were taken against the warrantor for giving a false warrant. The Magistrate, in dismissing the case, made the following remarks: "I must dismiss this case. In a similar case to this I convicted and the Sessions said I was wrong. The consequences to London are serious. Pure milk is of the utmost importance to all, particularly to children. They will not get it whilst things remain as they are."

HOUSING IN HACKNEY.

Considerable progress in the provision of additional housing accommodation is recorded by Dr. G. H. Dart in his first annual report as Medical Officer of Health of Hackney. A scheme has been adopted for the erection of 80 cottages and 62 maisonettes, and in addition nine houses have been converted into 21 tenements, and nine Army huts into 12 tenements. Constructional details of the new dwellings are yet to be settled.

PUERPERAL FEVER.

Dr. G. E. Oates in his report on the Health of Bethnal Green expresses the opinion that it is time the medical profession enlarged the scope of the term "puerperal fever," and ceased to restrict it to those cases which are complicated by septicaemia and which consequently often have a fatal issue. He adds that undoubtedly an appreciable number of slight cases of puerperal infection escape notification owing to the doctor in attendance not considering the case to be severe enough to be classed as "puerperal fever," and that it is to be regretted that the legislature while requiring the notification of puerperal fever has not seen fit to define the condition.

POPLAR'S "RAT YEARS."

"Every week is a 'rat week' in Poplar," affirms Dr. F. W. Alexander in his annual report on Rat and Mice Destruction in that borough. Large quantities of barium carbonate paste were distributed to ratepayers, and lithographic varnish traps were also used with marked success, resulting in a great diminution in the

number of complaints of nuisance from the vermin.

INNOVATIONS IN THE ROYAL BOROUGH.

In a foolscap volume of 62 pages, Dr. James Fenton, Medical Officer of Health of Kensington, reviews the public health work carried out in the borough during the first year of office. Among many matters of importance are to be noted the erection of a cleansing station for verminous persons, to be known as the "Medicinal Baths;" and the establishment of an Advisory Committee to the Maternity and Child Welfare Committee to assist the Council in co-ordinating the work of the numerous voluntary bodies engaged on child welfare work in the borough. Dr. Fenton draws attention particularly to the unusual occurrence of a rate of infantile mortality higher in South Kensington (91) than in the Northern half of the district (80), in former years the reverse having been the case. The great improvement in North Kensington in this respect is attributed largely to the to the amount of work done in that part of the borough by infant welfare workers, and to the improved conditions of the working classes in 1920, during the larger portion of which there was ample work at good wages.

WEST OF ENGLAND BRANCH.

EDUCATING PUBLIC OPINION.

It is by no means an uncommon occurrence, though it is a very irritating one, for a recommendation of a sub-committee, made after prolonged study and careful investigation of some particular question, to be referred back or even refused entirely by full committee or council.

When this happens it is frequently the result of the remarks of an ignorant, but ready speaker who, though he has probably never given the matter any serious thought, jumps at conclusions which are quite unjustified by the facts. It is not always realised, however, that it may be part of the duty of the small body of people who know, to enlighten the larger public, by whose goodwill alone they can carry out their schemes. Probably considerations of this kind are responsible for important gatherings in the nature of garden parties which took place this summer at Ham Green Fever Hospital and Sanatorium, near Bristol, in July, and at Winsley Sanatorium in August. In each case every

member of the Local Authorities concerned, as well as a number of other people likely to be interested, were invited to visit the Institution. Visitors were shewn everything that could be shewn, tea was provided, explanations of the work done were given, and altogether a very pleasant and instructive afternoon spent. Much interest was evoked, and there is little doubt that any future suggestions for improvements or alterations will meet with a more sympathetic hearing, than might otherwise have been the case.

THE NEXT SESSION.

Arrangements are in hand for the opening meeting of the 1921-22 Session, to be held in South Devon, probably at Torquay, in November. The President-elect is Dr. Thomas Dunlop, and it is hoped that as many members as possible will make an effort to attend. Further particulars will be announced in due course.

THE CENSUS IN WILTSHIRE.

In Wiltshire, the only places shewing any considerable increase is the town of Swindon (4,169) and Amesbury Rural District (3,980). The former has a population approximating to that of several County Boroughs, amongst which one imagines it will, sooner or later, desire to be included. A shrewd guess as to the reason for the increase at Amesbury will easily be made by those whose lot it was during the War to be stationed on "the Plain" for any length of time. These two increases are together considerably in excess of that for the country as a whole. In about a third of the rural districts the population has not varied by more than 50 in the ten years.

SECURITY OF TENURE.

Dr. Herbert Jones, of Hereford, has received many congratulations, both in the medical press and elsewhere, on the part he has played in connection with the recently passed Act giving security of tenure to medical officers of health. This is not the place to emphasize either the difficulties which have had to be overcome nor the far reaching effects of what has been accomplished. Dr. Jones, however, may rest assured that everyone belonging to the West of England Branch, of which he is so distinguished a member, takes a personal interest in his activities and a special pride in the respect which his services com-

mand in other and wider spheres. The thanks and congratulations of his fellow members in the Branch are in no way less cordial and sincere than any he has received elsewhere.

THE SALARIES QUESTION.

Two recent advertisements by Committees in the West of England are not without interest in connection with the very difficult task of improving the financial position of members of the health services. In one of these a salary of £250, with apartments, board and lodging was offered for the post of Assistant R.M.O. at a sanatorium. Medical journals have given valuable assistance by refusing to insert offers of less than £500 for non-resident appointments. A logical extension of this would surely be the exclusion also of advertisements where the cash value of benefits to be received in kind, plus the actual salary offered, amounted in the aggregate to less than the same sum. The former might be difficult to estimate but it could not well be such a figure as to allow the latter to be as low as £250.

The other advertisement was for a whole time Assistant School Medical Officer (Lady) to the Plymouth Education Authority. It appeared in the "Daily Telegraph," and possibly elsewhere, but was conspicuous only by its absence in the medical journals. The salary suggested was £400 rising to £500 in four years. It would be interesting later on to hear what response was received, and, if an appointment was made, the grounds on which the applicant felt justified in accepting it.

A SATISFACTORY SETTLEMENT.

Members of our own, as well as of the Welsh Branch, will remember that there has been a good deal of discussion from time to time as to what should be done with certain funds standing in the name of the old West of England and South Wales Branch when (in 1919) it ceased to exist under that name. For various reasons it was not possible simply to make a pro rata division according to the actual membership of the two newly-formed branches which took its place. Everyone will be glad to know, however, that with the help of Dr. Buchan, the Treasurer of

the parent Society, an equitable solution has now been reached. General meetings of both branches have approved and the whole question is now finally and satisfactorily settled.

THE NEED FOR MORE MEMBERS.

At the last Branch meeting the desirability of a considerably increased membership was urged by more than one speaker. The increase last year was over 44%, but there are still a great many outside the Society who ought to be in. It is not necessary here to insist on the value of unity in our ranks, though it may not be out of place to say that some people sometimes forget what a long way a little personal influence may go in inducing others to join us. The co-operation in this matter of all present members will shortly be asked in connection with certain suggestions which will be sent round for their consideration. As a result it is hoped that many new names may be added during the next few months.

NORTH WESTERN BRANCH.

GLOSSOP-DALE R.D.C.

In the contributory places of Ludworth and Charlesworth, in the rural district of Glossop-Dale, the following provisions of The Public Health Act, 1875 and Public Health Acts Amendment Act, 189, will be in force from August 8th, 1921, by order of the Ministry of Health:—

Powers re Slaughter Houses, Public Health Act, 1815, section 169, second paragraph; section 169, third paragraph; section 170; Public Health Acts Amendment Act, 1890, sections 29, 30, 31; also from August 8th, 1921.

The Public Health Acts Amendment Act, 1907.—Part ii. other than section 18-28 inclusive and 31 and all Part iv. (which relates to Infectious Disease) to be in force in all the Rural District of Glossop-Dale.

Part iii. other than sections 34-38 inclusive, all 43, 47, 48, 50 and 51 to be in force in the contributory place of Ludworth in the same Rural District.

BOROUGH OF GLOSSOP.

The Glossop Borough Council have applied for a loan for Sewage Disposal Works extension, and a Ministry of Health inquiry was held here on May 4th. The Council are awaiting the sanction of the Ministry.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

BRANCH AND GROUP ELECTIONS: SESSION 1921-22.

METROPOLITAN BRANCH.

President ...	Dr. W. H. Hamer.
Vice-Presidents ...	Dr. W. M. Willoughby. Dr. R. King Brown.
Hon. Treasurer ...	Dr. T. S. Higgins.
Hon. Secretary ...	Dr. C. Porter.
Representatives on Council of Society	Dr. H. R. Kenwood. Dr. Caldwell Smith. Dr. C. Porter.

SCOTTISH BRANCH.

President ...	Prof. M. Hay.
Vice-Presidents ...	Dr. A. Campbell Munro. 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. Drybrough Gould.
President-Elect ...	Dr. Gibbons Ward.
Vice-Presidents ...	Dr. Alfred Hill, Dr. Bostock Hill, Dr. G. Reid, Dr. J. Robertson, Dr. Ridley Bailey, Dr. E. H. Snell, Dr. C. E. Tangye.
Hon. Treasurer ...	Dr. Ridley Bailey.
Hon. Secretary ...	Dr. H. Gibbons Ward.
Hon. Auditor ...	Dr. W. H. Davison.
Representatives on Council of Society	Dr. E. H. Snell. Dr. R. W. Stocks. Dr. H. Gibbons Ward.

NORTH WESTERN BRANCH.

President ...	Dr. J. W. Talent.
Hon. Treasurer ...	Dr. H. H. I. Hitchon.
Hon. Secretary ...	Dr. H. E. Corbin.
Representatives on Council of Society	Dr. T. W. N. Barlow. Dr. G. W. N. Joseph. Dr. H. E. Corbin.

WEST OF ENGLAND BRANCH.

President ... Dr. Thos. Dunlop.
 Hon. Secretary and
 Treasurer... Dr. J. F. Blackett.
 Representative on
 Council of Society Dr. J. F. Blackett.

SOUTHERN BRANCH.

President ... Surg.-Cdr. R. J. Mackeown,
 C.B.E., R.N.
 Hon. Secretary ... Dr. W. J. Hart.
 Representative on
 Council of Society Dr. R. H. Wilshaw.

NORTHERN BRANCH.

President ... Dr. T. Eustace Hill.
 Hon. Secretary and
 Treasurer... Dr. Harold Kerr.
 Representatives on
 Council of Society Dr. Eustace Hill.
 Dr. Harold Kerr.

YORKSHIRE BRANCH.

President ... Dr. J. J. Buchan.
 Hon. Secretary and
 Treasurer... Dr. Bertram Hill.
 Representatives on
 Council of Society Dr. J. J. Buchan.
 Dr. Bertram Hill.

EASTERN BRANCH.

President ... Dr. T. L. Lack.
 Hon. Secretary and
 Treasurer... Dr. J. T. C. Nash.
 Representative on
 Council of Society Dr. J. T. C. Nash.

WELSH BRANCH.

President ... Dr. J. Howard-Jones.
 Hon. Secretary and
 Treasurer... Dr. Thos. Evans.
 Representative on
 Council of Society Dr. Thos. Evans.

HOME COUNTIES BRANCH.

President ... Dr. D. C. Kirkhope.
 Hon. Treasurer ... Dr. J. Scott Tew.
 Hon. Secretary ... Dr. R. J. Ewart.
 Representatives on
 Council of Society Dr. Kirkhope, Dr. Chas.
 Sanders, Dr. Duncan
 Forbes, Dr. Ewart.

TUBERCULOSIS GROUP.

President ... Prof. E. L. Collis.
 Chairman of Com-
 mittee ... Dr. T. H. Peyton.
 Hon. Secretary ... Dr. F. G. Caley.
 Hon. Librarian ... Dr. J. Sorley.
 Representative on
 Council of Society Dr. T. H. Peyton.

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

President ... Surg.-Rear-Admiral Sir
 P. W. Bassett-Smith,
 K.C.B.
 Hon. Sec. ... Capt. S. H. Daukes.

SCHOOL MEDICAL GROUP.

President ... Dr. G. A. Auden.
 Hon. Secretary and
 Treasurer... Dr. A. Ashkeny.
 Representative on
 Council of Society Dr. G. A. Auden.

NON-COUNTY M.O.H. GROUP.

Chairman ... Dr. Herbert Jones.
 Hon. Sec. ... Dr. J. M. Clements.
 Representative on Coun-
 cil of the Society ... Dr. J. M. Clements.

DENTAL OFFICERS' GROUP.

President ... Mr. Wm. Fisk, L.D.S.
 Hon. Treasurer ... Mr. R. H. Cumine, 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.

COUNCIL MEETING.

A meeting of the Council was held at the House of the Society on Friday, September 23rd, 1921. In the unavoidable absence of the President, the chair was taken by Prof. H. R. Kenwood. There were also present Drs. Snell, G. F. Buchan, Kirkhope, Cates, Clements, Herbert Jones, Wilshaw, Stocks, Gibbons Ward, Wheatley, Barlow, Charles Porter, Veitch Clark, Sanders, Ellis and Col. Grattan.

The minutes of the last meeting having been approved and signed, letters of apology for absence were received from Drs. W. J. Howarth, T. Eustace Hill, G. A. Auden, J. F. Blackett, Edmund Smith, Thos. Evans, A. K. Chalmers, R. A. Lyster and the President (Lt.-Col. F. E. Fremantle, M.P.).

Correspondence.

(1) From the Registrar-General stating that the procedure in connection with the distribution of particulars of transferable deaths adopted after consultation with representatives of the Society at the Ministry of Health on August 3rd last, has now been put into operation. *Resolved*: That the Registrar-General be thanked for his action in this matter.

(2) From the British Medical Association inviting the Society to nominate a representative to serve on the Insurance Acts Committee of the Association for the coming Session. *Resolved*: That Dr. W. J. Howarth, President-Elect, be nominated to this Committee.

(3) From the National Baby Week Council asking the Society to nominate two representatives on the Council. *Resolved*: That Prof. H. R. Kenwood and Dr. G. F. Buchan be appointed to this committee.

(4) From Dr. E. H. Snell, drawing attention to the Home Office Order authorising midwives to be in possession of and to administer preparations containing opium so far as is necessary for the practice of their profession or employment in such capacity. The Executive Secretary was directed to enquire of the Ministry of Health if they, or the Central Midwives Board, had decided in what circumstances midwives would be justified in administering opium to their patients.

(5) From a medical officer of health reporting the decision of his Local Authority to impose upon him duties outside the terms of his appointment without extra remuneration. The Executive Secretary was instructed to inform this member that his case was covered by Article 13 of the Sanitary Officers (Outside London) Order, 1910, and that the proposed extension of his duties was subject to the sanction of the Ministry of Health, who had been asked by the Society to refuse their approval of a decision so unfair to the medical officer of health.

(6) From a medical officer of health of a district in Wales, suggesting that in view of Part II. of the Second Report of the Welsh Consultative Council, the Ministry of Health should be asked to require that when a group of districts be combined, preference should be given to any displaced medical officer of health with a diploma in public health when appointing a whole-time officer for the new combined area. The Executive Secretary was directed to inform the correspondent

that as the population of the new areas would probably exceed 50,000, the Ministry of Health would no doubt enforce the requirement that the medical officer of health must hold the D.P.H. It was further decided to refer the terms of this letter to the Welsh Branch of the Society.

(7) From a member complaining that the recent vacancy for a medical officer of health for Grimsby had been so inadequately advertised that he and others missed the opportunity of applying for the appointment. It was agreed that the Society could take no action so long as Local Authorities complied with the statutory requirements in regard to advertising.

The late Dr. George Wilson.—On the proposal of Dr. E. H. Snell, it was decided unanimously that a letter of sympathy should be sent to the widow of Dr. George Wilson, an honorary fellow of the Society, who died on September 11th, aged 83 years. Dr. Snell reminded the Council that Dr. Wilson served for over thirty years as medical officer of health for the Mid-Warwickshire Combined District. He was one of the last surviving founders of the Birmingham and Midland Association of Medical Officers of Health which was formed in 1875, and which subsequently became the Midland Branch of the Society.

Representation of Groups on the Council.—The committee of officers of the Society submitted a series of recommendations which they proposed to discuss with Dr. Gibbons Ward and Dr. H. A. Ellis in accordance with the instructions given at the last meeting of the Council (*Public Health*: August, 1921, p. 218). Dr. Gibbons Ward protested that these recommendations should not be discussed until after the meeting of himself and Dr. Ellis with the Committee. It was therefore decided to fix that meeting for October 21st, at 11 a.m. Meanwhile it was *Resolved*: (a) That the time has arrived when the representation of the groups on the Council should be materially increased, and (b) that in any revision of the Society's Articles of Association, not less than two-thirds of the members of the Council should be medical officers of health, as hitherto.

Representations of the Special Food Committee.—Dr. Wheatley, on behalf of this Committee, submitted the following recommendations:—

(a) *Dental Caries*: That in view of the profound influence dental caries has upon the health of the community, a thorough inquiry should be made by the Government into its causation, and this enquiry should

be followed by a definite pronouncement and propaganda.

(b) *Pasteurised and Sterilised Milk*: (a) That in view of the importance at the present time of arriving at a satisfactory conclusion as to the effect of sterilisation and pasteurisation of milk on its hygienic value, the Government be asked to consider the question carefully so that a statement may be issued for the guidance of the public; and (b) that if the results obtained indicate the desirability of encouraging or even permitting the sale of milk so treated, that the process and processes should be accurately defined and powers given to secure that such are observed, and, further, that milk submitted to such treatment should be sold in such manner as will render it, at the time of sale, readily distinguishable from fresh milk.

Dr. Wheatley explained that recommendation (a) had been forwarded by his committee in May last, and since then (on September 22nd) the Ministry of Health, in conjunction with the Medical Research Council, had appointed a committee which would cover the purposes of the recommendation. It was agreed that a letter should be sent to the Ministry welcoming the appointment of the committee, and offering any assistance the Society could give in their enquiry.

As regards (b) it was decided to forward the recommendation to the Ministry, with the suggestion that the matter might usefully be the subject of enquiry by such a Committee as had been appointed in connection with dental caries.

It was also agreed, on the recommendation of the Special Food Committee,

That the Ministry of Health be asked to place the duty of spreading knowledge on questions relating to the food and feeding of the people on every sanitary authority, with a view to improving the general health of the people.

Dr. Charles Porter, who opposed this resolution on the ground that the present time is inopportune for propaganda work in regard to the food of the people, asked that his opposition might be recorded in the minutes.

Codification of the Public Health Law. On behalf of the President, Prof. Kenwood moved: "That there is urgent need for codification of the Public Health Law, and that representations to this effect be sent to the Lord Chancellor and the Minister of Health, asking them jointly or severally to receive a deputation from the Society to submit the matter to their notice." The proposal was adopted unanimously, and the following were appointed a committee to take the necessary steps: Prof. H. R. Kenwood, Drs. W. J. Howarth, Lyster, Snell, Charles Porter, Herbert Jones,

Veitch Clark, Cates, Sanders, Wheatley, W. M. Willoughby, Barlow, H. Kerr and Prof. John Robertson, with power to add to their number. Col. Fremantle was thanked for bringing this matter forward, and for his promise to introduce the deputation.

Report of the Council.—The report of the Council for the Session, 1920-21, for submission to the Annual Meeting was formally adopted.

Maternity and Child Welfare Group.—Dr. Woolsey Stocks submitted an application from upwards of fifty members of the Society for sanction to form a Maternity and Child Welfare Group. A deputation from the Society of Medical Officers of Maternity and Child Welfare Centres had met the officers of the Society on the previous day and there was good reason to hope that they would co-operate in the formation of the Group. *Resolved*: That the formation of a Maternity and Child Welfare Group be sanctioned, and that the thanks of the Society are due to Dr. R. Woolsey Stocks and Dr. A. B. McMaster for their efforts to secure the co-operation of the Society of Medical Officers of Maternity and Child Welfare Centres.

The Council then adjourned.

REPORT OF THE COUNCIL.

SESSION 1920-21.

Your Council Report:—

(1) That the progress of the Society has been well maintained during the Session 1920-21.

Four hundred and forty-five candidates have been elected as Members or Associates, but six Fellows and two Members have been lost by death, and 22 Fellows and Members have resigned. The nett increase on the Roll of Members at the opening of the new Session will be 415.

Although this may be regarded as not unsatisfactory, there are still many members of the Public Health Service outside the Society who, in the interests of themselves and their colleagues, should be urged to offer themselves for election.

(2) That the following papers were read at meetings of the Society:—

Dr. C. W. Hutt: "Some serious defects in the present organisation of the Health Services."

Professor H. R. Kenwood, C.M.G.: "The work of the Navy, Army, and R.A.F. Hygiene Group within the Society."

Dr. G. E. Oates: "Slum areas in Central London."

Dr. G. S. Buchanan, C.B.: "International Organisation and Public Health."

Dr. A. T. Nankivell: "The Relation of the Laboratory to Preventive Medicine."

Dr. S. H. Daukes, O.B.E.: "The scheme and scope of the Wellcome Museum of Tropical Hygiene."

Dr. H. A. Ellis: "Tuberculosis in Relation to Public Health Administration."

(3) The annual provincial meeting of the Society was held at Welwyn Garden City, on June 11th. After luncheon, by invitation of the President, the members were hospitably entertained by Mrs. Fremantle at Bedwell Park.

(4) That nine meetings of the Council have been held during the Session. Committees of the Council have met on seventeen occasions. The proceedings of the Council have been fully recorded in "Public Health," and have covered matters involving the interests of every branch of the Public Health Service.

(5) That they have had official communications with

(a) The Ministry of Health in regard to many matters, including

(i.) Records and statistics to be supplied by Local Authorities in connection with maternity and child welfare work.

(ii.) Compensation proposals referred to in the interim report of the Departmental Committee on Unhealthy Areas.

(iii.) The appointment of an additional representative of the Society on the Sanitary Inspectors' Examination Board.

(iv.) The remuneration of tuberculosis officers in respect of examinations undertaken for the Ministry of Pensions.

(v.) The Infant Life Protection section of the Children's Act, 1908.

(b) The Board of Education in regard to modifications in school medical inspection cards and schedules.

(c) The Board of Trade in regard to evidence for submission to the Departmental Committee on Carbon Monoxide.

(d) The Ministry of Labour in regard to difficulties in connection with the training of ex-service men.

(e) The Home Office in regard to evidence for submission to the Departmental Committee on Street Trading in London.

(6) That they have nominated deputations to attend at the Ministry of Health for Conferences with Sir George Newman respecting various matters, including revision of requirements in regard to Annual Reports.

(7) That they have been in communication with a number of representative bodies concerning matters affecting public health administration, and the Public Health Service, including the General Medical Council, the British Medical Association, the British Dental Association, the Royal Sanitary Institute, the Royal Institute of British Architects, the National Association of Local Government Officers, 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 four meetings, and attended two conferences with representatives of the British Medical Association. Throughout the session there has been much correspondence, on lines indicated by this committee, with the Ministry of Health and Local Authorities in reference to pending appointments, bonus awards, security of tenure, compensation for loss of office, superannuation, increase of duties without extra remuneration, inclusion of office and travelling expenses in salary and other matters affecting the conditions and terms of public health appointments.

(9) That other Special Committees have reported to the Council on the Duties and Training of Health Visitors, on the Regulations for Diplomas in Public Health, and on Food Problems in relation to Public Health.

(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 after negotiations with the School Dentists' Society, it was decided to form a Dental Officers' Group within the Society, and members of the S.D.S. have since been elected to the Society and the Group is now in working.

(12) That a group for Maternity and Child Welfare Medical Officers is in course of formation.

(13) That they have received as a joint gift from the Metropolitan and Home Counties Branch a portrait of Professor H. R. Kenwood, C.M.G., for inclusion in the gallery of Past-Presidents of the Society.

(14) That the annual exchange of officers involves the retirement from the Council of Dr. A. N. Stevens, Dr. J. Cates, Dr. E. M. Smith and Dr. H. A. Ellis, to each of whom the Society is indebted for valuable services.

(15) That Sir Shirley F. Murphy, K.B.E., has asked to be released from his responsibilities as a Trustee of the Berridge Bequest, and that the thanks of the Society are due to him for his long service in that capacity. The remaining Trustees will shortly recommend the appointment of his successor.

(16) That the thanks of the Society are also due to Lt.-Col. F. E. Fremantle, O.B.E., M.P., for his work on behalf of the Society during the past year, not only in the presidential chair, but also in the House of Commons, where he has closely watched the interests of Public Health administration.

NAVAL, MILITARY AND AIR FORCE HYGIENE GROUP.

A meeting of this Group was held at the Society House in Upper Montague Street, on June 30th, Lt.-Col. H. R. Kenwood, the President, being in the chair, when Col. H. W. Grattan, Deputy Director of Hygiene, War Office, read a paper on "The Co-operation between the Civil and Military Sanitary Authorities during a grave National Emergency."

The President, on behalf of this Group, congratulated Surg.-Rear-Admiral Sir P. W. Bassett-Smith on the honour recently conferred upon him.

Lt.-Col. Caldwell Smith illustrated from his own experience the value of co-operation with local authorities by personally enlisting the sympathy not only of the M.O.H. of the area concerned, but also the sanitary inspectors and chairman of public committees.

Maj.-Gen. Sir W. G. Macpherson said that billeting was often unsatisfactory because the police made arrangements without, in the first

instance, consulting the local sanitary authority. At the beginning of the War the L.G.B. gave every assistance to those entrusted with maintaining the health of the troops by sending medical inspectors to different parts of the country.

Col. Sir G. Sims Woodhead said that before the War no preparation had been made for a real sanitary service. This work fell largely upon the R.A.M.C. (T.F.) with its two sanitary companies, so that when the War broke out this essential work was carried out by a few men. The time was ripe for organizing the sanitary services and the liaison between the army and the civil services. To illustrate this need he instanced the erection of a gutted camp, with huts inadequately ventilated, where later an epidemic of cerebro-spinal fever occurred. One way of bringing about a closer co-ordination was for responsible civil posts to be made available to service-trained men on their retirement.

Surg.-Rear Admiral Sir P. W. Bassett-Smith, speaking from the naval point of view, said that by the development of a naval health service a real effort was being made to bring about closer co-ordination.

Major J. Hutchinson Wood considered that medical officers had too often been over-ruled by the higher authorities in local command, particularly in regard to the selection of camp sites.

Lt.-Col. J. A. Anderson said the quartering committees were excellent liaison arrangements, the local M.O.H. being a member of the committee. A scheme for co-operation had actually evolved towards the end of the War.

The President endorsed the opinion that full advantage had not been taken of local knowledge, little opportunity was given for local initiative. It was the peculiar duty of the group to ensure that the outcome of the discussion should not be lost sight of. The question of county survey was a subject which was receiving consideration by the group, and it was now proposed to approach the War Office with a view to further the work.

We regret to record the death, after an operation, of Dr. Wilfrid W. E. Fletcher, who was for twenty-five years a medical inspector of the Local Government Board, and who had acted during the war as medical officer of health for the metropolitan borough of Hackney.

CORRESPONDENCE.

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

PREVENTION OF VENEREAL DISEASE.

From Sister E. C. Evans, Sister-in-Charge, V. D. Clinic, Wolverhampton.

To the Editor of PUBLIC HEALTH.

Sir,—Lay readers of "Public Health" for April 1920, are grateful to Sir John J. W. McAlister for his enlightening article on this subject.

Arguments *re* medical matters coming from such an eminent source, we naturally do not attempt to criticise. But is the medical the most important element? or are we in our zeal to exterminate venereal disease, encouraging a worse evil? Are we sacrificing a permanent goal (social purity) to the lessening of (comparatively) temporary suffering?

Personally, I do not think the world has ever been bettered by the man who sacrifices his ideal to a second-best method for the sake of expediency. Surely the history of social reforms already obtained support this theory.

Humanitarians have to boldly face the definite question "Do we wish the packet-system introduced into civil life?" "Do we desire our youths instructed that Government provides centres* where, after practising immorality, they can rid themselves of evil consequences?"

Public opinion is beginning to realize that the only cure for this great social evil must come by more direct teaching—not only of the facts of sex, but of the necessity for self-control—to our young people; and parents must accept this as one of their greatest responsibilities.

We have therefore to remember that legislation is for the immoral man; the man who has escaped from, or refused to listen to such teaching.

Let us for a minute look at the consequences supposing the method were adopted and successfully so. In fifty years time venereal disease might be very much decreased, might possibly be rare (in men), but immorality would be far more prevalent.

The ruin of the lives of young girls—the broken hearts of mothers who have lost their daughters—

*Presumably Sister Evans is referring to the cleansing stations advocated by the N.C.C.V.D.—Editor P.H.

the number of unwanted and uncared for babies—can we advocate and definitely work for a system which will increase these?"

No, it seems to me that awful as the sufferings of the innocent and unborn, our duty is to use every influence we have, to lessen the sin.

If, as women, we at all are party to the practice of promiscuous intercourse, we throw away our chance—reform which might have come through us is still lost in hazy distance.

Not until we, individual women, expect and demand a code of morals for our men-folk equal to that expected from ourselves, shall we get it.

When it is demanded, when women and deep-thinking men realize it can and must be; then the heads of the medical profession will not advocate systems for a lower standard, but will stand by us.

From Ettie A. Rout (Mrs. Hornebrook), late Hon. Sec. New Zealand Volunteer Sisters.

Sir,—A Sister-in-charge of one of the Venereal Disease Departments of a General Hospital writes "to me regarding my contribution to *Public Health* She fears that the spreading of a knowledge of disinfection may increase immorality, and thinks that women's duty is limited to the lessening of sin as a means of reducing venereal disease. During the last few years I have distributed many thousands of copies of *Directions for Disinfection*, have given personal instruction continuously, and have issued disinfectants to thousands of men and women. My own knowledge of self-disinfection and the presence of calomel ointment and pot. permang. tablets in my pocket have not aroused any desire in my mind to indulge in promiscuous intercourse, and I think it dishonourable to impute such desires to my fellow-men and fellow-women who may be equally well equipped. Instead of this knowledge and provision "encouraging immorality," my practical experience is that both immorality and disease are "discouraged" thereby: disinfectants and directions, act as continual reminders of grave dangers to health and happiness.

The Sister-in-charge asks definitely: "Do we desire our youths instructed that Government provides Centres where, after practising immorality they can rid themselves of evil consequences?" Yes, however wrong immorality may be, it is still more wrong if it is diseased as well; therefore Centres for the Prevention and Treatment, of

*The letter was subsequently sent to the Editor and is printed above.

Venereal Disease are necessary and desirable. It is of no moral consequence whether our youths go to these centres within twelve hours for the prevention of infection or within twelve days or any other period for the treatment of disease. The foreknowledge that they can "rid themselves of evil consequences" is in the minds of our youths in any case. Similarly there is no moral difference between providing disinfection in a station and providing it in a portable form for personal application. What does it matter ethically whether the disinfectants are in a paper envelope, or in a bottle, or in a tube, or in a cardboard packet, or in a wooden hut, or a brick hospital?

As to the duty of women being limited to the "lessening of sin," sin cannot be greatly lessened until V. D. is lessened, disease being frequently the cause of immorality—not *vice versa*. The argument seems to me thus:—

1. That V.D. is known to be a cause of feeble-mindedness and physical deterioration;
2. That feeble-mindedness is known to be a cause of immorality;
3. That immorality (promiscuous sexual relationship) is known to be the principal means of spreading V.D.;
4. That the effects of V.D. are congenital;
5. That we have thus a complete vicious circle;
6. That we must prevent V.D. in the first instance in order to lessen both disease and immorality.

Some years ago we used to be told that we must not advocate self-disinfection because it was not effective and therefore it increased disease; now-days we are told we must not advocate self-disinfection because it is effective and therefore it increases immorality. One argument cancels the other. Out of the confusion comes this clear principle: that is our moral duty to prevent disease. We must not do wrong (*i.e.* maintain disease by failing to prevent it) in order that right may come of it. Morality must be built up by the promotion of virtue and not by the cultivation of disease.

The Sister-in-charge says:—

"No, it seems to me that awful as is the suffering of the innocent and unborn, our duty is to use every influence we have (as women) to lessen the sin."

Not so very long ago Spanish Jesuits baptized "heathen" babies and then bashed their brains out. In these days the moral fanatics only blind the babies, cripple the mothers, and drive the fathers insane—in the name of "Social Purity."

The Sister-in-charge asks me "to attribute as high motives to those who see differently" from myself as an advocate of sexual sanitation. There is nothing "high" about ignorance and prejudice and fanaticism, and there is something very wicked indeed about the deliberate refusal to "see" that cleanliness in itself is right and desirable. For some years, as a woman, I was in doubt as to whether the thoroughly immoral woman or the thoroughly moral woman was the most mischievous in Modern Society. The first robs men of their health and the second robs them of happiness. Now that greater knowledge of the world has shown me that the majority of real prostitutes are kind, affectionate, natural-born Pagans and the majority of virtuous women have substituted legality for morality,—well perhaps I had better not say what conclusion I have come to! After all, the good priests *did* bash out the "heathen" babies' brains! And the good women *do* put out the eyes of "Christians" children as a punishment for the follies of the childrens' fathers—or grandfathers! What place does history hold for such priests—and such women? Surely of such is the kingdom of hell!

A meeting of all medical officers engaged in connection with Maternity and Child Welfare Centres will be held on Oct. 20th, at a time and place to be arranged, and of which due notice will be published in the medical journals. The object of the meeting will be to inaugurate a Maternity and Child Welfare Group of the Society of Medical Officers of Health and to elect the officers and Council of the Group. There is good reason to hope that the Society of Medical Officers of Maternity and Child Welfare Centres will co-operate in the formation of this group and it is hoped that a large number of Fellows and Members of the Society of Medical Officers of Health will attend the meeting which has been specially fixed to enable those who may be coming up from the provinces for the Annual Meeting and Dinner to be present.

Any medical officer engaged in connection with Maternity and Child Welfare, whether whole or part time, voluntarily or otherwise, who wishes to become a member of this group is asked to apply for membership of the Society of Medical Officers of Health to the Executive Secretary, 1, Upper Montague Street, Russell Square.

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Editorial.

DENTAL DEFECTS.

THE Medical Research Committee, after consultation with the Ministry of Health, have appointed a Committee for the investigation of the causes of dental defects, and it therefore appears to be an appropriate time to express the hope that any investigations which are made will include practical testing of the various suggestions which have been brought forward as to the most likely methods whereby dental caries may be prevented. A study of past events in connection with this subject does not yield much encouragement. In 1907 the medical inspection of school children was made compulsory, and among the first results

obtained from such inspection was a realisation of the enormous amount of dental disease among children. In order to deal with this mass of material school dental officers were appointed by the more progressive authorities, and treatment was soon commenced. Many of these school dentists have now been at work for ten years or more and, in view of the fact that nine years is the average school life of a child in the elementary schools at the present time, we ought to be able to show the public some definite results. In other words, if the treatment of dental defects is as important as we are led to believe, there should be found without difficulty some very marked superiority among those children who have had dental supervision through the whole of their school lives over those children who have not had such benefits.

It was probably in a moment of enthusiasm that Sir George Newman, as Chief Medical Officer of the Board of Education, said in his Report in 1912 that "The question of the methods to be adopted in combating dental diseases must be considered to have passed out of the experimental stage." Possibly he felt justified in saying this on account of the encouraging results at Cambridge to which we refer below. As a matter of fact, many workers in preventive medicine will agree that few subjects present more difficulties, or can be more truly regarded as being absolutely in the experimental stage, than the question of the prevention of dental caries. Very few of the prevailing beliefs are founded on that strict analytical and scientific evidence on which beliefs appertaining to preventive medicine should be established. At the present time there is a growing army of state dentists whose numbers must, if we proceed with our present beliefs and methods, go on growing almost indefinitely. In fact, the amount of work to be done in this direction is so great that there is no doubt at all that the expenditure would render it financially impossible. Even if the public were willing to find the enormous sum necessary to provide

universal dental supervision we cannot, with our present knowledge, give the public any guarantee that the next generation will not require just as much work as this one.

Considering the size and complexity of the problem, there is a pitifully small amount of accurate knowledge about it. All that can be said is that we believe certain things to be true. We believe that if we could persuade the public to change their methods of diet, to alter their present neglect of the teeth, to cleanse their teeth regularly, and to have regular dental supervision from an early age, we should bring about an improvement in the dental condition of the race, but the evidence upon which these beliefs are based is negligible.

A study of the work of investigation that has been done by school dentists and those associated with them shows that the evidence is extraordinarily contradictory and variable. The relationships between dental disease and social position, breast feeding, mouth breathing, and a variety of similar subjects have not led to any convincing result up to the present. Even upon such a fundamental point as the effect, if any, of dental disease upon the vitality and general health and development of the child, there is practically no evidence. In fact, Dr. Priestley, of Staffordshire, a most careful investigator, was unable to find any great difference between the health and development of the average child and that of the child with a perfect denture. The differences were so small that in the second year of his investigation Dr. Priestley made this astonishing remark, "The possession of perfectly sound dentures seems to confer unexpectedly small advantages." We have no desire to belittle the importance of sound dentures, and we have no hesitation in ranging ourselves on the side of those who believe in the importance of sound dentures as a matter concerning public health, but we are endeavouring now to illustrate the bewildering condition of the small world of dental research at the present time.

At Cambridge the important claim was made in 1912 that organised dental treatment had resulted, after five years' work, in a substantial decrease of dental caries discovered on the first examination of the school child. No less than nine years ago it was claimed that, after five years' school dentistry in that town, children of five years of age were appearing at the school, without any previous dental treatment, with better teeth than the five year olds of 1907, and the suggestion was made that this decrease amongst these youngsters

was due to the fact that the treatment of the older brothers and sisters had rendered their surroundings at home less contagious. Nine years ago it looked, therefore, as if an amazing confirmation of all theories as to the importance of dental treatment had been obtained, and its publication in the Annual Report of the Chief Medical Officer of the Board of Education appeared to give us just the proof we wanted, and we felt confident that the next issue of that report would contain further valuable information. Unfortunately, these expectations were not realised and, so far as we are able to trace, there has been no further reference to this matter.

At the present time there are three main theories in connection with the prevention of dental caries. The first is that prevention would be achieved by altering the diet of the public and of the children in particular, in other words, by introducing into the food more tooth-cleaning material; the second is that a similar result would be achieved by regular cleansing of the teeth by tooth-brushes; the third is that a combination of the two methods is necessary. If the Committee which has been appointed to investigate this subject is able to obtain the necessary support from the Ministry of Health they have a wonderful opportunity to prove or disprove these theories. Large institutions containing children of all ages should be selected and should be put under very strict supervision. In one group of institutions the diet could be changed in the way recommended by those who favour the first theory; in another group tooth-brush care of the teeth should be made a matter of perfect discipline; in another group neither of these factors should be specially emphasised, while in a fourth group special attention might be given to thorough dental supervision in the way of conservative dentistry. An experiment of this kind carried over a series of years in institutions which would lend themselves to observation being carried out for ten or more years of a child's life, should lead to some definite result and should enable these theories to be put to the practical test. Nothing less will be of any real value.

PANEL DOCTORS' PAY.

The struggle between the Ministry of Health and the medical profession over the reduction of the panel payment from 11s. to 9s. 6d. per head has been short but not sharp. After many declarations of defiance the panel doctors have given way and have accepted the reduction. One wonders whether in the future it will be possible to resist

similar reductions being made more or less continuously until the payment per head reaches the old Friendly Society payment. During the war when every kind of remuneration was increased and when large war bonuses were being given to civil servants and others the small and altogether inadequate sum paid to doctors for the notification of infectious diseases was singled out for reduction, and this was accepted with apparent complacency by the profession. It is not surprising, therefore, now that there is a tendency for war bonuses and for wages to go down, that the medical profession has been selected as a victim once more.

A little more than twelve months ago the British Medical Association was asked by the Society of Medical Officers of Health for its definite support for a campaign for increased remuneration for whole-time medical officers of health. The expected and desired support was not forthcoming. Possibly some of those who opposed this request of the Society have by now realised that the existence of a grossly underpaid whole-time public medical service in this country will always be the chief factor in preventing any general increase in medical remuneration and in increasing the probability of decrease in the same. Undoubtedly the most serious argument in favour of reducing the present panel payment is the fact that the average panel practitioner working whole time receives more than double the salary of the average whole-time medical officer of health, and this inequality will continue to be an active factor in future possible reductions of panel payments until the panel payment reaches the sum of 5s. 6d. as compared with the present eleven shillings.

Sooner or later the British Medical Association will be compelled to realise the fact that the best way to assure proper remuneration for all medical services is to secure for all whole-time medical officials a rate of remuneration at least equal to the possible income made by any practitioner working whole time at the panel rate which they consider to be desirable.

FALSE ECONOMY.

The efforts which are now being made by the Ministry of Health to effect a reduction in expenditure on public health and social matters, resulting in economies which are microscopical compared with those which are possible in connection with the great items of national expenditure, are beginning to be resented by the general public. In the case of the supply of milk by Local Authorities the Ministry has presumably come to

the conclusion that it has gone too far, and it has now withdrawn its threat to reduce the grant. We have no doubt that in many other directions the Ministry will discover that it is making a mistake in playing for political kudos and risking the loss of popular approval. One of the latest efforts was the Board of Control circular about reducing expenditure, presumably issued at the dictates of the Ministry. In a recent case brought up on remand at the Westminster Police Court under the Mental Deficiency Act, Mr. Leeming for the L.C.C. pointed out that that body had been requested by the Board of Control to deal with no additional cases beyond a very close estimate of expenditure for the current year, which estimate had now been practically exhausted. The medical witness said that there was no chance for the defendant unless she were cared for in a proper institution, and the probation officer said that no ordinary home would take such a case. After hearing the evidence, the Magistrate (Mr. Chapman) ordered a further remand with the remark that a dangerous situation was created, and that it was very false economy.

"THE HOSPITAL AND HEALTH REVIEW."

After thirty-five years' existence as a weekly newspaper "The Hospital," established and conducted by the late Sir Henry Burdett, K.C.B., has become a monthly journal under the title of "The Hospital and Health Review." The new monthly will contain hospital news and criticisms as before, but it will enlarge its original sphere of interest by discussing, in addition to institutional matters, the multifarious activities of public health. The hospitals are becoming more and more centres for the teaching and practice of health, and in consequence, their activities take on a new and wider perspective which can best be presented in monthly reviews, wherein the whole movement can be brought into one focus.

The first number of the new series was published on October 21st and contains special attractions in the way of an article by Dr. W. Savage, M.O.H. for Somersetshire, on "Toxicity of Putrid Food," and also the first of a series of articles on "Notable Epidemics," by Dr. A. T. Nankivell, M.O.H., Hornsey, in addition to several attractive features of special interest to the medical officer of health.

DR. JAMES ARTHUR HARGREAVES, medical officer of health for the Wetherby rural district, has been appointed to the Commission of the Peace for the West Riding of Yorkshire.

OBITUARY.

DR. GEORGE WILSON.

We regret to have to record the death of one of our oldest Fellows, for some years one of our Honorary Fellows, Dr. George Wilson.

Dr. Wilson was appointed Medical Officer of Health for the Mid-Warwickshire Combined District in 1877 and resigned owing to ill-health in 1909. Prior to this he had been for ten years in the prison service. His "Handbook of Hygiene," a generation ago was the textbook for medical students; in fact "Wilson's Hygiene" was the only available publication for those who desired to acquaint themselves with this, then quite optional, subject. For many years this textbook held the field and in 1898 ran into its eighth edition. Unfortunately by that time Dr. Wilson had developed very heterodox views in the comparatively new field of bacteriology. He was an unbeliever in the germ causation of disease. These views he propounded in a striking presidential address before the Preventive Medicine Section of the British Medical Association meeting at Portsmouth in 1899. The writer endeavoured to persuade Dr. Wilson to have the book edited by a bacteriologist, but on this Wilson was obdurate. It was *his* book and he desired *his* views expressed whatever the result to the book. The foreseen consequences occurred. The book ceased to be of use to students and no further editions were necessary. It was probably owing to his known heterodox views that he was appointed to what may perhaps be best described as a "corner" seat on the Royal Commission on Vivisection in 1906; the anti-vivisectionists regarded him as their representative but Wilson declined to recognise any such relation and in his Reservation Memorandum he stated: "I am not an anti-vivisectionist." He was proud of his work on that Commission; he gave great attention to it and worked assiduously; the final report was published in 1912. Wilson signed the report, also a Reservation Memorandum jointly with the Rt. Hon. A. R. M. Lockwood and Sir William Collins. In addition he added a Reservation Memorandum of his own, longer than the final report itself, extending to sixty-six foolscap pages. This was full of painstaking conviction, evinced proof of a great desire to give full weight to evidence adduced but showed contin-

ually throughout that bacteriological considerations were anathema to him. This work was undertaken at a time when he was failing in health and handicapped by defective sight; had his convictions been less sincere he would certainly have avoided such arduous labour.

Wilson took his Medical Officer of Health work very seriously; and his attention to details and statistics for no less than eight sanitary authorities in his combined district, though evidencing great assiduity and incidentally tact and diplomacy, formed a strange commentary on our methods of local government; it is uneconomical that the mental capacity of a George Wilson should be employed in frivolous details and figures. We may perhaps muddle through to a more enlightened system.

Wilson graduated as a Master of Arts at Aberdeen in 1860; took his M.B., C.M., Edinburgh in 1863; M.D. in 1872; and D.P.H., Camb. in 1891; he received the honorary degree of LL.D. of Edinburgh in 1894 and was a Fellow of the Royal Society of Edinburgh.

Having retired in 1909, owing to ill-health, he and his wife travelled in Italy and elsewhere for some years and then settled down in Colwyn Bay, where the climate seemed to suit him. He had been troubled with cataract, only partially relieved by operation, and his latest years were marred by considerable visual disability. These drawbacks were met so far as they could be by the loving care of a devoted wife. He died on September 11th, at the age of eighty-three, and was buried on September 16th in the churchyard of Llandrillo-yn-Rhos.

Dr. Wilson was one of seven brothers, one of whom, Major Alan Wilson, lost his life in a memorable incident of the Matabele rebellion of 1896, when he and his men, after a heroic resistance, were all killed near the Shangani River. The only survivor of the brothers is a master at Epsom College.

DR. G. A. BORTHWICK has been appointed assistant medical officer of health and assistant school medical officer to the County Borough of Barnsley.

THE Public Health Committee of the British Medical Association is desirous of obtaining particulars of those local authorities who have in force superannuation schemes for their officials, and would be grateful to medical officers of health and others who know of such schemes if they would communicate with the Medical Secretary of the Association at 429, Strand, W.C. 2.

Presidential Address.

REFLECTIONS ON CERTAIN PUBLIC HEALTH PROBLEMS,

BY

WILLIAM J. HOWARTH, C.B.E., M.D.,
President of the Society of Medical Officers of Health.

The title of this address, which it is my duty in common with all who are elected to the honourable position of President of this Society to deliver, is an indefinite one. The choice is deliberate, for the reason that it allows considerable latitude of expression and a generous scope of subjects. No man may expect to attain the exalted office of President who has not been actively engaged in the public service for a considerable period of his active professional life, and it is reasonable to assume that the least energetic amongst us must have something of interest to communicate, just as it is probable that every man could write one inspired book on human emotions if he had the mind so to do. Generalisations on matters of mutual interest appeal to me as being a more congenial task, and one more profitable than to attempt a thesis on some complex scientific problem associated with our work.

EXTENDING INTEREST IN PREVENTIVE MEDICINE.

The topic which chiefly attracts me, though until recently in a somewhat passive way, is the fact that the profession of medicine for some years past has been agitated by political controversy, and, though undesired and unencouraged, the branch to which we belong is in continual danger of being involved. The origin of the disturbance was the passing of the National Insurance Act, and the risk that we may be drawn into the dispute arises from the acceptance of the principle that in the future, "preventive and curative medicine have to be brought together and practised in harmony." This is the statement of the principal Medical Officer of the Ministry of Health, and it is supported by the Editor of the *Lancet* in the words, "The prevention of disease is as much the rôle of the practitioner as is the cure and care of patients." Practitioners in general have accepted this view, and I think Medical Officers of Health could not raise any sound objection against it.

The development of public health on these lines has resulted in an increasing desire on the part of voluntary societies to participate in pre-

ventive work, a tendency which received marked impetus with the kingly utterance, "If preventable, why not prevented?" The medical consultant of Harley Street is similarly showing a no less praiseworthy interest, as is also his more humble colleague, the general practitioner. It is gratifying to know that both are anxious to claim some share of the credit for the results of the far-sighted policy of our predecessors, a policy which it is our present privilege to practise and develop. No exception need be taken to these claims or interests, for they will prove a stimulus in the development of the new principle.

My observations will be mainly directed towards ascertaining whether the combined efforts which are now operative are likely to lead to the best result to the State for money expended, and if not, to consider whether there is any outstanding alternative which might be substituted.

THE DEVELOPMENT OF MODERN PREVENTIVE MEDICINE.

Let us pause here for a moment and briefly consider the development of preventive medicine. It may safely be asserted that the first precautionary measures taken were in respect of conditions which grossly affected the special senses, e.g., offensive accumulations and objectionable sights. Neglect must have created intolerable conditions in the earliest communities, whilst the care of food, the control of drinking water, the rearing of infants and the general habits of life were based on experience gained through untold ages. Devastating epidemics doubtless furnished material for many horrifying tales, and it is reasonable to assume that the recurrence, more than once in a generation, of the same type of disease would result in some observant member of the community profiting by experience gained, and formulating rules based on that experience. Such, no doubt, was the origin of the earlier plague measures. The establishment of settled government would give good opportunity for the development of common action, and as is the case to-day, activity of proved value would be appreciated and either local or legislative action follow. From this might have arisen the recognition of the value of public records, and in this connection we have the Bills of Mortality—records which are of great assistance to the epidemiologist and statistician of to-day in his efforts to unravel the secrets relating both to the former health of the country, and to the degree of knowledge in respect of diseases which prevailed in these earlier days.

Among outstanding progress in more modern times, it is not difficult to appreciate how the rapid and enormous changes in social conditions which followed the development of industrialism during the fourth and fifth decades of the last century accentuated the obvious and glaring inequalities in the conditions under which the different grades of society passed their lives. Official documents and private contributions alike indicate the low value which was placed on the lives of the members of the working classes. The injustice to which the child was submitted and the shameless exploitation of the masses, who received inadequate remuneration for excessive hours of physical toil, resulted in a successful fight to establish the principle that all living persons were at least entitled to that amount of sunshine and fresh air, and of sufficient food and water, which would enable life to be maintained, and to adequate provision for shelter and rest after the day's labours were concluded.

This principle, though established, was for a long time imperfect in practice, and later developments brought about the overthrow of that feudal legacy—the doctrine of the sacred rights of property. Property owners were made to realise that a landlord had a duty to a tenant, as well as a tenant to a landlord, and acceptance of this contention drew attention to the subject of municipal responsibility in respect of the ratepayers of the district which the authority controlled. It is from this point that public health activities as we now know them became the real interest and concern of the State.

CARE OF THE INDIVIDUAL—A PROMINENT FEATURE OF MODERN PREVENTIVE MEDICINE.

Benefits resulting from these developments made the later era of applied science fairly easy, and in the last thirty or forty years we have found that scientific discoveries have been acted upon, not always, it must be confessed, with alacrity and without reluctance, but often without the impelling necessity of existing disastrous local conditions. Progress during the last thirty years has been more rapid than in any previous period, and from the care of the community as a whole, the care of the individual now almost dominates the situation. To such an extent has this developed, that the most remarkable proposals submitted in advanced public health programmes seem to give no reason for surprise, and one wonders where it all will cease. As an instance, I may mention that it was suggested at the recent International Conference on Tuberculosis that

“it is surely not too Utopian a counsel that a periodic state census of all persons should be taken, so as to classify them by means of von Pirquet's test into those with open tuberculosis, those with latent infection, and those as yet free from such infection.” An elaboration of this principle then goes on, “such periodic examination of children every six months by tuberculin tests, as advocated by Calmette, would be of great service in detecting the onset of infection, and so leading to a search for and elimination of the cause.” The work entailed by such proposals, as well as the expense incurred, would require extraordinarily favourable results in justification, and even at the best, it can only be advocated if the personal factor and not other pre-disposing causes can be regarded as the chief agent in the spread of tuberculosis. I am not now prepared to discuss such a proposal in relation to its value as a curative measure; I simply submit this blunt criticism if it is regarded as a purely preventive measure.

So we reach present-day conditions, and just as landlordism, municipal negligence and industrial apathy have resulted in the establishment of principles affecting the duties of these sections to the community at large, so now there is slowly evolving from this national care of the individual, the problem of the duty of the individual to all others.

EXPLOITATION OF THE INDIVIDUAL.

By this obvious process in the evolution of present day preventive medicine, the individual has come to be a person in whom many are interested. That he has a duty towards others, everybody recognises, but by many, I fear this duty is regarded as a commodity which he has to sell, and which may be purchased by means of bribes, doles, grants and the like, instead of its being accepted as an ingrained religion which a loyal citizen ought to observe, and if loyal citizenship demands observance, neglect should naturally constitute an offence against the community, for which appropriate penalties should be provided. The reward of the politician consequent upon a profession of affection for him has proved too great a temptation, and the result of this affection is to encourage the former frame of mind, since it is perhaps not so acceptable a task to establish the doctrine that duty is a common attribute which should be observed, and not a virtue to be praised. The social reformer often finds in him an outlet for a pent-up desire to be busy, and the medical man, as a consequence of State interference in professional

relationship between doctor and patient, is rapidly coming to regard him as a useful asset. This obviously tends to degrade professional relationship to the level of ordinary commercial undertakings, and interferes thereby with the great tradition of trust and confidence based on real sentiment and affection which in the past made the profession of medicine an example of ideal human relationship. I am not sure, either, whether the Medical Officer of Health is not somewhat interested in the individual otherwise than professionally. It must be a great temptation to increase one's sphere of activity and consequential importance by elaborating schemes which modern policy seems to make so easily possible.

POLITICAL OPPORTUNISM AND THE INDIVIDUAL.

The politician also finds preventive medicine, or what passes for it, valuable ground on which to sow the seed from which the harvest of votes will later be garnered. The accounts of the benefits which are to accrue to individual members of the community from his proposals are clothed with attractive catch-phrases and fervid rhetoric. Promises are lightly made which a moment's contemplation would show it was not possible, either for the medical man or the politician, to redeem, and it is a sad reflection for us to think that the work of our predecessors has recently been assessed at a very low value, but we, who know, recognise that it would not be easy to submit an alternative for the real preventive work which is in progress and which has developed so advantageously up to the present time. Political opportunism is a pernicious vice, and particularly so when it is exhibited in connection with what is in foundation an applied science, since it frequently results in failure to develop a well considered policy. Similarly, there is a particular wickedness in political slogans used in the same connection, but in no connection are they praiseworthy since they often rouse false hopes with the inevitable reaction. This risk is not the only objection. These methods are expensive, since temporisations often render sound policy difficult to establish later, particularly by reason of the dislike to demolish a costly edifice already erected, and because subsequent adaptation means an encumbered compromise at the best. Reaction once roused demands remedies to be discovered, sometimes under difficult conditions, but always hurriedly, when a “hang-the-expense” frame of mind dominates the situation.

Notwithstanding these observations, there can be no doubt that many of the schemes which are

in operation to-day are in foundation worthy in the highest degree. The criticism, which I submit is not against the objective, but against the manner in which it is sought to give effect to the principle.

DIVISION OF PUBLIC HEALTH WORK.

To enable me to develop my subject further, I must ask you to permit me to present a subdivision of preventive medicine as the position appears to me at the present time.

1. The early conception of public health work which was the foundation of the present system, is still the most important element in State medicine so far as it concerns the Medical Officer of Health. Its object always was and still is to reduce human suffering and to prolong human life. If these objects are attained, there must of necessity result greater fitness and a greater measure of general happiness. “The purpose of the science and art of preventive medicine is to apply human knowledge to the prevention of disease.” This is Sir George Newman's very apt definition. In the absolute forefront is, and always must be, prevention. No suggestion of treatment entered into the consideration of the workers in this branch of medicine in the early days, and now, as always, if patients require to be cured of a disease which can be considered preventable, the preventive measures adopted are obviously imperfect.

2. The preventive aspect of curative medicine is a principle which is now only just beginning to be recognised. It is increasingly accepted that a patient, when he arrives at the surgery of a medical man with a diseased condition well advanced, has, in a large number of instances, already passed through a stage where early symptoms, could they have been recognised earlier and correctly interpreted, would have indicated the certainty of this particular attack. This leads to the suggestion that the physician, if he is to practice true prevention in curative medicine, must be interested in the patient not only when suffering from a well-defined disease, but in health or apparent health. This is important, for these symptoms are not only such that the patient neglects them, but at the present time the medical man is not in a position accurately to assess their value. It is somewhat on these lines that Sir James Mackenzie, by means of his practitioners' clinic, has opened out a new field of research which promises well, and if these early promises are justified by later knowledge, cure of the sick person will become secondary to the recognition and true interpretation of early symptoms.

probably by means of a system which provides for continuity of supervision. But, even without this specialised knowledge, there exists a vast opportunity for observation and instructional methods open to the general practitioner. If his responsibility is limited to cure, his interest in the homes of those families which are attached to him, either privately or by contract, is intermittent, and depends on the frequency of illness in those homes. It is true that any medical practitioner will give general advice if requested, and often without request, but it is only rarely that, in the homes of the masses, advice is sought otherwise than when illness exists. It is no use suggesting this is a duty of the doctor without arranging that this additional interest is remunerated, for it represents a considerable obligation if performed honestly, and necessitates not only visitation when requested, but a continuing interest in the family, perhaps throughout life, but certainly during the years when the family contains young, growing children. If this could be arranged, each practitioner accepting this work becomes an assistant in true prevention, as well as a worker in the sphere of curative medicine.

In the two sets of circumstances already mentioned, we recognise two totally different spheres of prevention, each with a related ideal, but requiring the skilled practitioners of each to be educated in totally different schools, one as the trained clinician, and the other as the trained administrator, but both skilled in methods of investigation. Both require the same fundamental knowledge, but the expert knowledge tacked on to the fundamentals is entirely different.

The two groups appear to me to require to work on parallel lines. The practitioner in ordinary preventive medicine would observe in the course of his investigations conditions prejudicial to health. His training would indicate the directions in which the physical conditions of persons in that particular area would be affected, and that information would be passed on to curative practitioners. Similarly, the practitioner in curative medicine, in the course of his work, would observe the existence either of early symptoms leading up to disease, or would recognise that a certain class or group of diseases was more prevalent in his area than in others. Such knowledge he would bring to the notice of his public health colleague, with a view to investigations being conducted to solve the riddle of the predisposing factors.

3. Preventive medicine based on medical

survey. As an administrative measure, we see this in its most active form in the medical inspection of school children. Defects which are discovered at these examinations are grouped, and a simple classification enables a comparative test to be made. Here we find the health official discovering instances of illness, and in some measure able to establish the fact that such illness is in excess or in numbers which appear to be normal. The local authority, through its health department, conducts these investigations in respect of persons between the ages of five and fourteen. The defects so brought to notice are too often the result of objectionable conditions existing in the homes of the children or in the environment of the homes. I have yet to find a school so insanitary, or means and methods of education so defective that the physical defects resulting from these deficiencies can be regarded as other than minor contributing agents, compared with what results from the home conditions of the scholars. In some instances, permanent disability has already resulted, in others cure is possible. It is a recognised fact that these physical defects among children are regarded with less concern by many parents than a similar degree of illness in the adult who can look after himself, and on whose fitness depends the income of the family. It is obviously, therefore, not reasonable to undertake such an extensive survey without arranging for treatment. This treatment should, however, be within the province of the general practitioner, but in present circumstances, his interest depends upon a request made by the parent. This request is all too rarely forthcoming, and as a consequence recommendations for treatment are disregarded. It seems almost despair, that is despair of getting anything done, which forces the local authority to undertake treatment, and apologetically, in its schemes, to introduce a provision requiring payment for services rendered, a provision which is practically never enforced.

Here, then, in the case of school children, considerable activity is displayed by the local authority, but no effective remedial measures can be expected unless the authority makes the necessary provision for treatment, and by doing so enters into competition with general practitioners. True, that if the parents are too poor the Poor Law exists, but in the case of the general run of ailments of children, parents will not seek the aid of the Poor Law. The sanitary authority, by its action, is thus made also to compete with that body.

Time, energy and money expended on treatment which simply benefits the individual is far less profitable than expenditure on schemes designed to prevent illness, and with respect to school children, there is a minimum of early preventive energy displayed after we have given credit for the survey. In the absence of adequate preventive energy, it will follow that individual children will be discovered each year, who will benefit by the treatment which the local authority provides, but until the sounder supervisory methods by general practitioners, which should be a continuing process, are adopted, each year will continue to produce a corresponding crop of children to be treated.

4. This, the final group, consists of patients who are treated for the conditions from which they are suffering, less in their own interests than in the interests of the community. In other words, it is assumed to be treatment given with preventive object. Perhaps the best illustration, and the one with the soundest basis for its existence, is that of venereal disease, but again I fail to see why the treatment of venereal disease should not be undertaken by an organisation linked up with curative medicine as a whole. Information obtained from such a clinic could be furnished to the health department, leaving that department to perform its real preventive function, such, for example, as undertaking work consequent upon the notification of the disease. I know that this is a controversial point, and I do not intend here to consider the arguments.

In addition to these four divisions, there is one method of prevention common to all, and this is education. The public health authority is coming to use this work more extensively, and few will now disagree with the contention that education such as is given at Maternity and Child Welfare Centres is contributing in no inconsiderable amount to the improvement in public health which is taking place to-day. The practitioner possesses equal opportunities for educating the public, though, as I have already suggested, he cannot give full scope to this aspect of his work unless families in the younger days are his continuing care in health as well as disease. In schools, education is becoming of increasing importance in the curriculum, but we have a long way to travel before an ideal programme can be expected. In the case of venereal disease, education may be looked upon as receiving well merited attention.

The illustrations mentioned, crudely as they are expressed, illustrate, in my opinion, the

present confusion between the preventive and other branches of medicine, and the probability of a greater mix-up resulting unless some change takes place. It all tends to a display of antagonism which will prove to be detrimental to both branches of the profession. The suggestion that curative and preventive medicine cannot be divorced or that they have the same objects can be interpreted in a manner which is too extreme, and perhaps it is this extreme interpretation which causes local authorities to undertake treatment schemes of all kinds, and similarly the same idea, contributing as it does to the justification of State schemes for treatment, conveys to many practitioners of medicine the impression that they are really practising preventive medicine, and that they themselves are competent, without adequate training, to express definite and forcible opinions on refinements of public health policy and administration. Probably, also, the opposite view holds good that many public health officials are assuming expert knowledge in clinical medicine which can only be justified in exceptional instances. It is useless to protest against the contentions of either, but that this state of affairs exists, and that misunderstandings are being created which will eventually interfere with progress if allowed to continue, most will agree.

STATE ORGANISATION CONNECTED WITH NATIONAL HEALTH.

It is recognised that there are three great organisations now concerned with national health, either in the way of cure or prevention. The Poor Law Authority, which has been subjected to much criticism in recent years, still continues to administer, more or less efficiently, for the wants of those who cannot afford to pay for medical treatment. This organisation is practically entirely concerned with "cure." The remaining two, the Local Sanitary Authority and the National Health Insurance organisation, in different degrees are concerned with both branches of medicine. I have briefly referred to the position of the Local Sanitary Authority. The most direct preventive aspect of the National Health Insurance Act is an important one, and of a character likely to prove irritating and objectionable if not used with circumspection, inasmuch as it gives to the National Insurance Commissioners or any approved society or insurance committee, the right to complain that either the local authority or individual or person concerned has been negligent in enforcing the conditions of the Act relating to the health of

workers in factories, workshops, mines, quarries or other industries, or relating to public health, housing of the working classes, or any regulations made under any such order to enforce or observe any public health precautions, with results which operate to their disadvantage, to claim what amounts to compensation for such neglect. This provision, to my knowledge, has, and I think fortunately, never been acted upon. Supervisory control over local authorities and employers should only be vested in the central authority.

The maternity benefit which is administered by the Insurance Act may be looked upon as a dole to assist families under trying conditions, but certainly, whatever its intention, it could be made a valuable preventive asset if administered by the local authority.

The treatment of tuberculosis has received special attention, and apparently specialisation was considered justified on preventive grounds, for an organisation intended to benefit the non-insured members of the community was developed on related lines. I have still to be convinced that money spent on treatment of tuberculosis is worth while on preventive grounds. I do not presume to judge of its value for curative work, but I am unable to see the necessity for detaching tuberculous conditions from schemes which provide for medical treatment in general, or for regarding such treatment as an essential factor in public health administration.

At the present time, the attitude of the central authority towards this disease has undergone somewhat of a change, and we find that the insurance practitioner is required to undertake treatment of the tuberculous insured person just to the same extent as would be necessary for any other ailment, and that the central dispensary is coming to be regarded more as a consultation centre and a general clearing house. Perhaps this more closely approximates the function of a dispensary in public health work, but even with this change I am not sure that it would not be better to regard it as a feature of a curative scheme.

NATIONAL MEDICAL TREATMENT.

The remainder of the provisions of this Act refer to medical treatment. This treatment is of a preferential kind, since it is limited not only to certain classes of workers from the age of 16 until they cease work, but also to such treatment as may be expected of a general practitioner of "ordinary professional competence and skill." If the condition of the patient is such as to require services in excess of this standard, the practi-

tioner must advise the patient as to the steps which should be taken in order to obtain such treatment as his condition requires, or where provision is made for such in or for the authority in which notice has been given by the committee to the practitioner, take such other steps as may be reasonably necessary in order that the patient may derive full advantage from the provision of such services.

It is clear from this that treatment contracted for by the State is of too restricted a character, since it leaves the more skilled and technical provision, both of surgery and medicine, in an unsatisfactory position. If the local authority has made arrangements, then the patient is encouraged to fall back on this, and probably what was in the minds of the framers of the regulations was State-aided treatment for tuberculosis and venereal disease.

It is difficult to see how, on this basis, a medical man is encouraged to undertake preventive work. He is paid to cure illness which has developed, and he limits his activities to that work, and then only among a selected portion of the community. Much of his time is taken up in curing or alleviating conditions which are often preventable, and no encouragement, other than personal enthusiasm, to interest himself in preventive work exists. Otherwise than at the selected ages, the position is left pretty much in the position it was before the passing of the Act. The age for medical benefit is one for which, except in the mass, the local authority does little. That in brief, then, is the present position.

One could enter into a discussion on whether it is desirable that a non-elected body should control an organisation which is supported by contributions from rate and taxpayers, and I do not think it would be difficult to support the contention that medical treatment is a thing apart from those monetary benefits which are paid in cases of invalidity or unemployment, or that it would be better to arrange for supervision and control of a medical service by representatives elected by the people who pay and who are direct beneficiaries, and by the profession who perform the work.

ADMINISTRATIVE RELATIONSHIP BETWEEN CURATIVE AND PREVENTIVE MEDICINE.

I have already referred to the position of the local authority in connection with the medical inspection of school children, and emphasised the fact that the authority is forced to give treatment to enable some advantage to be obtained from the expenditure already incurred on medical

services. Other similar work can be brought under review, but the above is enough for my present purpose, which is to emphasise the following position. The local authority undertakes general preventive work. It attempts to improve the conditions of life affecting the whole community. It undertakes special services, chiefly at the lower ages, namely, in infancy, and from five to fourteen years. At these ages, only inadequate provision exists for continued medical supervision and education in health matters at home. The local authority does its best by means of schools for mothers and health visitors, and by providing certain treatment for those discovered to be in need of it. Medical treatment is contracted for, for a class which does not return the best value for work done. Medical treatment of young children remains in a neglected, or at least unsatisfactory position, because the State offers no direct aid, and so long as this deficiency exists the curative efforts of the local authority may be likened to trying to fill a bucket with holes in it; it may be filled if there is a large enough inflow, but cessation of this inflow soon empties the bucket. Treatment which is provided to-day is differential and limited to selected classes. It is also limited in character. The contract under which this treatment is provided does not encourage the practitioner in the view that he should take an interest in the patient in health, as well as in illness. The treatment of the indigent poor is where it has been for years.

These disconnected efforts result from the recognition of the value of systematic medical surveys, and the value of providing treatment to encourage those who are unfortunately sick to seek assistance before the disease is too far advanced, but there does not appear to be sufficient appreciation of the fact that both schemes are expensive, and that, if limitations are necessary on that account, the foundation should be one which ensures a satisfactory working arrangement between the two.

NECESSARY ADDITION TO, OR CHANGE IN THE NATIONAL SCHEME OF TREATMENT.

Now what is the remedy? Two organisations are necessary, the one with cure, continuous supervision and home education as its main functions, and the other the present public health department continuing to develop its schemes of prevention. The first of these could be developed by an extension of the benefits of the National Insurance Act to all members of the families of insured persons. It is probably useless expecting any such extension in the present state of national

finance, and if such be the case I would, as a medical officer of health, prefer to cancel existing arrangements and leave the present insured class to make their own arrangements with the medical profession. Existing contributions by this class could still be used for invalidity and other benefits, but the money saved on present medical benefit I would like to see used to develop an organisation in which the first concern would be continuous supervision of and free treatment for families, say up to the age of ten or even fourteen years. This same organisation might well undertake the specialist work of the local authorities and the higher medical and surgical work suggested by the Dawson report. It is a rational basis for the provision of free treatment, and one with which the activities of the local health authority could be best and more advantageously co-related.

Unless some more definite arrangement is rendered operative than is the case to-day, the two branches of medicine will work without any co-ordination, and distinctly in competition. The local authority will continue to develop specialised forms of treatment, creating as it proceeds new groups of young expert officials without much hope of a real career open to them. Medical practitioners, on their side, and in direct proportion to the amount of expert treatment provided by the local authority, will lose in experience and become a less efficient body.

It is only by co-operation and the development of a rational scheme capable of progressive growth, that the community and the profession will benefit.

CONCLUSION.

This brings me to the main object of these observations. The criticisms may be sound and the proposals practicable, or they may be the reverse; my purpose will be served if I have satisfactorily demonstrated that developments are in progress which require the closest co-operation between both branches of the profession if a satisfactory progressive evolution is to be attained. Up to a few years ago, there was a clear-cut line of demarcation between the two, and we, as medical officers of health, concerned ourselves mainly with work in which the general body of practitioners took only passing interest. As a consequence, we became a detached body, and to a very great extent we are so to-day. This detachment and spirit of aloofness ought no longer to exist. Developments are such that we are not the only persons interested in legislative enactments dealing with national health, and it

is our duty now, at least, so I conceive it to be, to form an alliance with the practitioners of curative medicine. We must keep in close relationship and fearlessly and honestly discuss with them the situation and all possible developments, not only from our point of view, but from theirs. We shall become educated in their aims, and they in our objects, and I would even go so far as to suggest that the time has now arrived when some representative practitioner of medicine should be invited to join our Council, but whatever means we adopt, we should lay ourselves out to ensure that frequent interchange of opinion takes place. By this means only can we hope to frame a policy for the future development of preventive medicine, which will be sound both in principle and administrative possibilities, and which will give everybody concerned the freest scope for the exercise and practice of their special skill and knowledge.

THE PUBLIC HEALTH SERVICES IN RELATION TO THE GENERAL PRACTITIONER.

BY

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An address delivered before the West of
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Officers of Health at Winsley, Sept. 21st,
1921.

I welcome this opportunity of discussing with you the relation of the general practitioner to the public medical service, because I am convinced that only by frequent and friendly conferences between the various sections of medical service will a satisfactory scheme be evolved.

Nothing in the past has tended so much to interfere with the development of the medical service as the want of association of practically every section of medicine. Hitherto, each has worked in a more or less watertight compartment, and is rather jealous of any leakage from its own enclosure.

Preventive medicine has been separated from curative, and the various departments of curative medicine have worked the one independent of the other, the hospital apart from the general practitioner, the big hospital apart from the cottage hospital, the special hospital apart from the general hospital, and so on.

There is an interdependence, but it is neither recognised nor developed.

The dissociation of various sections of medical practice is no doubt largely the natural result on the one hand of the individuality of the medical practitioner, and on the other hand of the prevailing want of apprehension of the fact that the interest of the individual is the same as the interest of the community.

When public health authorities undertook not only the supervision of drainage, water supply and housing, but the notification and isolation and consequent treatment of cases of infectious disease, they came into such immediate personal contact with the family doctor, and so obviously interfered with his work, that he, resenting their intrusion, came to look on the medical officer of health as a sort of opponent, this cause was rather increased by the fact that much of the public health work was done by part-time medical officers, often practising as rivals to the men whose patients they had to deal with, though I have no doubt that in the vast majority of cases these officers acted with tact and fairness, there certainly were occasions when a little want of consideration on one side or the other gave rise to discords which rankled and spread to an extent out of all proportion to the cause.

And when of recent years treatment by public authorities came to be given not only to infectious cases which the practitioner was glad to be rid of, and which it was obvious could not properly be left in their homes, when treatment was extended to school children, persons suffering from venereal disease and tuberculosis, and those attending maternity and child welfare clinics, then the general practitioner became seriously alarmed, irritated with, and suspicious of, not the medical officer, but the public health authority.

Thanks to the tact of medical officers of health, the clinician's common-sense and appreciation of the need of community, both sides are now realising that they are as essential to one another as are the navy and the army to one another, that they are the fighting force of the community in its battle for health.

Can we any longer talk of preventive medicine and curative medicine as separate services, there is a definite service dealing with administration, but beyond this, where does one end and the other begin—can you define separate spheres of work for them?

Public health service deals with infectious diseases, including tubercular and venereal, the diseases of school children, of pregnant lying-in women, and of their infants, and cases of early mental disease.

If the service is to be truly preventive in the sense that it shall deal with every factor that may prevent the occurrence or aggravation of disease or disability, it must consider and possibly control, not only the environment of the people at home and at work, but their food supplies; it must prevent or treat not only the diseases I have already mentioned, but those most disabling diseases: influenza, dental disease in adults as well as in school children, disorders of digestion, affections of the heart, in fact, all preventable conditions that cause disability; it must also take an active part in that research work which is so essential to progress in medicine.

I mention this to show how closely related already is, and still more must be, the prevention of disease with the work of the general practitioner; in fact, we may fairly say that all medicine is in a sense preventive, admitting that, we admit that every practising medical man is, in fact, in the public health service.

How obvious, then, is the need for co-operation between the official public service and the family doctor.

So unmistakable is it, that in such a meeting as this no further argument is required in support of the statement.

But can it be said that under the present arrangements the State gets the best and fullest value out of the general practitioner?

Consider his knowledge of the history of disease in his individual patients, in their families and in the community in which he practises; his acquaintance with his patients' surroundings at home and at work, their conditions of life, their habits, his experience of the manner in which, and extent to which, these things influence them in health, in disease and under treatment.

No official can ever have the same intimate knowledge of the life history of the patient, the same opportunity to detect disease in its earliest stages, or, and this is even more important, the tendency to disease.

Surely there must be some means by which this unlimited supply of invaluable information can be used in the interest of the community more effectively than it is at present.

Now, the report of the Consultative Council is essentially an endeavour to link up all the

medical services and to provide that the general practitioner shall occupy in the public medical service, to a much greater degree than hitherto, that important position which his work and experience justify.

The scheme there propounded was surely not intended to be followed letter by letter; in fact, no one scheme can be everywhere practicable, its object is, I take it, to point out the need for method, for organisation and evenly balanced distribution of work.

It cannot be more than a broad outline of a plan which should develop and adapt itself as time goes on; to attempt more than this would probably be to restrict development in its fullest and best form. In times such as we are now passing through it is not possible to build the whole house at once, but we can plan it so that we may add to it from time to time as need and opportunity occur.

The communal clinic is the debatable meeting-place of the general practitioner and the medical officer, and the point we have to consider first is not how the service can be arranged to enable the practitioner to take part in it, but whether it is essential for its greatest efficiency that he should so do.

Few will question the need for the continued existence of the general practitioner, the more efficient he is the more valuable he must be to the public. Picture the world without him. But if you take from him the opportunity to diagnose and treat all the diseases and conditions that already are or are likely to be diagnosed and treated at your clinics, it is evident that you seriously restrict his experience, his knowledge, his skill, and his usefulness. You almost annihilate him.

Again, while the patient at the clinic may require the expert special opinion, he equally requires the expert general opinion.

The public are rather inclined to confuse specialist with consultant, and I think that there is, in the public service, a rather indiscriminate tendency to specialism. The tendency to say, "Here is a specialist, all cases in his line must be under him," whereas the procedure should be, "We have provided a specialist, consult him whenever you think fit."

In regard to the competence of a medical man to undertake what is called special work, it is frequently forgotten that in many cases what was specialist practice yesterday is general to-day, in fact, were this not the case the pioneer work of the specialist would lose much of its value.

We hear of the mistakes and oversights of the private practitioner that are discovered at the clinics, but the family doctor sees mistakes and oversights that occur there too. They are probably no greater in one than the other; they are inevitable in all practice.

But if only the work of the two could be combined how much less likely would be the occurrence of these mistakes.

Which is easier, to graft the general experience of the private practitioner on to the expert or to educate the practitioner in the work of the specialist?

However, cannot both practitioners be used, the general practitioner who has specialised in some degree carrying on the work of the clinic, with the assistance, when necessary, of the expert?

If all persons were insured every doctor's surgery might be a clinic, the communal clinic being used for consultative purposes, and for treatment that could be better and more expeditiously done there.

As the clinic system extends, the greater the need for efficiency, the greater the need for every sort of assistance, the greater the need for the general practitioner, with his special experience and opportunities. In fact, every extension of the system magnifies the impossibility of dissociating the domiciliary and consulting room work of the practitioner from that of the clinic.

When the medical man can follow through the cases that he cannot properly deal with in their homes or his consulting room, to the clinic or hospital, with their better facilities for diagnosis or treatment, and for consultation when necessary with other general practitioners or specialists; when he can do this, how much more keen must he become, how much more useful to the nation as well as to his profession.

He will come to have a different conception of his private practice as he realises, as he will if he has the chance, that it is all part of the great service that medicine has from all time endeavoured to give the world, though its efforts have too often been hampered for want of method and opportunity.

If the need and advantage of the assistance of the general practitioner is admitted the medical officer of health will not rest until he has found the means of using it.

In the actual arrangement and conduct of this there will no doubt be difficulties, but we

consult you, the experts and specialists in administration, believing that in consultation only can then difficulties be overcome.

But so important is an alliance with the general practitioner that to secure it treatment must be radical, if other means do not suffice; it might even be necessary to remodel the whole system of clinics.

There is already by the force of circumstances a constant convergence of various sections of medicine, the centrifugal forces are weakening, the centripetal are increasing. Yet we cannot shut our eyes to dangers that are incidental to the process, to recognise them is to avoid them.

The medical man is fearful of losing his professional independence, of which he is for many reasons, and I think rightly, very jealous.

But I am sure that he recognises that in a society so complex and interdependent as ours, there must be limits to individual liberty, and is anxious to discover some means by which he can combine his freedom of thought and method with that intimate and hearty co-operation between all departments of medicine, which is necessary for a complete and efficient service.

It must be remembered that in indiscriminate consultation there lurks a risk of the loss of that sense of responsibility which weakens instead of strengthening individuality, capability, and knowledge.

I appeal to you to do all in your power to enlist the services and sympathy of every practitioner. With every extension of the Insurance principle prevention becomes increasingly (his lowest) his pecuniary interest, with every fresh scientific acquisition, with every new opportunity for the better practise of his art, it becomes his highest inspiration.

THE WASSERMANN REACTION—ITS VALUE AND LIMITATIONS.

BY

H. WANSEY BAYLY, M.C., M.R.C.S.

The numerous articles and correspondence that have taken place in nearly every medical journal during the last three years on the subject of the reliability of the Wassermann Reaction makes it quite clear that this test is not in any way pathognomonic, and that it is liable to lead practitioners into very serious error if they do not know its limitations.

The valuable article on this subject, by Mr. R. M. Pearce and Dr. G. J. Langley in the October issue of "Public Health," is of great value, as the number of tests applied on a large number of patients enable conclusions to be drawn, based on experiments sufficiently numerous to make the statistics based on them of weight and value.

If, however, a critical survey is made of the figures presented by these gentlemen, it is difficult to see how they arrive at their conclusions, which appear to be that the test is a valuable one as a means of diagnosis. Indeed, the results published in their various tables indicate that the results obtained by them were even less satisfactory than those which have been obtained by many other workers.

Table 1 shows that only 57 per cent. of untreated primary sores that have been present for 28 days give a positive reaction, and only 75 per cent. of similar cases in three months, only 65 per cent. of secondary cases, and 55 per cent. of tertiary cases. In treated cases, whether the treatment has been old, new, or inadequate, the positive results are at about the 50 per cent. line, and if no treatment has been given at all, the percentage of positives is about the same.

Table 3 shows that even with such strong dilution as 1 in 5, only 50 per cent. positive results are obtained under four weeks, and 65 per cent. in over four weeks, but under three months.

These results clearly indicate that the Wassermann Reaction is of no value for the diagnosis of primary syphilis, as it is an equal chance as to whether a positive or negative result will be obtained, even if the sore has been present a month. That out of 2,897 cases of florid secondary syphilis only 65 per cent. should give positive results; and that out of 1,242 cases of syphilis with tertiary lesions only 55 per cent. should give positive results, suggests also that the Wassermann Reaction is of little value for the diagnosis of secondary and tertiary syphilis with the technique employed in the Pathological Department of the University of Manchester.

The value of a provocative dose of Salvarsan does not appear clear, as the three out of 53 cases that were previously negative and became positive are not very conclusive.

In *Tabes Dorsalis* also about an equal number of cases gave a positive and a negative reaction. Of cases which had apparently been

diagnosed as general paralysis of the insane, somewhat less than 50 per cent. gave a positive reaction of the cerebro-spinal fluid. Now, I think I cannot be accused as being a biased partisan in favour of the reliability of the Wassermann Reaction; indeed I think that I was one of the first to draw attention to the fact that this test was far from being pathognomonic, and that it was essential that its limitations should be known, (1) but my experience certainly leads me to believe that it is of greater value than the above figures would lead one to suppose, (2) and my experience, extending over ten years, does not cause me to modify the opinion I expressed in 1912, (3) that about 75 per cent. of positive reactions are obtained in primary cases, if the initial lesion has been present over one month; while florid secondary syphilis gives 90 per cent. of positive reactions, and tertiary lesions about 75 per cent., if the original technique is employed.

My figures also agree with those of Mott and Plaut, in finding about 90 per cent. of positive reactions of the cerebro-spinal fluid in cases diagnosed as general paralysis. In my opinion it would be equally a matter of regret if the general practitioner was led to believe that the Wassermann Reaction was of little practical value, or whether he was deluded into thinking that the Wassermann Reaction was an invariably reliable test in cases provisionally diagnosed as secondary and tertiary syphilis or general paralysis. I believe that a negative Wassermann is of very decided value indeed, as indicating a very considerable probability that in such cases the provisional diagnosis has been an erroneous one. Similarly, if a lesion is present, the nature of which is obscure, the presence of a strongly positive Wassermann Reaction indicates that anti-syphilitic treatment should be given, and the effect of such treatment noted before considering the advisability of proceeding to other forms of treatment.

References:—

- (1) Bayly, H. Wansey: "The Wassermann Reaction—Its Use and Abuse." ("The Lancelot," 4.5.18.)
- (2) Bayly, H. Wansey: "Venereal Disease—Its Prevention, Symptoms, and Treatment" (1919). (J. & A. Churchill), London.
- (3) Bayly, H. Wansey: "Clinical Pathology of Syphilis and Parasyphilis" (1912). (Balliere, Tindall & Cox), London.

NOTES FROM THE BRANCHES.

FROM THE METROPOLITAN BRANCH.

1. UNLABELLED CREAM PROSECUTIONS.

Instances where action has been taken in London under the Public Health (Milk and Cream) Regulations, 1912, Amendment Order, 1917, dated 8th February, 1917, No. 141, have been so few that a note of two cases heard recently may be of interest. The defendants in each case were the same, the prosecuting borough councils being St. Marylebone and St. Pancras respectively.

In the first case the summons was for delivering and depositing for sale preserved cream in a receptacle not labelled in accordance with the regulations. The evidence showed that an employé of the firm called at the dairy, with the proprietor of which there was a standing order for the delivery of unpreserved cream, and was asked for two quarts of cream. Bringing with him into the shop a three-gallon can and a four-quart can, neither of which was labelled, the man poured the required quantity of cream from the larger into the smaller can, the latter being left on the premises. Payment having been made for the cream, the inspector took a sample, which on analysis proved to contain boric acid equal to 0.2%—14.0 grains per lb. After the sample had been taken the vendors' employé labelled the four-quart can as prescribed by the regulations, but did not label the larger can which was returned to the delivery cart. The vehicle itself was found to contain a considerable number of cans, all unlabelled, some of which contained preserved cream, and others unpreserved cream. A sample of the latter proved on analysis to be genuine. At the hearing it was argued for the defence that the vendors had not been given an opportunity to offer an explanation, as provided by Article VI. of the regulations. For the borough council it was contended that due notice in this respect had been given, as the inspector had enquired verbally of the vendors' employé why labelling had not been done, and had received in explanation a reply from him that he had forgotten it. This the magistrate held to be sufficient, and imposed penalties.

In the St. Pancras case the circumstances were similar, but in addition to a summons under the Regulations, another under the Sale of Food and Drugs Acts, for selling cream to

the prejudice of the purchaser, was issued. At the hearing only the latter was proceeded with, the defending solicitor entering a plea of guilty. The defendants were fined £2, with 10s. 6d. costs.

2. THE CLERGY AND HEALTH WEEK.

On the whole the National Health Week campaign appears to have been taken up enthusiastically in the London boroughs, and nothing but good can result. And this at a financial outlay that even the most hardened economist could scarcely begrudge, since it involves in most cases but a comparatively trifling expenditure on the printing of posters and handbills.

In a propaganda scheme of this nature it is evident that the various religious bodies can be a most potent factor in bringing to the masses the gospel of personal health. It is to be regretted, therefore, that, from all accounts, the response from the churches during the recent celebration of Health Week has been so poor. In St. Marylebone, for instance, a special appeal was sent to some sixty ministers of different denominations in the borough, asking that a special sermon on the subject of health might be preached on Health Sunday, or some reference made to the matter, and offering to provide speakers from the staff of the Public Health Department for meetings of girls' clubs, etc., and to supply appropriate posters and leaflets for general distribution. Only four replies were received—less than 7 per cent. Physical health cannot be so far removed from spiritual and moral well-being that it deserves this fate at the hands of our clerical colleagues, and it is difficult to understand why even one Sunday in the year cannot be devoted to contemplation of the thought that "Cleanliness is next to Godliness."

3. TUBERCULOSIS PROCEDURE.

A conference between the London County Council officers and those of the metropolitan borough councils concerned with administration and treatment in regard to tuberculosis is to be held at the Society's Rooms on Friday, November 4th, 1921, at 4 p.m., for the purpose of discussing various points in connection with the Memorandum of the County Council on the Treatment of Tuberculosis (Revised Procedure), which has been in operation experimentally during the last few months. It is hoped to secure a good attendance, and members interested are asked to make an effort to be present at the meeting.

WEST OF ENGLAND BRANCH.

1. AN INTERESTING MEETING.

Some seventeen members and guests of the West of England Branch met on September 21st, at the Winsley Sanatorium, near Bath, and spent a thoroughly enjoyable afternoon. Lunch was provided for those able to arrive in time. An inspection, under the guidance of Dr. Pedley, the Senior R.M.O., was then made of the various buildings and of the extensive grounds. The estate covers about 40 acres, and there is accommodation for 120 patients. Visitors had an opportunity of seeing the laundry, electric light plant, sewage disposal works, sputum disinfecting apparatus, and a water softening installation. The business meeting was held at 3.30, and was followed by a discussion on "The public health services in relation to the general practitioner." Dr. C. E. S. Fleming, who is a member of the official Consultative Council dealing with medical and allied services, opened the discussion by reading a valuable paper on the subject. The Branch was entertained to tea by the Sanatorium Committee, to whom, and to Dr. Pedley, a cordial vote of thanks had been passed during the afternoon for allowing the meeting to be held at the Sanatorium and for their kind hospitality.

A side light was thrown on the inherent difficulty of getting large gatherings from an extensive area with a scattered membership, by the fact that the return journeys undertaken by thirteen of the seventeen attending the meeting amounted in the aggregate to about 1,700 miles, an average of 130 miles each.

2. A TUBERCULOSIS SUB-GROUP.

A number of clinical and administrative tuberculosis officers were present at the meeting referred to above. After full discussion, it was decided that the time was opportune for the formation of a Sub-Group. Dr. Bushnell, Tuberculosis Officer and Deputy M.O.H. for Plymouth, was asked to act as Secretary until a meeting, called for the purpose, should have elected officers and made other necessary arrangements. It was suggested that this meeting, to which all likely to be interested will be invited to attend, should be held at Bristol in October.

3. BRISTOL'S NEW SANATORIUM.

Bristol is fortunate in having a medical officer of health who has been able, in this year

of reaction, to induce the Council to purchase and equip, what will ultimately become a magnificent institution for the treatment of tuberculosis in children. Frenchay Park occupies seventy acres, and the mansion, without additions, is capable of being adapted to accommodate thirty-five patients, together with the necessary staff. The whole property, which is delightfully situated within easy reach of the city, was purchased for about £17,000. There is ample room for large extensions, which it is hoped to make in the future. The building was formally opened as a sanatorium on October 6th, by Sir Wm. Treloar, in the presence of a large number of influential citizens. One sentence in the press report of the proceedings strikes us as being infinitely pathetic from a national point of view, though it is, of course, a real tribute to Dr. Davies. The Chairman of the Health Committee stated that a large number of schemes, with a similar object in view, had been prepared and submitted to the Ministry of Health, but with one small exception no other had been permitted, in view of the present financial strain, to go forward. As if turning down such schemes were economy!

4. BRANCH MEETING AT TORQUAY.

A meeting of the West of England Branch will be held in the Town Hall, Torquay, at 2 p.m., on Wednesday, November 30th, 1921, when Dr. Thomas Dunlop, medical officer of health for the Borough of Torquay, will deliver his presidential address. Arrangements have been made for members of the Branch to visit the Refuse Destructor (when the Borough Surveyor will describe his new electrical refuse remover), and the new Housing Estate of the Corporation. The motor drive will be extended to include Babbacombe Downs, the Lincombe Drive and Daddy Hole Plain, and will terminate at the Bath Saloons, where tea will be provided by the President. All medical officers of health, school medical officers and tuberculosis officers are invited to the meeting, even if they are not members of the Branch.

THE Hygiene Committee of the League of Nations has held its first meeting at Geneva, under the presidency of Dr. Madsen (Denmark). Dr. G. S. Buchanan, C.B. (Great Britain), was elected vice-president.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

ANNUAL GENERAL MEETING.

The Annual General Meeting was held at the house of the Society on Friday, October 21st, 1921. At the commencement of the proceedings Lt.-Col. Fremantle, M.P., presided, there being a very large attendance.

The minutes of the last Annual General Meeting having been approved and signed, Col. Fremantle called upon his successor, Dr. W. J. Howarth, to occupy the presidential chair, and invested him with the badge of office. In congratulating the new President on his election, Col. Fremantle recalled that Dr. Howarth had at various times been chosen by his colleagues to preside over three different Branches of the Society, a unique distinction of which any man might be proud. He had now attained to the highest position which the Society could bestow, and he was assured of the loyal support of every Fellow, Member and Associate during his year of office. Dr. Howarth having briefly thanked the Society for placing him in such an honourable position, a vote of thanks to Col. Fremantle for his services during the past session was carried by acclamation. In proposing the vote Prof. H. R. Kenwood declared that Col. Fremantle had served the Society faithfully and well, not only at Council and Committee meetings, but also very notably in the House of Commons.

Col. Fremantle in reply said that he had esteemed it a great privilege to preside over the Society, and acknowledged the great assistance he had received in his duties from the Council and officers.

On the recommendation of the Council, it was agreed unanimously:—"That the Honorary Fellowship of the Society be conferred on the Rt. Hon. Lord Gainford and Sir Philip Magnus, Bart., M.P., in recognition of their parliamentary services in connection with Public Health Administration and more especially for their successful efforts in regard to the Public Health (Officers) Act, 1921."

The annual reports of the Council, the Hon. Editor and the Hon. Treasurer, as recorded in the transactions of the Council, were duly submitted and adopted, and votes of thanks accorded for services rendered.

Mr. J. T. Harris was unanimously re-elected as Auditor of the Society for the Session 1921-

1922. The following candidates having been duly nominated were elected to the Society:—

As Members:—Adams, Herbert Fredk. Wilfrid, M.B., Ch.B.Ed., D.P.H.; Attlee, Cecil Knight, M.R.C.S., L.R.C.P.; Boag, John Hamilton, M.C., Capt. R.A.M.C., M.B., Ch.B., Ed., D.P.H.; Bodington, Percival James, M.B., Ch.B., Edin.; Bushnell, Frank George, M.D., B.S. Lond., B.ès Sc. Lett., Paris, M.R.C.S., L.R.C.P., D.P.H.; Cheyne, Douglas Gordon, M.C., Capt. R.A.M.C., M.D., Ch.B.Aherd., D.P.H.; Cole, John Wm. Edward, M.A., M.B., B.Ch. Cantab., M.R.C.S., L.R.C.P., D.P.H.; Cummings, Stevenson Lyle, C.B., C.M.G., Col. A.M.S. (ret.), M.D., B.Ch., R.U.I.; Davies, Ernest Ivor, M.B., B.S. Lond., M.R.C.S., L.R.C.P., D.P.H.; Fraser, Alastair Norman, D.S.O., Major R.A.M.C., M.B., Ch.B. Edin.; Gordon, Wm. Hadden, M.B., Ch.B. Glasg., D.P.H.; Hammond-Searle, Alfred Christopher, Major R.A.M.C., B.A., M.B., B.Ch. Cantab., M.R.C.S., L.R.C.P., D.P.H.; Jones, Edith Catherine Morris, M.B., B.S. Durh., D.P.H.; McIvor, William John, B.A., M.B., B.Ch. Dubl., D.P.H.; Paterson, Arthur Thomas, M.D., Ch.B. Edin., F.R.C.S. Edin., D.P.H.; Simpson, William, M.B., B.S. Lond., M.R.C.S., L.R.C.P., D.P.H.; Todhunter, John Reginald Arthur Digby, M.B., B.Ch. Cantab., M.R.C.S., L.R.C.P., D.P.H.; Trayer, Hugh George, B.A., M.B., B.Ch. Dubl., D.P.H.; Turner, Frederick Thomas, M.C., M.R.C.S., L.R.C.P.; Williams, Roger Llewellyn, D.S.O., M.C., L.R.C.P. and S. Ed., L.R.F.P.S. Glasg., D.P.H.

As Associates: Egan, Louis Eugene, L.D.S., I.; Gick, Reginald William, L.D.S. Liv.; Horton, James Ernest, L.D.S. Eng.; James, Charles Edward, L.D.S. Eng.; Leiper, (Mrs.) Ceinwen S., L.D.S. Eng.; Ludbrook, Stephen Percy, L.D.S. Eng.; Roberts, Thos. Henry, L.D.S. Liv.

A large number of candidates were nominated for election at the meeting to be held on November 18th.

Dr. W. J. Howarth then delivered his presidential address, which will be published in full in the journal of the Society.

The meeting closed with a cordial vote of thanks to the President for his address.

ANNUAL DINNER.

The Annual Dinner of the Society was held at the Café Royal, Regent Street, on Friday, October 21. The attendance surpassed all previous records, 165 members and guests being present. Seated at the high table were the President and Mrs. Howarth, the Bishop of London, Mr. J. W. Pratt, M.P. (Vice-President of the Scottish Board of Health), Sir Philip Magnus, M.P., Sir George Newman, Sir Aston Webb, P.R.A., Sir Anthony Bowlby, P.R.C.S., Sir Arthur Robinson, Prof. Sherrington, P.R.S. and Dr. Garstang (Chairman, P.H. etc., B.M.A.). Alternated with these guests were Dr. F. J. H. Coutts, Major-Genl. Sir W. G. Macpherson, Dr.

J. J. Buchan, Dr. Sidney Barwise, Dr. Eustace Hill, Dr. George Reid, Lt.-Col. F. E. Fremantle, Dr. G. A. Auden, Dr. J. R. Kaye, and Dr. A. G. R. Foulerton. The seven branch tables were presided over by the Vice-presidents (Dr. Herbert Jones, Dr. James Wheatley and Dr. R. Veitch Clark), the Hon. Treasurer (Dr. G. F. Buchan), the Hon. Editor (Dr. R. A. Lyster) and two recent ex-Presidents, Prof. H. R. Kenwood, and Dr. Charles Sanders. Others present included Drs. F. J. Allan, W. A. Bond, W. H. Hadmer, A. S. MacNalty, F. N. Kay Menzies, J. Brownlee, E. W. Goodall, W. Butler, E. H. Snell, T. Ridley Bailey, W. A. Bullough, Drybrough Gold, R. H. Wilshaw, Joseph Cates, A. T. Nankivell, H. Scurfield, J. B. Howell, Harold Kerr, Charles Porter, D. C. Kirkhope, J. M. Clements, Wanklyn, Hitchon, C. S. Thomson, Shadick Higgins, John Tate, W. J. Cox, R. J. Ewart, C. W. F. Young, J. M. Clements, Freear Wilkes, Woolsey Stocks, W. H. Corfield, Sir Bruce Bruce-Porter, Sir W. R. Smith, Mr. W. Fisk (President, Dental Group), Dr. T. H. Peyton, Capt. Grantley Smith and Dr. T. W. Naylor Barlow. Many members brought lady guests, so that the dining hall presented a very festive appearance.

Those responsible for the arrangements of the evening had experienced more than their fair share of misfortune. The previous day they had been warned that it might be impossible for Sir Alfred Mond to attend but that he would be represented by Lord Onslow. Then came the message that Lord Onslow was ill in bed. At the eleventh hour also, the news came that the Attorney-General was detained by urgent State business. However, as so often happens when things look most hopeless, once the members and their guests had assembled all troubles disappeared, and the evening was an unqualified success. Dr. Howarth presided with great dignity and his genial speeches admirably fitted the occasion. Mr. J. W. Pratt, M.P., Vice-President of the Scottish Board of Health, who attended on behalf of the Minister of Health, delighted the audience with an eloquent appreciation of the aims of the Public Health Service. The Bishop of London revealed the humour and humanity that have made him perhaps the best beloved man in the metropolis, and Sir Philip Magnus spoke happily of his work in the House of Commons in connection with public health matters. Sir George Newman, always an effective speaker,

was in his best form, and one might detect in the warm reception accorded to him how the assembly regarded the persistent press attacks recently directed against his department. The retiring President (Lt.-Col. F. E. Fremantle, M.P.), who was also warmly applauded, paid graceful tribute to the distinguished guests, the President of the Royal Society responding in a charming speech that unfortunately was not easily audible in some parts of the room.

Immediately after the toast of "The King," Dr. Howarth read the following message from the Minister of Health:

"I am extremely disappointed at not being with you to-night. My absence is due to circumstances over which I have no control. Nevertheless, I would like to convey to you all my warmest appreciation of the splendid work you are doing day by day, and year by year, throughout the country. You are the outposts of public health, and I am proud to rely on your loyal co-operation at all times. I sincerely hope that the present need for stringent financial economy will not unduly discourage you. Even though extensions are not at the moment practicable, there is a wide field of opportunity for consolidating the splendid achievements of the last twenty years and keeping the health services at the high state of efficiency they have reached owing to the indefatigable efforts of the medical officers of health."

At the close of the evening the President, with cheery informality asked permission for one or two "domestic" toasts. These included his first chief and kindest guide in public health work, Dr. Sidney Barwise, and the Executive Secretary, each of whom made suitable acknowledgment of an unexpected compliment. Finally, at the President's request, Dr. Herbert Jones proposed the health of the Hon. Treasurer (Dr. G. F. Buchan), and the Hon. Editor of "Public Health" (Dr. R. A. Lyster), the former making a brief reply. It should be mentioned that the toast-master with gallant inspiration had, early in the evening, given the company an opportunity of paying homage to Mrs. Howarth by according her a special cheer in connection with the Presidential toast.

COUNCIL MEETING.

A meeting of the Council was held at the house of the Society on Friday, October 21st, Lt.-Col. F. E. Fremantle, M.P., presiding. There were present Prof. H. R. Kenwood, Col. H. W. Grattan, Drs. Peyton, Clements, Herbert Jones, Auden, Stocks, Snell, Gibbons Ward, Duncan Forbes, Joseph, Kerr, Howarth, Barlow, Kirkhope, Lyster, Wheatley, G. F. Buchan, Sanders, Eustace Hill, J. J. Buchan, J. T. C. Nash, Charles Porter, and Lt.-Col. P. Caldwell Smith.

The minutes of the last meeting having been approved and signed, letters of apology were read from Drs. Thos. Evans, J. F. Blackett and R. Veitch Clark.

Correspondence.—(1) From the British Medical Association inviting the Society to nominate two representatives for election to the Maternity and Child Welfare Sub-Committee of their Medico-Political Committee. *Resolved*: That Drs. G. F. Buchan and T. W. Naylor Barlow be nominated for this Sub-Committee.

(2) From the British Medical Association inviting the Society to nominate two representatives for election to the Parliamentary Sub-Committee of their Medico-Political Committee. *Resolved*: That Drs. W. J. Howarth and G. F. Buchan be nominated for this Sub-Committee.

(3) From the Metropolitan Branch of the Society nominating Dr. T. Shadick Higgins for election as a representative of the Society on the Sanitary Inspectors' Examination Board. *Resolved*: That Dr. Higgins be duly elected and notification thereof be sent to the Board and the Ministry of Health.

(4) From the Institution of Municipal and County Engineers enquiring if Medical Officers of Health paid by salary are allowed to deduct their professional subscriptions from assessments for income tax.

The Executive Secretary was instructed to reply that in some areas the Surveyors of Taxes allowed such deductions, but that there appeared to be no definite ruling in the matter. The Society had asked the Board of Inland Revenue (Feb. 21st, 1921) that medical officials should be allowed abatements for any professional expenses not defrayed by their local Authorities, and had been informed that the matter should receive consideration.

(5) From a Medical Officer of Health reporting that all letters for his department, some of

a very confidential character, were opened by an official in the Town Clerk's office, and enquiring if such procedure had been adopted in other areas. The Executive Secretary was directed to reply that the Council had no knowledge of such an objectionable practice being sanctioned by any other Local Authority.

(6) From a Medical Officer of Health, reporting that the local Division of the British Medical Association were receiving delegates from the district Association of Ratepayers to discuss the annual report of the M.O.H. *Resolved*: That a letter be addressed to the B.M.A. pointing out that it is not in the interests of professional unity that the work of medical officials should be discussed by the Association or its Divisions with non-medical bodies, and asking if the meeting referred to was being held with the approval of the Association.

Representations from Branches and Groups.

—(1) From the Non-County Group: "That the Ministry of Health be informed that their decision, communicated to the Society by the late Sir Robert Morant on March 10th, 1920, that copies of all documents of any importance issued from the Ministry on health matters should be sent direct to the medical officer of health of every local authority at the same time that they are despatched to the clerk of the authority, is not being carried out, and in consequence such documents frequently do not come to the notice of medical officers of health.

(2) From the North-Western Branch: "That this Branch of the Society of Medical Officers of Health strongly deprecates the action of the Government in reducing the Milk Grant from 50 % of the actual expenditure to 5 % of the expenditure during 1920-21, and urges the Council to take such steps as they may consider desirable to bring the matter before the Minister of Health for re-consideration." Dr. Joseph asked permission to withdraw this representation, as the Government had announced their intention of continuing the full grant during the current financial year. It was agreed that the representation should be considered at any time should the reduction of grant be again proposed by the Government.

Sanitary Inspectors' Examination Board.—Owing to the resignation of Dr. Reginald Duffield, it was referred to the Metropolitan Branch to nominate a second representative of the Society for election by the Council to the Sanitary Inspectors' Examination Board.

Medical Inspection of School Children.—It was proposed by Dr. G. A. Auden and carried unanimously: "That representations be made in the appropriate quarters to give effect to § 3, sub-section I, para. 3, of The Ministry of Health Act, 1919, that there shall be transferred to the Ministry of Health all the powers and duties of the Board of Education with respect to the medical inspection and treatment of children and young persons." A committee consisting of Drs. Auden, J. J. Buchan and Barlow was appointed to report to the next meeting of the Council on the steps to be taken to give effect to this resolution.

Honorary Fellows.—On the proposal of Dr. W. J. Howarth it was agreed unanimously that Lord Gainford and Sir Philip Magnus, Bart., be recommended to the Society for election as Hon. Fellows.

"*Public Health.*"—Dr. Kirkhope having drawn attention to the attitude of "Public Health" in relation to the controversy regarding V.D. Prophylaxis, it was agreed on the proposal of Professor H. R. Kenwood: "That as 'Public Health' is the official organ of the Society, the opinions to be expressed in that journal in regard to matters of policy should be approved by an Editorial Committee before publication."

It was further agreed that the Journal Committee appointed in 1919 (the Editor, with Drs. Kenwood, Bostock Hill, Howarth, Veitch Clark and Charles Porter) be re-elected for the current session.

Report of Hon. Editor.—The following report was approved for submission at the Annual Meeting of the Society:—

LADIES AND GENTLEMEN,

During the year the printing of the Journal, under the contract, has continued satisfactorily, and the expenditure upon the Journal continues to be on a small scale, the actual editorial expenditure being only a small fraction of what it was a few years ago. Plans for making the Journal more useful and attractive are difficult to carry out without making considerable increases in the expenditure upon the Journal, but some improvements have been brought about during the year. If the same proportion of the total income of the Society as was formerly considered necessary for the upkeep of the Journal could now be expended upon it, it would at once be possible to make considerable extensions and improvements. The income from advertisements is fairly satisfactory.

The Editor has much pleasure in acknowledging the valuable services of the Executive Secretary in connection with the production of the Journal.

R. A. LYSTER,
Honorary Editor.

20th October, 1921.

Report of Honorary Treasurer.—The following report was adopted for submission at the Annual Meeting of the Society:—

LADIES AND GENTLEMEN,

I beg to submit my Annual Report for the year ended 30th September, 1921.

The year's working shows a deficit of £249 8s. 8d., being the largest sum since 1916, when the deficit was £300 2s. 8d.

I stated in my report to the Society, which appeared in the January, 1921, number of "Public Health," that the Society was now faced with a normal annual expenditure estimated at £2,500 as against a pre-war average annual expenditure of £1,912. The total expenditure during the year 1920-21 has been £2,414 11s. 6d. as compared with £2,041 11s. 9d. in the previous year, or an increase of £372 19s. 9d.

The main items of increased expenditure have been £270 18s. 5d., in respect of printing and posting the Journal and Roll of Members; £96 18s. in respect of General Printing, including the Memoranda on Salaries and the Dawson Report and the Group Regulations; and £50 15s. 1d. in respect of the Travelling Expenses of Representatives on the Council. Other items of increased expenditure include Fuel and Lighting, £46 1s. 11d., Branch Grants, £22 5s., Salaries and Wages, £55 13s. 8d., and other smaller items.

It is satisfactory to note that the income from subscriptions in 1921 exceeded the income from this source in 1920 by £114 15s. 5d., and that the income from advertisements exceeded that of the previous year by £73 16s. 1d.

The total increased expenditure referred to above represents a sum of £542 16s. 1d., and the total increased income, £188 11s. 6d., showing a balance of the increased expenditure over the increased income under consideration of £354 4s. 7d.

It is not very likely that any of the items of expenditure to which I have referred will materially diminish, but on the other hand the income from subscriptions will probably increase by a sum of £300 per annum, owing to the increased subscription now in operation. Even with this increased subscription it will be seen that it will be necessary to exercise rigid economy with the view of meeting liabilities without encroaching on the reserve fund while continuing actively to participate in all movements for the improvement of the Public Health and the status and position of members of the Society. To strengthen the Society financially, and as an instrument for good on behalf of its members and the Public Health, I would earnestly ask that each Fellow Member and Associate does his best to induce all who are eligible to become members of the Society.

I desire to record my indebtedness to the Executive Secretary for his invaluable assistance during the year.

GEORGE F. BUCHAN,
Honorary Treasurer.

19th October, 1921.

NORTH-WESTERN BRANCH.

Ordinary Meeting, held in Manchester, on Friday, October 14th, 1921.

Present: Dr. Wilkinson (chair), and twenty-two members.

A recommendation from the Committee that the Annual Dinner be held in Manchester on December 9th, and that a Sub-Committee, consisting of Drs. Talent, Corbin, Hitchon, Barlow, Dearden, and Joseph, be appointed to carry out all arrangements, was received and approved.

Dr. Wilkinson introduced Dr. Talent as President for the Session 1921-22.

A vote of thanks on the proposition of Dr. Barlow, seconded by Dr. Peck, was unanimously accorded to Dr. Corbin for his services as president during the past session, and the hon. secretary was instructed to write to Dr. Corbin expressing the sympathy of the members with him in his illness and their wishes for his speedy recovery. Dr. Talent then delivered his presidential address on "Maternity and child welfare work."

A hearty vote of thanks to Dr. Talent for his interesting address was proposed by Dr. Wilkinson, seconded by Dr. Thomson, and supported by Drs. Barlow, Daley, and Peck. A resolution, proposed by Dr. McClure, and seconded by Dr. Wood:

"That this Branch of the Society of Medical Officers of Health strongly deprecates the action of the Government in reducing the milk grant from 50% of the actual expenditure to 5% of the expenditure during 1920-1921, and urges the Council to take such steps as they may consider desirable to bring the matter before the Minister of Health for reconsideration,"

was passed, and the Hon. Secretary instructed to forward it to the Council.

Dr. Rees Jones drew attention to the Regulations under the Dangerous Drugs Acts, and summarised the main points of importance to Medical Officers of Health.

METROPOLITAN BRANCH.

A well attended meeting of this Branch was held at the Society's Rooms in London, on Friday, 7th October, 1921, the President (Dr. W. H. Hamer) occupying the chair.

Drs. Annis, and Parkes were re-elected Hon. Auditors for the ensuing session.

Dr. Higgins was nominated in connection with the appointment of a second representative of the Society on the Sanitary Inspectors' Examination Board.

Consideration was given to a communication from the Home Office inviting the Society to give evidence before the Departmental Committee on Street Trading in the Metropolis, and the Branch decided that the Hon. Secretary be empowered, after ascertaining the views of the Metropolitan medical officers of health on the subject, to appear, if necessary, before the Committee and give evidence on behalf of the Branch.

A letter from the Metropolitan Asylums Board, calling attention to the facilities available at St. Margaret's Hospital, Kentish Town, for the treatment of cases of ophthalmia neonatorum, was received.

The question of Annual Reports of Medical Officers of Health and the Memoranda governing their compilation and arrangement, was brought forward by the President, who had attended a conference at the Ministry of Health with regard to it. After consideration it was decided that it be left to the President to convey to the Ministry the view of the Branch that although it was not felt that there was need of any considerable alteration it was agreed to leave the matter in the hands of the Ministry. The members were, however, unanimous in objecting to the suggestion that a full report should be submitted only at five-yearly intervals, with skeleton reports in each of the intervening years.

"A bird's eye view of typhoid fever in London" formed the title of Dr. Hamer's presidential address to the Branch, which was listened to with the greatest interest. A cordial vote of thanks was unanimously accorded to the President for his excellent paper, which has been forwarded to the journal for publication.

TUBERCULOSIS GROUP.

Report of Meeting of Group Committee, held on Friday, 23rd September, 1921.

1. *Present*: Dr. H. A. Ellis, retiring Chairman, took the Chair for the first part of the meeting; and Dr. Peyton, Chairman for the current year, for the second part.

Drs. Blackmore, Burra, Hebert, Wingfield, Sorley and Caley.

2. The Minutes of the meeting held on 29th July, 1921, were read and passed without comment.

The Secretary reported that Dr. Welch regretted he could not attend the meeting.

3. *Constitution of the Tuberculosis Group.* Dr. Peyton raised the question of the admission as members of the Tuberculosis Group of distinguished members of the profession who held no public appointments, but whose private or consulting practice brought them into frequent contact with tuberculosis. It was pointed out that no one can be elected as a member of the Group, not even an Honorary Member, unless he is an actual or proposed member of the Society. Accordingly, he must be qualified for membership of the Society. The Executive Secretary advised the meeting that in practice the qualification for admission to the Society was made as elastic as possible, and that no difficulty had yet arisen in the direction indicated, and further that the Society would gladly welcome members of this nature.

It was accordingly resolved to put forward individual applications for membership of the Group as they arise, and to propose each case on its own merits.

4. *Formation of Sub-Groups.* A general discussion then took place as to the advisability of forming Sub-Groups of the Tuberculosis Group within each Branch of the Society.

The Secretary reported that at a meeting of Tuberculosis Officers and others interested in tuberculosis, held in Birmingham on 9th July, 1921, it was resolved to form a Midland Sub-Group, and also, that a Sub-Group had been proposed in the West of England Branch.

Dr. Herbert Jones afterwards attended and informed the meeting that the West of England Branch were very anxious to proceed with the formation of their Sub-Group and wished to obtain the sanction of the Group to go ahead at once.

5. *Need for Revision of Group Regulations.* As it was thought that the Group Regulations drawn up last year did not make sufficient provision for the formation of Sub-Groups, and it was unanimously resolved:—

That in accordance with the power conferred on the Committee by Regulation 10, the next meeting of the Group be a Special General Meeting to consider as to what alterations of the Regulations of the Tuberculosis Group are necessary to provide for the formation of Sub-Groups.

Certain amendments were suggested by the meeting for discussion at the Special General Meeting.

6. *The Status of the Tuberculosis Officer* with special reference to his position in the Public Health Service was discussed in detail by all members present.

This matter is to be considered again at the Committee Meeting on 22nd October, 1921.

7. *Representation of the Group on the Council of the Parent Society.* The meeting was unanimous in instructing its representative on the Council to press for the abolition of the present system of Group Representation on the Council of the Society with the object of substituting a system of equal membership of the Society and equal voting in the election of representatives of Branches on the Council, without preferential treatment of any section of the Fellows or Members.

8. *Programme for the Session, 1921-22.* The Secretary reported that Professor Edgar Collis, President of the Group, had accepted the invitation of the President of the Society to read a paper before the full Society, and that this paper would rank as his Presidential address to the Group.

It was agreed that in view of the suggested formation of Sub-Groups the Group Meetings should consist only of an Annual General Meeting, and such Special General Meetings as might be required. The Sub-Groups would no doubt hold ordinary meetings, as they thought fit, for reading papers and other matters.

9. A letter from the Medical Officer of Health, London County Council, dealing with a proposal to hold occasional conferences of persons engaged in tuberculosis work in London was considered, and the following five members were nominated to act for the Group in the matter:—Dr. Peyton, Chairman, Dr. H. Wilson, Dr. Hebert, Dr. Blackmore, and Dr. Caley, Secretary.

10. A letter was considered from the Yorkshire Tuberculosis Society forwarding a copy of a resolution passed at their meeting on 23rd July, 1921, that the administrative handling of Service patients is in need of radical revision, and that it cannot undertake any more printed forms.

It was unanimously resolved to defer action in the matter, and the Secretary was instructed to write to the Yorkshire Tuberculosis Society

and point out that such a resolution was calculated to do harm to the interests of Tuberculosis Officers and their work, when emanating from a Society representative of only a minority of Tuberculosis Officers, and that its publication in the Medical Press is particularly to be deprecated.

MIDLAND TUBERCULOSIS SUB-GROUP.

At the First General Meeting of the Midland Section of the Tuberculosis Group of the Society of Medical Officers of Health, held on October 22nd, at 44a, Broad Street, Birmingham, the following gentlemen were selected as officers and committee:—Dr. G. B. Dixon (President), Birmingham; Dr. Gordon Smith, Worcestershire (Vice-President); Dr. A. G. Campbell, Birmingham (Secretary and Treasurer); Dr. Bell-Ferguson, Smethwick; Dr. Clark, Walsall; Dr. Coward, Leicestershire; Dr. Edwards, Nottingham; Dr. Edwards, Nuneaton; Dr. Elliott, Shropshire; Dr. Peebles, Cheltenham; Dr. Sharpley, Worcester; and Dr. Watt, Derbyshire.

CORRESPONDENCE.

SCHOOL DENTISTRY IN ENGLAND.

The Editor, "PUBLIC HEALTH."

SIR,

I have read with great care an article on the above subject in the September publication of your paper, which unfortunately only came into my hands a few days ago. There are statements contained in it which, if you will permit me, I should like to criticise.

Referring to the treatment of temporary teeth, one reads: "In view of the small staff employed and the enormous amount of work required to be done, this can only be regarded as a waste of time which might far more profitably have been devoted to the saving of permanent teeth." Now, sir, the treatment and preservation of deciduous teeth is one of the most important duties of the school dental surgeon, and the value of the functions which this dentition performs cannot be too highly emphasised. A consideration of these functions is too large a subject to be entered upon in the limited space at my disposal, and I shall therefore content myself with a reference to the same eminent authority quoted by the writer later in his article. In chapter 13 of Mr. Norman Bennett's admirable book on the Science

and Practice of Dental Surgery, one reads: "The teaching of removal of incurably septic deciduous teeth has been confused by some with the wholesale removal of deciduous teeth with pulps unaffected and not beyond treatment. Such a method may lead to disastrous results, especially when post-normal occlusion is present, and even when the teeth are septic, extraction only should be adopted when it is felt that no other treatment would produce asepsis and so eliminate any danger to the general health."

This treatment, alas! is only too widely carried on amongst school dental officers, chiefly because they have no time to do otherwise, and because such is the line of least resistance, for it is far easier to extract a temporary tooth than to fill it, although in one's own short experience in this branch of work it occupies little more time to do the latter.

Furthermore, conservative work frightens the child far less once the initial fear of the drill, often imbued by a thoughtless parent, has been overcome.

Too frequently one sees as a direct result of the premature extraction of deciduous teeth a mouth in which the permanent dentition is so crowded as to predispose the patient to caries, and in adult life chronic general periodontitis. The regulation of teeth in children is, in view of the time it occupies, quite beyond the power of the school dentist.

Prevention as well as cure must be foremost in our minds. How, then, can caries be prevented in permanent teeth in a mouth which contains carious temporary teeth, the wholesale extraction of which must lead to the dangerous habit of food bolting, with its attendant evils?

The writer also remarks: "All the treatment necessary for both dentitions cannot be done. Something must be sacrificed, and it should certainly not be the permanent teeth."

It should not be forgotten that if the children are examined and treated early enough, and all caries from the temporary teeth eliminated, the danger of disease in the permanent dentition is enormously decreased. The age of five, as the writer suggests, is certainly not too early for the initial examination.

I am, sir,

Yours faithfully,

A. F. PERCY, L.D.S., R.C.S. ENG.

Public Health

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Editorial.

UNIFICATION OF CONTROL.

THE creation of a Ministry of Health was undoubtedly the result of a popular demand due to the general conviction that public health administration, both centrally and locally, was badly in need of co-ordination and reorganisation. Such a Ministry was claimed to be the first step towards the attainment of unification of control, and a good deal has been accomplished in that direction, but there is one central improvement which is very much overdue. The Board of Education still maintains its hold upon

the medical inspection of school children, and this condition of affairs is exercising a most unfortunate result upon the development not only of the work of medical inspection but also upon the general public health service with which it should by now have become an integral part.

It will probably be remembered that when the Ministry of Health Bill was in Committee the Board of Education made strenuous efforts to get itself excepted from the Bill, but the intentions of Parliament were very definite upon this point and the medical inspection of school children was included among the spheres of activity to be controlled and absorbed by the Ministry. In spite of its defeat, and in spite of the very clearly expressed wishes of Parliament upon the subject, the Board of Education has continued to retain control of the work of medical inspection, and in the Education Act, 1921, it has apparently re-established to a large extent the status quo.

It is important that the position under the Education Act, 1921, should be clearly understood. Section 3 constitutes the Council as the Local Education Authority, an entirely satisfactory condition but, unfortunately, section 4 proceeds to establish an education committee of the council to which all matters relating to the exercise by the council of their powers under this Act shall stand referred. Section 11 makes it the duty of the local education authority to submit to the Board of Education schemes for performing their duties with regard to education, but section 16 provides that the part of the scheme relating to medical inspection or treatment of school children must be approved by the Ministry of Health and not the Board of Education. This conforms with the Ministry of Health Act, but the obvious intentions of Parliament at that time are again nullified by the introduction of the proviso that the Minister of Health may make arrangements with the Board of Education respecting the submission and approval of such schemes, and the powers and duties of the Minister may, under such arrangements, be exercised and performed by the Board

of Education under such conditions as the Minister of Health may think fit. We contend that the continuation of this proviso, which was inserted into the Ministry of Health Act purely as a temporary measure, is in direct contravention of the intentions of Parliament when passing the Ministry of Health Act, and also that it is a serious obstacle in the way of the progress in public health.

The wording of section 80 of the Education Act, 1921, which appears at first sight to be entirely satisfactory inasmuch as all duties connected with medical inspection and treatment are placed upon the local education authority, *i.e.*, the local Council, but, unfortunately, section 4 causes this duty to stand referred to the education committee. Thus again the spirit of the Ministry of Health Act is not observed, and the obvious intentions of Parliament when passing that Act are being defied. Similar obstacles are provided in Section 118 where the strict letter of the Ministry of Health Act is observed by the substitution of the Ministry of Health for the Board of Education, but where the spirit of that Act and the intentions of Parliament are defied by the continuation of the proviso which was agreed upon as a temporary measure only.

The time is obviously much overdue for the whole of the work and machinery connected with the medical inspection and treatment of school children to become included in general public health work both centrally and locally. It is not at all difficult to show that its continued separation is against the public interest and is causing unnecessary expenditure in many directions. Every argument that was used for the creation of the Ministry of Health may be applied with equal force to the immediate inclusion of the medical work of the Board of Education within the Ministry, and for the immediate absorption of this work locally by the local public authority.

At the inception of medical inspection of school children there were obvious reasons why this work should be given to Education Committees, and all kinds of difficulties might have been created if this step had not been taken. Obviously, however, such an artificial arrangement of the work should have been only temporary, and it is now being realised that we have paid a big price for avoiding those preliminary difficulties and for obtaining those initial advantages. Medical inspection is now an established and accepted fact, and there no longer remain any real advantages for keeping this service

under the label of education. On the other hand the work is suffering badly owing to the fact that it is not being directed as part of the great public health machine of the country, and there are signs, moreover, that the present reaction in health matters is being seized upon as an opportunity for making the medical work of education committees a minor item in the local education department and for pushing it further into the background. The memorandum recently presented to the County Councils Association on this subject by the Association of Directors of Education should be sufficient to convince the Ministry of the danger, as such a memorandum must, necessarily, present the views of the average director only and stop far short of the ideas of the more extreme members. It is true that the County Councils Association have decided to ignore the memorandum, but there is no doubt that in most areas every effort will be made to secure at least the position set out therein.

Already, here and there, an extraordinary and farcical state of affairs has been set up, and many directors have succeeded in ousting the medical officer from his proper position as medical adviser to the education committee and chief administrator of the scheme for the medical inspection and treatment of children, and there is convincing evidence in such areas that such an arrangement is against the public interest. Some of the common results are set out in the article by a school medical officer which will appear in our next issue. In any case, it must be clear to the Ministry that the position is dangerous and that alteration is urgently necessary in the public interest when a progressive education committee like that of Bradford joins with the local health committee in appealing to the Ministry for an authority to transfer the whole of the medical work to the local health committee. Bradford's case will also be published in our next issue.

So long as Sir George Newman was established at the Board in a position of considerable authority the school medical service was being continually guided towards a co-ordination and coalescence with the general public health service, but since his removal to the Ministry there have developed gravely ominous signs that the powers at the Board have joined forces with the reactionary local elements in order to set the current in the opposite direction and to constitute the work relating to the health of school children as a minor department in the office of the director

of education. If this tendency is allowed to develop, or even continue, it will be necessary for the Society of Medical Officers of Health to take the extreme steps in order to warn the public of its danger, as every health officer is entirely of the opinion of Sir George Newman, which is expressed so clearly in his admirable report for 1920, in which he refers to the dependency of success in health work in schools upon ante-school and post-school activities, and urges the importance of co-relation and co-ordination. Effective co-relation and co-ordination can only be secured by unity of command, centrally and locally.

In some areas the lack of co-relation and co-ordination is not only directly disadvantageous to the development of the work and to the public service, but has led to an intolerable position. The fact that this service is mis-labelled "education," combined with the fact that grants in aid thereof are paid as part of the general "education" grant has led some education committees to regard it as one of the minor educational services to be controlled entirely by the director of education. In such areas the whole service is seething with discontent, which must inevitably reflect upon the quality of the work, and the work itself is carried out without any relationship to other public health activities in the district, and in some cases in actual competition with them. The present position is one which would not be permitted to continue in any big business organisation, and we feel confident that the matter has only to be put clearly before the present Minister for him to determine that the time has arrived when the clear intentions of Parliament in passing the Ministry of Health Act must be carried out, and that the whole of the medical work of the Board of Education should now be transferred to the Ministry of Health, and that the position locally should be established legally by the very small amount of legislation that would be necessary in order to complete the transfer locally as well as centrally. The actual legislation necessary will, of course, be decided by the legal advisers to the Ministry, but it may be suggested that a very simple amendment of Section 4 of the Education Act, 1921, would suffice. If Section 4 (2) (a) could have inserted in it the words "except as regards the medical inspection and treatment of school children," the position would apparently be made satisfactory, as this work would then fall naturally upon the Public Health Committee of the local authority.

"THE TIMES."

The "Medical Correspondent" of "The Times," in his recent communications upon public medical matters, resembles a spoiled child who destroys in turn all his toys and is pleased with nothing. He criticises venomously all public medical services and shows incidentally a vast ignorance about them, and at the same time he can see nothing but evil in medical work under the Insurance Act—a system which undoubtedly contains the germs of the only practicable system of a public medical service worked by medical practitioners who are not whole-time officers of the State. Apparently the only way to please him would be to return to the good old days when the practitioner was given insurance work by Friendly Societies, as a great favour, at about four shillings per head per annum.

We believe that the writings of this gentleman are being assessed at their real value by the public, but there is a real possibility that he may succeed in creating ill-feeling between the private practitioner and the medical officer unless the B.M.A. takes special steps to prevent it.

WILLESDEN B.M.A. DIVISION.

"The Times" has worked itself up into some excitement over an alleged proposal of the Willesden Division of the British Medical Association to combine with the Willesden Ratepayers' Association in an attack upon the medical officer of health, and it has ascribed the abandonment of the proposed meeting to the influence of the Society of Medical Officers of Health. This is of course entirely wrong, but it serves the purpose of the *Times*, which is to create as much bad blood as possible between the public health service and general practitioners. The Society of Medical Officers of Health has no influence at all which it could exercise in persuading the Willesden Division to abandon its extraordinary project. All that the Society has done is to remind the Secretary of the British Medical Association that there is a subject known as "Medical Ethics," and, acting on this reminder, the Secretary of the British Medical Association has presumably advised the Willesden Division as to the best course it could take in the matter, and this advice has presumably led to the abandonment of the meeting. At the same time we regret that

there seems to be undoubted evidence that a combination between the Ratepayers' Association and the Willesden Division (as represented by the small proportion of its members who attend its meetings and object to the progressive policy of the Willesden Urban District Council) is being favoured by the British Medical Association as an opportunity to attack the extensive scheme of treatment which is at present organised by the Medical Officer of Health for the District Council. This new move in B.M.A. tactics may have startling developments, and we urge the B.M.A. to hesitate before it embarks on a campaign of this kind. If persisted in, it amounts to a declaration of policy on the part of the Association that it intends to ally itself with any and every reactionary force in order to oppose the natural development of public medical services. Such an alliance amounts to the prostitution of a professional union for the purpose of alleged private gain. The health service of the country has nothing to fear from it, as it will probably do more ultimate good to the cause of progress in preventive medicine than anything else that could have happened, but it will inevitably destroy those friendly and close relations which have existed for so long between the B.M.A. and the M.O.H. Society to the benefit of both, and will lead to open hostility between the public health service and the other branches of the profession.

DENTAL DEFECTS.

This subject is evidently a popular one for discussion, as the Editorial comments of last month have resulted in numerous communications. Three of these are published in this issue, two of them as small articles from Dr. Wheatley and Mr. Strangways, and one from Dr. Herd in our correspondence columns. We welcome all expressions of opinion, and in particular the critical one (based largely upon misunderstanding) from Dr. Wheatley, who is a recognised authority and enthusiast on this important subject, and who will, we hope, allow us to publish next month his concrete proposals as regards the position of the dental needs of the population with relation to the work of health and education authorities of the country. A very large proportion of our readers are interested in the practical aspects of this subject, whereas the fact that Dr. Wheatley considers as proved certain theories which other people do not so regard is obviously a minor issue.

OBITUARY.

It is with very great regret that we have to announce the death of four distinguished members of the service and Fellows of the Society: Professor Sheridan Delépine, Colonel G. S. Elliston, C.B., Dr. D. Drybrough Gold, and Dr. H. E. Corbin. We hope to publish appreciations in our next issue.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

NOTICES.

Fellows, Members and Associates who have not yet paid their subscriptions for the Session 1921-22, are asked to do so at their early convenience. In these days of heavy printing and postal charges, the collection of subscriptions is an expensive matter when it is necessary to send several notices, to say nothing of the work involved for the clerical staff of the Society. The subscriptions now in force are: *For Fellows and Members*: Whole-time medical officers, £1 11s. 6d.; part-time or retired medical officers, £1 1s. *For Associates*: £1 1s. Cheques should be made payable to the Society and crossed "& Co."

The Hon Secretaries of Branches, Groups and Sub-Groups are invited to use the monthly agenda paper of the Society for notices of their meetings. The agenda paper goes to every member of the Society, so there are obvious advantages in circulating notices in this way. All notices for inclusion in the agenda paper should reach the Executive Secretary not later than the 24th day in each month.

The Annual Dinner of the North Western Branch will be held at the Queen's Hotel, Manchester, on Friday, December 9th, at 6.45 p.m. The Lord Mayor of Manchester, Sir Walter de Frece, M.P. and Mr. Henry Fildes, M.P. have accepted invitations to attend. Members of the Society desiring to be present should apply for tickets to Dr. G. W. N. Joseph at the Health Department, Warrington.

A BIRD'S EYE VIEW OF TYPHOID FEVER IN LONDON DURING THE LAST SEVENTY YEARS.

BY

W. H. HAMER, M.A., M.D., F.R.C.P., D.P.H.,
President of the Metropolitan Branch, S.M.O.H.

In choosing this subject I have had in mind Sydenham's dictum that a man does well to explore the phenomena of an epidemic disease in his own town; and also the fact that during thirty years of official life I have often had the chance of studying typhoid fever in association with past or present members of this branch. The fields over which we have roamed together may not have been of amaranth or of asphodel, but we have "paidled in the burn and pu'd the gowans fine," and can look back in quiet retrospect on happy memories of days of auld lang syne.

A president of the Society of Engineers fifty years ago was able to trace all cases of typhoid fever coming under his notice in London to faulty drains; the next succeeding generation concentrated its attention upon contaminated wells; their successors suspected river water supplies and polluted milk. America and the Continent of Europe followed after varying intervals of time the corresponding plans of campaign marked out in this country. It was pretty generally agreed seventy years ago that typhoid excreta were the source of danger; but the fresh evacuations were deemed harmless; nurses did not suffer, direct case to case infection was not admitted; an interval of days it was held must elapse before there was risk of trouble. *De novo* origin was, moreover, countenanced by Murchison; but Pettenkofer in the eighties had penetrated so far into the mystery of typhoid as to postulate an unknown factor closely bound up with earth temperatures and ground water levels.

Then, in the nineties, came the definite parting of the ways. Two great discoveries were made—Eberth's Bacillus, and the fact that typhoid could be communicated by shellfish. The former by itself might not have excited the interest which actually resulted, when it appeared in company with other causal organisms—coming at first (in the eighties) as single spies, and then in the nineties followed by the onrush of battalions in mass formation. As a result, epidemiology was divided into two camps, "contagionists" (followers of Koch)

and "localists" (disciples of Pettenkofer). The former speedily gained the upper hand and typhoid fever, willy nilly, became on the instant an intensely infectious disease, spreading from case to case like typhus or small-pox. Pettenkofer and others drank their pure cultures of typhoid bacilli in vain—for those were the halcyon times of bacteriology, ere the hey-day in its blood was as yet tame.

The other discovery, that of risk from polluted shellfish, though speedily confirmed in America and France, had at first nothing like the reception accorded to Eberth's finding. Bulstrode's great oyster report was, however, published in 1896 and there followed in 1911 his report on other shell-fish. In 1900, unmistakable fish outbreaks occurred in London, and during the next ten years the importance of estuarial pollution was increasingly realised.

The autumnal rise of typhoid in London almost disappeared in 1907; it was completely lost in 1909, and then again from 1912 continuously onwards; this was probably in part due to corresponding abandonment by the London, Grimsby and Hull Fishing Companies supplying Billingsgate, of certain nurseries of small flat fish, a disuse emphasised and stereotyped on the outbreak of war. A similar disappearance of the autumnal rise was observed in 1914, in Manchester, and was ascribed by Dr. Niven, in a measure, to improvement in the quality of the mussels supplied in that city; in this connection it may be noted that the amount of native shell-fish consumed in this country generally did not undergo much diminution during the war, and that the sale of oysters actually increased.

Meantime the contagionist hypothesis was in difficulties. Quite in the early days it had been noted with interest that sewer men did not often contract typhoid fever; moreover, vegetables from sewage farms could not be shown to produce disease. But a much more serious difficulty from Koch's point of view was the fact that convincing examples of direct case-to-case infection, when carefully searched for, proved strangely elusive. And even when found they might, it was realised, as a rule be explained (as Bulstrode suggested at Whitehaven, and as had all along been maintained by Murchison and most of the older epidemiologists) by persistence of the cause responsible for the "primary" case. It soon became necessary therefore, for the out and out contagionists to fall back, first upon unrecognised

typhoid in young children, and then as a *der-nier ressort* upon the healthy carrier.

Apart from all this the bacteriology of typhoid has during recent years undergone some modification, and the time seems thus specially appropriate for taking a bird's eye view of the London epidemiology of the last seventy years. This is no easy task; the facts as to London are so complex and need much more disentanglement than those of towns and countries, giving one more or less simple, if not always conclusive, answer to all enquiries. Thus in Belfast, to take an extreme case first, cockles have undoubtedly been paramount; in Germany the appeal has consistently been since 1903 to healthy carriers; in the armies in the Great War protective inoculation was deemed to overshadow everything; in England and Wales outside London and in the United States polluted water supplies have long held pride of place; in Glasgow and other Scotch and some American cities milk outbreaks have been not infrequently reported; in South Africa, in the Spanish-American War and elsewhere, flies have been regarded as very important. Truly, as Mr. J. M. Keynes tells us, in "A Treatise on Probability," the great crux is in determining "initial probabilities."

In appraising the "initial probabilities" of the several typhoid hypotheses which have found favour in London, some help and guidance may perhaps be found in notes on "Human Testimony" in a recent "Times" Literary Supplement. We are reminded that while there may be no doubt about a man's general trustworthiness there are "certain classes of statements, e.g., his breaks at billiards, the number of miles his motor car runs on a gallon of petrol—for which that particular witness's credibility is at a minimum." The "credibility" of a witness, in fact, varies in an extremely complicated way. "When Brown is listening to Jones talking about the enormities of Smith the extremely delicate and rapid weighing of probabilities being performed by Brown beggars any mathematical description." Human testimony, it seems, "has much less value than is normally assigned to it, and in particular much less value than it is held to possess in a Court of Law." Sensations most relevant to the enquiry in hand have necessarily "been filtered, as it were, through the medium of the witness's interest: and it is often the case that his interest has not been excited by the sensations most pertinent to the subsequent enquiry."

The "Times" writer cites Edgar Allen Poe's example in the "Murder in the Rue Morgue," of the "Cries of an Ape," which were interpreted as remarks in different languages by different observers"; he notes too how in war experiences soldiers gave details of catastrophes which never occurred, and how under the influence of the comparatively slighter emotions of a spiritualistic seance people will identify the same "materialised" mask as the features of their husbands, wives, sons and daughters; again, he remarks how unconscious reasoning plays its part in mal-observation, as in the statement of a man sitting in a dark room, "that dog's bark is not really a grasshopper, it is the squeaking of a cart." And finally "when the witness is not isolated but is a member of a group . . . the event will have been discussed and a uniform version gradually prepared. The phenomenon of *mimétisme testimonial* makes its appearance and may assume abnormal dimensions, a kind of collective hysteria may be induced, and there can be little doubt that some of the collective denunciations of witches which took place in the middle ages were manifestations of this form of mimicry."

Reverting to Mr. Keynes, we learn that "nothing is more obscure than the precise nature of the process by which we deduce probable conclusions from certain data. It is a question which has intrigued many excellent logicians and mathematicians, and the very elements of the subject are still in doubt."

There is one consideration, however, which at once meets the eye on a survey of the whole ground. The President of the Society of Engineers just did what anyone might have done, who enjoyed his advantages and laboured under his limitations. But surely he, if he had been confronted with the case of the Winchester and Southampton banquets, as elucidated by Bulstrode, would have suspected oysters, even if the drains of the houses of some of the sufferers had failed to pass the water test; he might perchance have held to his opinion even although the housekeeper of one sufferer, or the aunt of another, had become a typhoid carrier twenty or more years previously.

And thus in the light of recent knowledge, not a few of the reports of earlier epidemiologists make exceedingly fascinating reading. From this point of view, study may be made of water outbreaks; for instance, there are the two Tees Valley prevalences; looking at them now in the light of the fact that the affected districts

presented excessive incidence of typhoid some years before and after those two floodings of the Tees in 1890-91, and the fact that typhoid came down with a run when the shellfish beds in the estuary were disused, the verdict against the water seems less clear than it did thirty years ago, and the arguments of Mr. D. D. Wilson unquestionably gain added force. The same moral is pointed by Belfast, one or other of whose water supplies lay under suspicion, until Darra Mair settled the question of the sewage shoot and the cockle beds. Similarly Newport, the two Worthing outbreaks, Bangor and the two King's Lynn's, all come under review; and some sceptic may even hold that an element of doubt attaches to other large water outbreaks. But if these be adjudged suspect what of the host of small ones?

On turning now from water to food, and especially to milk, the question as to "initial probabilities" is seen to be greatly complicated by the discovery of the "healthy carrier." Thus reference has recently been made to risk associated with employment of a healthy carrier in an oyster shop; though here we may at least urge the possibility that the oyster may have been contaminated on some distant foreshore. In the London fish outbreaks of 1900, widely separated parts of London were affected, so that the question of healthy carriers at the retail shops did not arise; and later experience of fish outbreaks (for example, that of 1910, in which thirty-three distinct retailers were concerned) inevitably throws back the suspicion, at any rate as far as the wholesale market, if not to the "nursery ground" itself. But the case for estuarial pollution on the one hand—or cook, waiter, or oyster-barman pollution on the other—has been so fully argued elsewhere that I do not here pursue it, beyond remarking, with regard to the healthy carrier hypothesis generally, that I have nothing to add to or retract from the criticism made of it in 1912. Thus food, other than estuarial, must be dismissed: it will, however, be necessary to say a few special words later with regard to milk and ice-cream.

A note may here be introduced concerning the "initial probabilities" of such hypothetical causes of infection as working in sewers and the practice of bathing in sewage in rivers or on foreshores. These must now be regarded as smaller, than they were held to be twenty-five years ago. The question of nurses, doctors, laboratory workers, etc., stands in somewhat

similar case; the rates taken upon a large sample are not very markedly in excess; on this point appeal may be made to London experience and also to Koch's own reports. As to flies, they may spread disease regarded as typhoid fever in hot climates; such influence is not apparent in London; it must always be remembered, however, that in mental hospitals, an anomalous typhoid, sometimes associated with dysentery, has been noted as occurring for many years past, and the behaviour of this disease is not precisely that of ordinary typhoid; the phenomena in some respects call to mind those of "war typhoid." (See Annual Report, 1920, p. 28.)

The broad fact emerging from a bird's eye view is then, that the London typhoid of the last twenty-five years has been in the main of estuarial origin. Typhoid, elsewhere, is still, however, widely attributed to water, milk and other causes. Why is there no such evidence in London? As regards water, the right answer is presumably that "No one really quite knows." It has, however, been seen that there is reason for thinking much of the supposed water-borne typhoid of the past was really food-typhoid; and again, the quality of London's present water supply is, of course, greatly superior to that of twenty-five years ago. It is noteworthy that when a purer source of water supply was advocated for London in 1892, critical reference was not unnaturally made to the fact that Glasgow and Manchester (with lake supplies) did not compare very favourably with London with its river supply. The experiences of London in respect of cholera (at any rate) are often quoted as showing that an impure river supply may be a source of epidemic disease; though even here it must be remembered that the facts as to fish and shell-fish consumption in 1831, 49, 54 and 66, were not then ascertained and are not now fully attainable.

With regard to suspected milk outbreaks in London, the events are more recent and can be made the subject of more exact study. The evidence against milk may be *a priori* (or purely statistical), i.e., directed to showing that consumers of the suspected milk were attacked in greater proportion than chance would explain; or the presumption may be based upon *a posteriori* grounds, e.g., the probable pollution of the milk by added water, by a worker suffering from recognised or unrecognised typhoid, or by addition of one of the "specific organisms" at the hands of a healthy carrier.

It is at once clear that outbreaks comprising only a few cases do not lend themselves to precise analysis: again, when the "number of cases amongst drinkers of suspected milk" is less than, say, 90 %, the problem, statistically speaking, is not a promising one: further, the mere statement that the percentage of cases "amongst drinkers of suspected milk" is even 100 %, is not, of course, final, for reference to the original report may show that consideration was wholly limited to persons drinking the suspected milk, other cases occurring in the same environment being ignored; either because the enquiry was frankly not directed towards them, or from inability to obtain the requisite information. A rather stringent preliminary test would be to limit consideration to outbreaks affecting more than twenty persons, and further to those in which it is stated that 95 % or more of the sufferers were consumers of the suspected milk: such a test would, however, it is interesting to find, forthwith eliminate the large majority of the outbreaks from further consideration. Thus, allowing for overlapping in the three lists (two compiled by Mr. Ernest Hart and one by Sir George Newman), out of some 110 outbreaks (occurring for the most part in the British Isles) only 22 comply with this rough preliminary test.

On coming now to closer quarters with these, it is clear that in many of them no study of the possibility of food infection was made, and the milk thesis may merely have been accepted *faute de mieux*.

It is noteworthy, moreover, that since the introduction of notification and systematic investigation of all cases reported, the character of epidemics of milk typhoid has undergone a remarkable change. Not only is the number smaller—this might perhaps have been expected with extension of knowledge concerning sources of infection—but the outbreaks of the last fifteen years are not, as a rule, as was at first the case, explosive, but may extend over two, three, five or more years; the charge against the milk being now really based on bacteriological rather than statistical grounds.

The attempt was made eleven years ago (Proc. Roy. Soc. of Med., 1910), to show that the case against suspected milk must in the long run stand or fall on statistical evidence, and not merely on the discovery of a healthy carrier; but it seems fitting, here and now, to deal with the fundamental issue, and to examine, in the light of our bird's eye view, the

statistical evidence adduced in the classical milk reports.

The original milk outbreak is that of Dr. M. W. Taylor, reported in the "Edinburgh Medical Journal," 1857-58. The number of cases here was quite small, and the attempt was not made to deal with the question of possible chance coincidences; but the case against the milk, according to modern ideas, falls to the ground, for Dr. Taylor's very clear description at once suggests that the disease in question was typhus and not typhoid fever. The only mention, indeed, of typhoid in the original report is a reference to the fevers *preceding* the particular outbreak, which "were mostly of the typhoid and enteric type": it is both inferentially and expressly made clear that the "leaven" at work, in the outbreak under examination, was "the leaven of ochletic typhus," as is abundantly apparent from the description of its transference from Liverpool to a crowded home in Penrith and thence to a distant valley, a country village and a school, so "variously and widely did the malady spread . . . for five months."

The first case really in point is, then, the Islington outbreak of 1870 reported on by Dr. Ballard. It was an explosive one and there was a high percentage incidence upon consumers of a particular milk. "With only nine or ten exceptions the families involved were those of independent persons or well-to-do shopkeepers, and were attended by private practitioners." These exceptions constitute a difficulty. Dr. Ballard discusses them in some detail. Three men had not knowingly consumed any of the suspected milk but had taken some of their meals at a coffee shop supplied from the dairy; a girl not supplied from the dairy had come ill from the country; two persons were only occasional customers; "five only stated that they did not deal there at all." Dr. Ballard adds: "Outside the quarter-mile radius, in the rest of the parish, I said I had fourteen fatal cases to account for. Five of these fourteen occurred in families supplied by this dairy—that is more than a third of them. With such facts as these before me, I had a strong *prima facie* case against the milk; but strong as it was it did not absolutely exclude the idea of mere coincidence."

Dr. Ballard points out that "females formed nearly 69 % of those attacked above ten years of age," and he adds; "I am not aware that, under ordinary circumstances, typhoid shows

any such remarkable preference for the female sex." The outbreak is described as having occurred in July and August, but the death returns show that the excessive incidence of typhoid in Islington began before the milk was suspected and continued after the complete stoppage of the supply.

In the light of all the circumstances the distribution of infected fish or shell-fish, on various occasions from June to September, 1870, seems a possible explanation of the prevalence; the season corresponds with the cockle season, and a cockle origin would explain the family attacks and incidentally account for the large number of domestic servants implicated.

The next outbreak of importance to be considered is that of 1873 in Marylebone. There again the time was July and August, and those attacked were almost invariably well-to-do persons. Reference to Charles Booth's map of London shows that the areas involved (three to the north and one to the south of Oxford Street) stand out like four islands in a sea of surrounding poorer neighbourhoods. The dairy which fell under suspicion carried on an essentially "better class" trade and made a speciality of "nursery milk." There were three branch dairies, two of which were mentioned in the report, and the non-involvement of one of them (some two miles distant) is referred to as a principal difficulty confronting the thesis of milk causation. On the other hand, there is reference to a group of cases supplied from the second branch (about three-quarters of a mile away), and it is sought to explain this incidence, and also the escape of the branch two miles away, by assuming that "nursery milk" was at fault. This hypothesis is examined in the report, which also contains full particulars concerning the sanitary conditions at the particular farm from which the nursery milk came.

It is significant, however, that the 244 cases of illness (218 of which were among drinkers of suspected milk) did not contribute a large proportion of the deaths from typhoid fever registered in N.W. London at the time. On setting out the deaths in registration sub-districts week by week it is not even at first sight clear upon which of the sub-districts in N.W. London the incidence of mortality was exceptional, and it is certain the suspected milk could not have been responsible for a large proportion of the total deaths. Again, there is the extraordinary extent of involvement of domestic servants (92 out of 244 cases, i.e. 37.7 %). It

would have been interesting, in the light of these facts and of present-day knowledge, to have investigated the incidence of illness upon customers of a particular fish shop a few yards away from the dairy, which, like it, was centrally situated as regards the "area of the outbreak," and, unlike it, had no branch establishments.

As the outcome of study of London milk outbreaks, two further prevalences have also come under notice, in which the question arose as to whether a milk supply can spread typhoid fever for considerable periods of time. The first is the prevalence during four and a half years at Ascot, reported upon by Dr. Ballard (1873-77). Here, again, June to September are the special months of incidence of the disease; moreover, well-to-do families and their servants were almost exclusively involved. The suspected milk supply was "the largest by far and supplied the largest number of families," so that it may have been a mere coincidence that in the four and a half years 58 cases out of 69 were supplied from this source. A very significant fact to be noticed is the extraordinarily low fatality, which Dr. Ballard says "corresponds also with experience as to other epidemics of enteric fever due to milk." Only two persons out of the 69 attacked died.

The second case is that of the St. Pancras outbreak, occurring between the last week in July and the first week in September, 1883. In May and June of the following year a localised prevalence of typhoid fever occurred in Islington, and milk from a farm in Hertfordshire (which might possibly have been at fault in the St. Pancras outbreak of 1883) fell under suspicion. There was coincidentally a prevalence in St. Albans and neighbourhood, and this was specially reported upon by Shirley Murphy to the Local Government Board. The questions arising out of these reports resemble those discussed in connection with the later Folkestone outbreaks. It will be remembered that, at Folkestone, the facts (originally elicited by Dr. Theodore Thomson) clearly showed that the observed incidence on the milk might have been explicable as a mere chance coincidence, and in the later outbreaks this milk supply did not—compared with other Folkestone milks—suffer to a notably excessive extent.

The next London outbreak of importance is that of October, 1891, which was the first prevalence ever ascribed to *ice cream*. Four groups of cases, two in Rotherhithe and one each in

Deptford and Greenwich, were reported upon by Dr. George Turner. It was felt that it would "be necessary to show an exceptional incidence of the disease on those who consumed the ices procured from certain vendors, and as the enquiry was made in November and December this was exceedingly difficult; naturally there were no ice-cream barrows in the streets and the identification of the vendors would be very tedious." A *prima facie* case was, however, established against ices supplied by "F," an itinerant Italian vendor to the sufferers in the Greenwich group. Moreover, a presumption was raised that many of the sufferers in the Deptford group had obtained ices from "P," a compatriot of "F"; and some of those in one of the Rotherhithe groups may have done so from the "A" family. "F" and "P" and the "A" family all lived in an insanitary area (Mill Lane) cleared later under an Improvement Scheme.

Some time after the occurrence of the fish outbreaks of 1900, the question arose as to the possibility that the outbreak of 1891 also, might really have been due to fish: this suspicion was strengthened when enquiry showed that a fried fish shop stood just at the entrance to the affected group of streets in Greenwich and that certain other fried fish shops were associated with the three other affected areas.

But further it was found that the behaviour of typhoid fever in London generally shortly before and at the time of the 1891 outbreak was especially noteworthy, both in respect of the number of multiple attacks in houses and the occurrence of groups of cases; both features suggesting the possible operation of an infected food supply widely distributed over London. Thus, these features were noticeable in June and July in Greenwich; in July and August in St. Pancras and Shoreditch, and between April and August in Hackney.

More significant is the fact that actually at the precise time (20th September to 15th November) when the supposed ice-cream outbreaks prevailed, in the four centres reported upon by Dr. Turner, there were two other aggregations of cases in Greenwich and two in Lewisham; and further afield, St. Pancras, Hackney and Holborn, also showed excessive incidence of typhoid, with grouping of cases and with multiple attacks in the same house or institution. Similar, though less clearly marked features were observable coincidentally in Islington, Bethnal Green, St. George

in the East, Limehouse, Mile End Old Town and Poplar. In all the groups of cases the populations implicated were very poor, and there was noteworthy excess of attacks at ages between five and twenty.

In St. Pancras 35 cases occurred in the Foundling Hospital; in Holborn 12 occurred in one house (Red Lion Passage); in Hackney there were 4 cases in one house (2 Duddington Terrace, Southwold Road).

The outbreak at the Foundling Hospital was reported upon by Dr. Sykes. It corresponded exactly in time with Dr. George Turner's outbreaks; its incidence was mainly confined to the E. wing (32 cases), where 3 adult females and 29 girls (4-16) were attacked; in the W. wing a female servant attached to the infirmary sickened, and also 2 boys (friends and companions), one of whom was an infirmary patient. In the E. wing, ward G. 3, which contained girls being trained in household duties, was especially involved. The milk was always boiled in bulk before distribution. "The main cause of the spread of the disease remains undiscovered," but, says Dr. Sykes, "it was forcibly evident that the acting factor was in the house, was closely allied to domestic duties and especially to kitchen work. Of the three (kitchen) girls, kitchen maid and cook, all had fallen a prey to the disease except the cook, but a re-investigation of the kitchen and basement failed to disclose the reason." On the whole these outbreaks in widely separated parts of London bear a striking resemblance to the outbreaks, occurring some years later, which were traced to infected fish.

In the next outbreak attributed to ice-cream (Ann. Rep., Liverpool, 1897), 28 children had partaken of ice-cream sold by an Italian vendor at a fair. "The two remaining sufferers were believed to have eaten chip potatoes purchased from the same vendor at the same time." There is no mention of fried fish save that it is recorded that the ordinary occupation of the Italian in question was that of a vendor of fried fish.

It may be added that the opportunity was afforded, in 1911, in Finsbury, of analysing, in co-operation with Dr. A. E. Thomas, the facts in an outbreak in which ice-cream was at first suspected. It was shown, here, that ice-cream was not at fault, and that the prevalence was attributable to fried fish supplied from a shop just on the opposite side of the road from that of the ice-cream vendor.

Only one other London outbreak of typhoid fever attributed to milk remains to be mentioned. This occurred at Plumstead in 1895, and was reported upon by Dr. Sidney Davies and myself. The proportion of cases occurring among consumers of the suspected supply was rather low, 87 %; there were, moreover, some other anomalous facts that came to light at the time, but the outbreak was accepted by us as a milk outbreak. Some years after its occurrence it came to my knowledge that the premises adjoining the suspected dairy were, in 1895, in the occupation of a fish vendor; I now recall the fact that the outbreak was mainly limited in its incidence to poor people living in the immediate neighbourhood of the dairy (and the fish premises), while the milk went further afield; and I can only wonder whether a fish thesis would have met the case.

This examination of the reputed London milk outbreaks confirms the general view held by Creighton that if milk must be deemed a cause of typhoid epidemics, it can only be responsible for certain aberrant prevalences of a typhoid-like disease, and is not a significant factor in the spread of true typhoid fever.

The question now naturally arises, can shell-fish and fish be held accountable for the bulk of the London "typhoid" of the last twenty-five years? The direct evidence bearing upon this point has been given in various annual and special reports, and is briefly summarised in my *Annual Report for 1919*, pp. 13-16. The present occasion affords the opportunity for a brief reference to the desirability of enlarging the field of enquiry.

Examination shows that the English and Welsh registration areas with high typhoid death-rates (exceeding 40 per 1,000 in 1881-90; 30 in 1891-1900; and 20 in 1901-1910) are either (a) coastal areas in which there are shell-fish layings, or (b) areas within easy road or railway communication of the aforesaid areas or of some large centre of fish supply. The registration areas, on the other hand, with very low typhoid death rates (under 10 per 1,000 in 1901-10) are almost without exception remote both from shell-fish layings and from the main sources of fish and shell-fish supply. This distribution is very striking because the areas with low typhoid rates are the very areas in which primitive methods of drainage and water supply still prevail. (It is noteworthy that a similar observation was made by Hirsch some thirty-five or forty years ago.)

In Scotland, Glasgow, Paisley and Greenock, adjoining the estuary of the Clyde, had the highest rates in 1901-10; but little attention, however, has been given to the question of shell-fish in Scotland as compared with England and Wales and Ireland. In Ireland, the contrasts presented (so far as cockles and oysters are concerned) are, in some respects even more striking than in England and Wales, perhaps because the pollution of certain Irish cockle and oyster beds has been especially gross. Belfast, Dublin and Cork have the worst records; next in order as to typhoid come places like Lisburn, Dundalk, Waterford, Limerick, Galway, Sligo, and certain industrial areas, all with ready access to polluted shell-fish. When these heavily attacked areas are taken out, the incidence of typhoid on the remaining registration areas as a whole is noticeably low (about 0.5 per 1,000 per annum in 1901-10), less than one-fifth of that in Belfast; in some twenty per cent. of the residual areas the rate is much lower than this.

But there are still a few deaths registered as "typhoid" in almost all these residual areas, and the question naturally arises as to how far these are really typhoid deaths.

In London the margin of error in diagnosis is known to be very high, varying from some twenty to forty per cent. in different years. In Belfast and Dublin, the error may be approximately about the same; but what of the residual areas? The question at issue is this. If, say, 5 "typhoid" deaths per 10,000 population occur annually in Belfast or Dublin; and one or two out of every five are not really *true* typhoid; and if there are only one-tenth as many, i.e., "typhoid" deaths per 100,000 in the residual areas; may it be regarded as an arguable proposition that in the areas last-named deaths from *true* typhoid of local origin do not occur? It is clear that some *true* typhoid must be imported or be due to introduction of polluted shell-fish from without; and there then remains the question as to the correctness of the diagnosis in the rest of the cases. It will of course be remembered, in this connection, that dysentery and typhus fever are still encountered in rural Ireland, and that appendicitis, gastro-intestinal influenza, cerebrospinal fever, etc., are more likely to be described as "typhoid" there than in Dublin, Belfast or London.

Time does not permit of extension in detail of these enquiries to other parts of the world;

but it may be stated that considerable support for a thesis of coastal and fishing-port distribution of typhoid is forthcoming from the United States of America and from France, Prussia and some other parts of the Continent of Europe; particularly if regard be paid to the extent to which estuarial food supplies are distributed to certain mining and industrial populations in those countries.

In conclusion, I cannot do better, I think, than follow in the footsteps of a great authority on typhoid fever. Seventy years ago clinical diagnosis held the field, and Jenner distinguished typhoid from typhus and from continued fever mainly on clinical grounds, attaching special importance to the eruption or rash. When (in replying on the discussion at the Royal Medical and Chirurgical Society in December, 1849) he was pressed on the point as to whether he regarded typhoid spots as the characteristic and indeed diagnostic mark of typhoid fever, he said he "only spoke of the eruptions as diagnostic *when they were present*."

Rather more than thirty years later the clinician began to give way to the bacteriologist, and (since 1903) especially so when typhoid fever was under consideration. Another turn of the wheel, and it was plain that the claims of bacteriology had been too much pressed and epidemiology once more began to reassert itself. May we not, in the light of our bird's eye view, urge that we are now justified, when typhoid fever is in question, in regarding evidence of estuarial origin as diagnostic *when it is present*? If, in fact, illness supervene shortly after the consumption of fish or shell-fish from a polluted source, a strong presumption is raised that the illness is typhoid fever, and this even in the absence of spots and of typhoid bacilli. Thus it was possible to diagnose the simultaneously occurring illnesses of three brothers in an outbreak in E. London in 1910 as typhoid fever; although the considered verdicts at the three different London hospitals to which these patients were removed, were tenaciously held to be continued fever, typhoid and typhus respectively.

Sydenham insisted "it is necessary that all diseases be reduced to definite and certain species . . . since it happens at present that many diseases although included in the same genus, mentioned with a common nomenclature, and resembling one another in several symptoms, are, notwithstanding, different in their natures, and require different medical treat-

ment." And he added that reliance should not be placed upon remedies and formulæ, but the indications to be satisfied must be exhaustively studied. . . . He said: "True medicine consists in the discovery of the real indications rather than in the excogitation of remedies."

It is submitted that a bird's eye view yields unmistakable indication that, at any rate during the last twenty-five years, the mischief responsible for London typhoid has been traced either to some remote estuary or to some far distant foreshore.

"THE INFLUENCE OF THE PLACENTA IN RELATION TO PREMATURE BIRTH AND ANTE-NATAL DEATH."*

BY
D. C. KIRKHOPE, M.D., Ch.M., D.P.H.

I have been led to make my observations on this theme for two reasons. First because some years ago I had quite a considerable number of placentas sent to me for pathological examination, and I have not until now taken the opportunity of expressing my considered opinion upon them as a whole, and second, because the subject of premature birth with its disabilities and of still birth is increasingly engaging the attention of those concerned with preventive medicine. These reasons together with the fact that it is but a fortnight since your branch did me the signal honour of electing me to their presidential chair for the ensuing year, allowing me therefore little time to consider a subject and prepare a paper more worthy of the occasion, are my apology for selecting this one, remote as it is from matters engaging our daily attention.

You will excuse me if I briefly recall to your mind the construction of a mature placenta. Between the uterine wall and the foetal (chorionic) surface of the placenta is a great space or sinus filled with maternal blood. The placenta itself is divided up into a number of small placentas—cotyledons—between which septa dip down from the uterine walls and are attached to the chorionic surface. From the uterine wall also, columns of embryonic cells spring which also have their attachment at the foetal surface—pillars of support that appear to have the

*Read at the Home Counties Branch, on October 7th, 1921.

function of keeping the two surfaces of the space (the intervillous space) maternal and foetal in their relative positions.

From the foetal surface spring the chorionic villi, each villus consisting of a core of loose areolar tissue supporting a leash of a capillary blood vessel and the whole covered by a layer of syncytium resting on a basement membrane. The syncytium is a layer of protoplasm with large oval regularly placed nuclei—a single layer of cells without cell divisions.

Into the intervillous space open the uterine blood vessels. The function of the syncytium is manifestly to absorb nutrition from the maternal blood stream which, carried by capillary blood vessels of the villi, enters the foetal circulation, and it is reasonable to suppose that to the extent that the syncytium ceases to function, the foetus will suffer.

In all but the earliest placentas that I have examined, certainly in all those past mid-term, there has been found quite a considerable layer of fibrin covering the greater part of both maternal and foetal surfaces of the intervillous space. As maturity is reached, the fibrin is seen to extend along the villi and their branches, over the surface of the columns of foetal cells and the dissepiments between the cotyledons. This fibrinous deposit—canalised fibrin as it is called because of its peculiar construction—is a change well recognised by all observers, and synchronises with a change occurring in the maternal blood vessels supplying the intervillous space. The lumina of the vessels by an endarteritis obliterans become narrower, more and more as term approaches, retarding the blood flow.

That these changes take place early is clear from the fact that in ripe normal placentas are to be found quite large islands of fatty looking tissue—misnamed placental infarcts—which are, in fact, masses of canalised fibrin embedding clumps of destroyed villi, the whole having undergone a process of coagulation necrosis and frequently forming the basis of a chalky deposit according to the well known pathological law relating to functionless tissue.

I have described the ordinary so-called placental infarct, the fibrinous infarct, the infarct that is caused by the gradual encroachment of

fibrin within an area of the intervillous space extending along the villi and leading to their destruction, the conversion of the blood and villi containing space into a solid mass of necrosed coagulated fibrin with the skeletons of the villi.

There is another process by which considerable areas of the placenta are thrown out of function. The villi surrounding an area and their branches are coated with fibrin and form attachments one with another or with the fibrin covered embryonic columns or their branches. Thus a network enclosing the area is established—a pervious capsule—to a blood and villi containing space. I believe this is what has been called the red infarct, if it isn't, I have never seen or recognised a red infarct. As the fibrin contracts, the blood contained in the space is squeezed out through the network arrangement of the cemented processes of villi and columns, the foetal vessels supplying the villi are strangled and what is seen under the microscope is a dense capsule surrounding a space containing the defunct villi with syncytium shed, the vessels patent and containing disintegrating corpuscles. The spaces between the villi are devoid of blood. The villi are closely packed together.

It is interesting to note the relation of the syncytium to the maternal blood stream. The fibrin does not extend along the surface of the syncytium. It appears first to destroy the surface from which the villi spring and extend along the basement membrane upon which the syncytium rests. The blood stream of the mother, however, still continues to nourish the syncytium, which appears to remain intact for some time after the basement membrane is replaced by fibrin. Nor does the coating with fibrin of the villi interfere with the capillaries of the villi, which continue to function. The relation between the blood stream of the mother and foetus is, however, disturbed, and the extent of this disturbance is in my view the determining factor when the foetus shall be born and whether it shall be dead or alive.

The fact that the spirochete or minute traces of lead are found in the liver of the dead foetus proves nothing more than that the parent was syphilitic or had taken lead. It does

not prove that either was the cause of the premature birth, and it is a fact that many children are born alive, the children of syphilitic and lead poisoned parents. What is more likely is that syphilis and lead and other poisons have their influence in hastening those changes that normally take place in the placenta.

Pathological are frequently mere exaggerations of physiological processes, and I believe that in a large proportion of still births the too early narrowing of the maternal blood vessels leads to the hastening of the changes described above with consequent asphyxiation and starvation of the fœtus. The placenta, so altered by these changes, fails to fulfil its purpose, and acting as a foreign body stimulates the muscular fibres of the uterus so that its contents are extruded. One placenta I remember well, so small and shrivelled was it (as was also the fœtus) that it was a matter of surprise that the fœtus could have lived so long. No normal tissue could be found in any part examined. It would not stain by the dyes used for staining the specimens—hæmatoxylin and eosin. It was a mass of necrosed coagulated tissue resembling in appearance and feel a piece of tough wash leather.

Very early fœtuses invariably succumb to hæmorrhages. They are thrown off in a blood clot, pointing again to some pathological change in the maternal blood vessels.

It is interesting to note the types of disease and poisons that are usually accounted responsible for premature delivery or ante-natal death.

Syphilis—a disease that is pre-eminently associated with damage to the vascular system, as in gummata of the heart, fibroid degeneration, amyloid degeneration, endarteritis obliterans, aneurism, gummatous periarteritis and arterio-sclerosis—to quote Osler.

Nephritis gives rise to arterio-sclerosis, with resulting or concurrent hypertrophy of the heart depending upon the extent of the diffuse arterial degeneration and the greatly increased blood pressure.

Alcoholism.—According to Payne the poisonous effects of alcohol are manifested on the parenchymatous elements, particularly epithelium and nerve producing a slow degeneration, and on the blood vessels causing thickening and ultimate fibroid changes.

Amongst *mineral poisons* lead occupies first place. Its prominent symptoms are green gums, constipation, intestinal colic—green gums due to the deposit of lead salts in the capillaries, colic due to deposit and irritation from lead salts in the capillaries of the intestinal villi, constipation due to arrested intestinal secretion from spasm of the villous blood vessels.

Amongst *vegetable abortifacients* ergot will first be thought of. Its medicinal effects are calculated to be exercised on unstriated muscle and the blood vessels are coated with unstriated muscle. Its poisonous effects are asphyxia and necrosis of tissue due to contraction of the small blood vessels.

In the "Medical Officer" of 2nd July of this year, Dr. A. K. Chalmers reports upon an investigation extending from 1917 to 1920 into the causes of still-birth as shown by examination of the fœtus at the Municipal Laboratories, Glasgow. The apparent ages of the fœtuses varied from four months to nine months. Thirteen of the 255 examined were undoubtedly due to syphilis—five per cent. Dr. R. M. Buchanan, who directed the investigation, is of opinion, however, that the dark ground method of examining the first forty-nine specimens in which this method was not employed would have raised the percentage to 6.5.

Contrast this figure with that of Dr. Whitridge Williams. In 700 fœtal deaths occurring in 10,000 consecutive deliveries, 26 per cent. were proved due to syphilis. Out of this number in 4,000 consecutive deliveries with 302 fœtal deaths the clinical history, Wasserman and microscopic examination of the placenta with autopsy of the fœtus was procured in each fatal case. Of these 302 cases of infant death, syphilis was noted in 104—i.e., 34 per cent.

It is manifest from the discrepancy between the figures of the two observers quoted that

examination of the fœtus leads to very unreliable conclusions only. The whole product of conception must be the subject of investigation, careful and exhaustive.

With the aid of a grant from the Auxiliary Scientific Investigation Fund, Dr. Eardley Holland has completed an enquiry into the causes of still-birth. This contribution to the subject is not yet out of the hands of the printers, and I am therefore unable to give the views of this, the latest authority on the subject.

The application of this essay is, of course, to the Ante-natal clinic. It is in its infancy, and the clinician is satisfied as a rule with a routine examination of the heart, lungs and kidneys and an external measurement of the pelvis. In suspicious cases a Wassermann test may also be made.

If my conjectures are correct, much more is needed, and I hope that those who will hereafter be entrusted with this important branch of the Public Health Service will equip themselves for enquiry into the pathological causes—near and distant—that determine pre-natal death and premature birth. As it appears to me, what is required is not only an ascertainment of the presence or absence of a specific history, the functional capacity of the kidneys and the absence of adventitious heart sounds, together with a rough idea of the pelvic space and the probability of its giving passage to a child of normal size. The coagulability of the blood should be ascertained and if possible adjusted so that fibrin will not too readily be deposited. The blood pressure should be estimated at frequent intervals, so that measures may be taken to prevent the slowing of the current through the placenta. The blood content should be examined to ascertain its oxygen bearing capacity. These and other measures that will disclose themselves to the research worker ought to be employed to ensure a free, full clean and wholesome current of blood through the placenta. It is impossible for me to believe, that given these essentials, the ante-natal death rate and the death rate within a few weeks of birth will longer be a source of anxiety.

DENTAL DEFECTS.

BY

JAMES WHEATLEY, M.D., County Medical Officer, Shropshire.

The Editorial headed "Dental Defects" in the November number of "Public Health," appears to me to be so misleading, and, if accepted by any considerable number of public health workers as an authoritative statement, likely to do so much harm, that I think it should not go unchallenged.

There are two separate and distinct matters dealt with in this article—the one is our knowledge of the cause of dental caries, and the other is the evidence as to the harm done by this condition. On the latter question we have the expression of opinion by a Government Committee on which both Sir George Newman and Sir Arthur Newsholme sat. One of their conclusions was:—

"In conclusion, we wish to state very strongly, that, in our opinion the state cannot afford to allow the health of the workers of the nation to be continuously undermined by dental neglect. Steps should be taken without delay to recognise dentistry as one of the chief, if not the chief, means for preventing ill-health . . ."

The trend of the article can be gathered by the following quotations:—

"Considering the size and complexity of the problem, there is a pitifully small amount of accurate knowledge about it."

"Very few of the prevailing beliefs are founded on that strict analytical and scientific evidence on which beliefs appertaining to preventive medicine should be established."

"The possession of perfectly sound dentures seems to confer unexpectedly small advantages." (Quoting Dr. Priestley, School Medical Officer, Staffordshire.)

I would submit on the contrary that the following statements are correct:—

(1) That the processes concerned in the prevention of dental caries are known with

accuracy. There is also agreement among the leaders of the dental profession as to the main factors of causation.

- (2) That we know far more accurately the cause of dental caries than we did the cause of typhoid fever, cholera or tuberculosis, whilst the early but most effective preventive work was being carried out against these diseases.
- (3) That proof of productions of disease and general ill-health from dental caries and oral sepsis is of a most conclusive character. The proof is of two kinds—immediate cessation of symptoms and improvement of health, on removal of the source of infection; the discovery of the same organisms at the seat of the disease and in the dental focus.

The amount of serious disease that can be demonstrated quite certainly as due to dental caries and oral sepsis is large and most serious, but the amount of disease in which the evidence of dental origin is considerable but not conclusive, is infinitely greater. Disease originating from dental caries shows itself mostly in later life when the resistance of the body to chronic infection is decreasing. Unfortunately the writer only appears to have looked for it amongst school children—the persons least affected.

The article concludes with a description of an experiment that should be carried on at selected institutions, groups of children being put under different conditions of feeding and oral hygiene and kept under strict dental supervision. Such an experiment would undoubtedly be good and has frequently been advocated. The writer goes on to say:—

“An experiment of this kind carried over a series of years in institutions which would lend themselves to observation being carried out for ten or more years of a child's life, should lead to some definite result and should enable these theories to be put to the practical test. *Nothing less will be of any real value.*” (The italics are mine.)

All our investigations, all the natural experiments that are going on around us in many parts of the world, all the inferences that can be drawn from the rapid growth of dental caries are to go for nothing, and we are to stay our hands in prevention, allowing the decay of teeth free scope until this experiment of ten years' duration has been completed. At least it appears to be the only inference that can be drawn from the article.*

I would most earnestly urge an exactly opposite course, viz., that we put into practice with the utmost energy we are capable of, the methods of prevention which are most generally accepted by the leaders of the dental profession. I feel very strongly that the denial of existence of evidence on any subject should never be made except with a very extensive and, as far as possible, complete knowledge of that subject.

DENTAL DEFECTS.

BY

LUDLOW STRANGWAYS, L.D.S.,

Dental Officer, Torquay.

The editorial suggestion that large institutions containing children should be selected and one group subjected to special diet and another to tooth brush drill, whilst a third should have both factors combined, is a most valuable one.

As regards tooth brush drill alone eliminating dental caries, the evidence is rather negative.

Notwithstanding the fact that tooth pastes, powders, and mouth washes are sold by the ton and widely advertised, yet decay goes merrily on, and will do so until we discontinue sloppy foods and bottle feeding for infants.

After ten years' school clinic experience, I am convinced that the size of the jaw and faulty calcification of enamel is at the root of the trouble. The former is largely influenced by the muscles of mastication, and one only has to examine the jaws of native races to see the truth of this fact. Mr. Truby King, C.M.G., M.B., writing of the Maoris, states that “by the adoption of European methods of feeding, i.e., soft foods for themselves, and bottle feeding for their babies, many Maori

*[This quotation does not appear to us to admit in any way of the interpretation given it by Dr. Wheatley. — Ed. “Public Health.”]

mothers of the present generation have already brought the jaws and teeth of their progeny nearly down to the level of the average European. The old-time Maori, chewing tough roots between his molars reaped the reward of honest work, he developed perfect jaws and teeth, which almost turn us green with envy, as we see them in museums side by side with the jaws of our own race—the jaws of physical idleness.”

One finds that in a large arch decay is at a minimum, but there is still another difficulty—that of the mother.

For if the calcification of the permanent teeth is influenced so much by the way the child is fed during the first early years of its life, so is the calcification of the deciduous teeth affected by the habits of the mother during pregnancy and immediately afterwards.

Bottle-feeding is the bane! Breast-fed children have the best teeth. Human milk best supplies the vitamins and hormones necessary to building up the teeth.

Every dental surgeon notes enamel deficient in lime salts, for the drill cuts through like pumice instead of the glossy compact tissue that blunts the sharpest instruments. Weak enamel must be caused by fault in diet or assimilation. Tooth brush drill cannot replace imperfect calcification, and the prognosis of such teeth is bad from the very first.

The suggestion of dieting children should, therefore, be undertaken at the earliest possible age, especially through maternity and infant welfare centres, that is if it is desired to test the effect of diet on enamel formation. Even with poor enamel the more mechanical action of coarser foods would have beneficial effect by increasing the use of the masticatory muscles and thereby the size of the jaw, stimulating the salivary flow and in the self-cleansing action of such food.

With regard to the vexed question of the treatment of temporary teeth, there is, in my opinion, little doubt that the profession as a whole are in favour of conservative treatment, but the question of the time at our disposal is the basis of the present condition of things.

A small clinic with a few hundred children affords the operator the opportunity of carrying out the ideal of treatment, but when the young patients run into thousands (as here) then it is a question as to how best use the time available in their interest.

To sacrifice permanent teeth in the endeavour to save the temporary teeth is to defeat our own ends.

Sir George Newman, in the report just published for the Board of Education, 1920, page 97, takes up this question, and it is obvious that the authorities take the view stated above, as follows. (Sub-section 166, pages 96-97):—

“Another source of wasted time is the treatment of the temporary teeth to the neglect of permanent. In many areas the number of temporary teeth filled during the year actually exceeds the number of permanent. In fact, in some clinics no discrimination would appear to be made between the two groups.

“This is an extremely short-sighted policy, for if a child is to leave school with a sound and complete dentition it is of the utmost importance that the first sign of disease or misarrangement in the first permanent teeth should be promptly dealt with.

“Inspection should, if possible, be made sufficiently early to permit of any necessary treatment being undertaken in time, and since the six-year molar is often in place even before five years of age, and sometimes badly decayed by the time the child reaches six, it follows that the nearer to five years of age the inspection takes place (even in the present difficult times) the more hope is there of making it possible for the child to reach the school-leaving age with no permanent teeth extracted—a condition that most children have a right to expect.”

Here our children vary from 5 to 17 years in elementary and secondary schools, and 2,885 were inspected last year, 1,395 fillings, and 2,788 extractions (a very high proportion for fillings), 265 dressings, making a total of 4,448 operations for only four days a week, and in view of the fact that one comes across permanent teeth too far gone to fill, it is manifest that one must concentrate on the second set.

Education authorities have the last word in the time allotted for dental treatment. Conditions vary so in different clinics, not only as to the time at the operator's disposal, but also the number of cases requiring treatment and the difference in the condition of children in various localities, that just comparison is impossible.

Therefore, in place of criticism we should aim at being little Nelson's Captains—a “band of brothers” working for the common good.

MEDICAL CORRESPONDENTS.

BY
"AN OCCASIONAL CONTRIBUTOR."

There are medical correspondents of many kinds. There are the correspondents in this country of the foreign and colonial medical Press, who are men of high professional standing, and who write, as a rule, on new developments of medical or surgical science. Then there are, in the large provincial towns, local correspondents of the great medical papers; they also are men of eminence, and they record local events of interest to the whole profession.

Another class of medical correspondent writes for the lay Press, and puts medical truths in popular language. There is no malice or back-biting in such; no political or other ulterior motive. The care of the public health is their sole consideration.

Again, we have the writers in the more popular weekly papers, of the columns entitled "Every man his own doctor"; they give advice by correspondence on all manner of ills, and carefully hide their identity under a *nom-de-plume*.

Another type of correspondent is on the staff of an important daily paper, presumably with a view to advising the editor and his colleagues on medical matters of which they can have no exact knowledge. The importance and value of such a position can readily be realised if the medical gentleman concerned is of sound judgment, thoroughly conversant with the subjects of which he writes, and has a real knowledge of the trend of medical opinion. It is of importance also that the correspondent should be in an independent position and not subject to the dictates of political expediency.

In this connection, reference may be made to a series of articles which have appeared of late in "The Times," where, with relentless persistence, attacks have been made on the Medical Department of the Ministry of Health, and on the measures taken by the Local Sanitary Authorities of the country to preserve the health of their people. It is obvious from a perusal of these articles that their writer has very little knowledge of the work accomplished by the Public Health Authorities whom he so vigorously attacks.

"A 'service' is an organisation of doctors employed on a whole-time basis to carry out certain duties," and he summons the "anti-

venereal disease service" to prepare for abolition, the fact being overlooked that the very great majority of its members are part-timers, who are employed a few hours a week only in the treatment of cases, attending the Venereal Disease Clinics.

Another sentence reads: "The public services have never attracted the public"; this is easily refuted, because it is capable of being tested statistically. Anyone with even an elementary knowledge of the work of our Local Sanitary Authorities knows that the attendances at Municipal Child Welfare Centres, School Clinics, and V.D. Clinics are increasing yearly, and are in the first two instances extremely popular.

After stating "the medical bureaucracy despises and dislikes the working medical man and his intimate relation with his patient," the insidious suggestion is made that panel doctors' fees must be cut down in order that the salaries of "medical bureaucrats" may be retained intact, apparently this statement is made with the intention of making bad blood between the holders of Public Health appointments and the practitioners of their areas. There is no reason at all for antagonism between private and public medical men.

The facts are that Maternity and Child Welfare Centres, and School Clinics, do not provide treatment, but refer patients requiring it to their private doctors, unless the parents are necessitous, or unless the need is, *e.g.*, the prescription of glasses, or operative treatment which many practitioners do not care to perform; such prescription of glasses or removal of tonsils, etc., is generally performed by specialists, who are also in private practice, and not by members of "a whole-time service."

Tuberculosis Dispensaries and Venereal Disease Clinics are used by private practitioners in increasing numbers as places where a skilled opinion can be obtained. In the County of Lancaster, in 1920, 70 per cent. of all the notified cases of tuberculosis were sent, prior to notification, to the County Tuberculosis Officers for their opinion. Practitioners constantly rely on the "medical bureaucrats" for assistance in the diagnosis of obscure cases of infection.

The relationship between whole-time Public Health Officers and the private and panel doctors of their areas is more cordial than that existing between many of the private practitioners themselves. A concrete fact is worth

more than whole columns of invective; the whole-time Medical Officer of Health of a County Borough was, on his recent retirement, the recipient of a most handsome gift presented by all the private doctors of his town; and this is by no means an isolated occurrence.

Another point is worthy of mention: Those medical officials of the Ministry of Health and of the Local Sanitary Authorities who received a war bonus have had their emoluments materially reduced; yet "The Times" says under the heading "Where there are No Cuts," "We have no announcement that a single inspector or director is to lose a penny." Perhaps that is because there was no widely advertised protest meeting to let the world know that the emoluments of the medical officers of the Ministry of Health were being reduced, or was it because the medical correspondent concerned has that convenient memory which retains only what suits his immediate purpose?

Many members of the Public Health Service are on practically pre-war salaries, but even so they have strongly supported the panel doctors in their efforts to obtain adequate remuneration.

In the articles in "The Times" frequent reference is made to the writings of Sir George Newman. The writer has not the honour of his acquaintance, and has no complete knowledge of his writings, but would draw attention to his statements on pages 36 and 37 of his Annual Report to the Minister of Health for 1920 to the effect that the insured practitioner must "be secure of a fair recompense for his services," and that "he and his patient must be in possession of that mutual confidence and freedom of individual action in relation to the practice of medicine which is necessary to its proper fulfilment." Is it not, in view of this, preposterous to suggest that there is antipathy on the part of officers of the Ministry of Health to panel doctors?

The reader may perhaps like to know what the Public Health Service has done, and what it costs.

It is a fact that since the development of the Public Health Service the general death-rate, the deaths of infants, and the tuberculosis death-rates have declined to a remarkable extent. In the case of infantile deaths the decline can be definitely associated with new developments of the work, appointment of health visitors, establishment of Child Welfare Centres, etc.

The tuberculosis death-rate has declined more in places like Birmingham, where the problem has been attacked in a comprehensive manner, than in other places where less has been done.

The great epidemics have gone; smallpox, typhus, fever, and cholera, no longer take their toll of life in thousands; scarlet and enteric fevers are comparatively mild.

If we compare the average death-rate during 1916-20 (and it should be noted that three of the years were war years, when the best of our manhood was away, and, therefore, the death-rates per 1,000 of the civilian population were greater than if all had been at home) with the average death-rate from 1871-80, we find a reduction of 6.9 per 1,000. On a population of 37,000,000 this means a saving each year of over 255,000 lives; think of the value of these to the State, think of the grief and anguish which would have been caused by each of these deaths, think of the illnesses causing these deaths, and remember that not all who were ill would die; think of all who would have just recovered with constitutions permanently impaired if the sanitary service of this country had been incompetent and had allowed things to remain as they were.

Similarly the rate of infantile mortality has declined from 149 per 1,000 births in 1871-80 to 91 in 1916-20. It was 153 so late as 1891-1900, *i.e.*, until Local Sanitary Authorities began to appoint health visitors, and educate mothers on infant welfare. The rate was 108 in 1913, just before Child Welfare Centres were started in any number; it was 80 in 1920, when 1,754 were in operation. The decline from 149 to 91 means an annual saving of over 43,500 lives, and child welfare work does much more than that—it gives to tens of thousands of our children, who would otherwise be weaklings, a strong constitution, which will be a tremendous asset in after-life.

With regard to tuberculosis, the death-rate in 1871-80 was 2.88 per 1,000; in 1920 it was 1.128, a reduction to much less than half. Instances of reduced or almost vanishing death-rates could be largely multiplied, yet the croakers have the audacity to allege that our efforts have been useless, relying, no doubt, on the inherent dislike of the Public Health Service to vaunt itself, and on the impossibility of a Government official making any reply at all.

The reader of the lugubrious articles of the "Medical Correspondent" has never been informed of these results, but the cost of the service has been held up as colossal. Let us examine this, and we will find that for the financial year 1919-20, the last for which figures are available, the average cost per person for the services administered by Medical Officers of Health in 53 representative great towns was 5s. 3d., which, expressed in rateable value, is 1s. 0½d. in the pound. This included the cost of hospitals for infectious diseases, disinfection, all maternity and child welfare work (including maternity hospitals), the school medical service (including all clinics), anti-tuberculosis work (including dispensaries, hospitals, and sanatoria), anti-venereal diseases work (including treatment of both in- and out-patients and publicity campaigns), supervision of food supplies (including efforts to obtain pure milk), housing, and other work of Sanitary Inspectors, salaries of Medical Officers of Health, of School Medical Officers, Tuberculosis Officers, and of all other whole or part-time medical, veterinary, health visiting, nursing, or sanitary inspection workers in the Public Health and School Medical Services. It includes not only what it costs the ratepayer, but the moiety paid by the taxpayer of maternity and child welfare, school medical, and anti-tuberculosis work, and the three-quarters paid by the Government towards the expenditure on the prevention and treatment of venereal diseases.

With regard to the cost expressed as a penny rate, the whole expenditure has, for simplicity, been set out as if it were charged to the ratepayer. Approximately 9½d. in the pound is so charged, and the remaining 3d. is received from the taxpayer.

The cost of education (excluding the cost of the School Medical Service) was, during 1918-19, the last year for which figures are available, £1 1s. 8d. per head of the population, and it is known to have been more in 1919-20. Is not life worth more even than education? May we not ask: "What doth it profit a child to have the world of knowledge and yet lose its health"?

It has been shown that the annual number of deaths is now 255,000 less than before the health services of the country were established, and it cannot be denied that the diminution in the death-rate has been largely due to the efforts of sanitary reformers. Their work is carried on for 5s. 3d. per head per annum; the cost of

a few visits to the picture palace or the football match. Surely no thinking person can suggest deliberately that the country is too poor to pay this sum to stem the ravages of disease, and improve the stamina of the people.

Sir George Newman emphasises in his report that the private medical practitioner is an essential element in any scheme for improving the public health. There was no Public Health Service before 1871, but there were private medical practitioners. The results recorded show what the two in combination and co-operation can do.

The "Medical Correspondent" unfortunately draws a comparison between the provision of medical benefit and the Public Health Service; what the latter does for 5s. 3d. per head has been shown. For 11s. 6d. per head per annum (9s. 6d. for the doctor and 2s. for drugs) medical benefit provides for insured persons treatment at home or at the doctor's dispensary; it also provides a supply of medicine. There is no provision for hospital treatment, for nursing, for bacteriological aids to diagnosis, for second opinions in doubtful cases, the cost of many of which are included in the 5s. 3d. for the Public Health Service; and the 11s. 6d. per head does not include the cost of administration.

Why does our "Medical Correspondent" in his new-found solicitude for the poor attempt to deprive them of that second opinion so largely taken in middle and upper-class practice?

Then again, objection is taken to the number of medical officers on the staff of the Ministry of Health. Does it not seem reasonable that as the Government pay large sums to Local Authorities for health services on condition that they are well administered, they should be in a position to see how the money is spent, and to advise Local Authorities on how to obtain the best value for their money?

Medical correspondents are indeed of many kinds; the latest is fortunately in a class apart, for his mind is warped, many of his statements are grotesque, and might be written with the express intention of fomenting dissension in the ranks of the honourable profession to which he belongs. But there is this consolation, the readers of the august newspaper which receives his contributions are probably more able to appreciate their true worth than would those of the more popular papers, whose subscribers are, perhaps, apt to regard all they read as true.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

NOTES FROM THE BRANCHES.

1.—THE METROPOLITAN BRANCH.

CONFERENCES.

Two important meetings have recently taken place in London in connection with the work of the Branch. The first between representatives of the Branch and a committee of the Metropolitan Asylums Board, when emergency procedure was decided upon to meet the situation created by the abnormal demand upon the Board's hospital accommodation as a result of the increased number of scarlet fever and diphtheria cases. Though called at less than twenty-four hours' notice a full attendance was recorded at the conference. The second meeting was held between officers of the London County Council and the metropolitan medical officers of health and tuberculosis officers to discuss the provisional memorandum issued by the County Council in June last dealing with revised procedure in connection with the treatment of tuberculosis. This conference was also well attended, and many points were brought forward which will assist greatly in the framing of the memorandum to be issued shortly on the subject.

RAT DESTRUCTION.

Many are the ways of launching attacks upon the rat population of a district, but little apology need be made for giving a note of a method employed by a London borough in connection with its sewers which, while the cost is exceedingly modest, is claimed to be efficacious. It involves the use of a bait with barium carbonate as the destructive agent, and since several enquiries have been received the recipe and its cost are given in detail:

6 ozs. Barium carbonate	...	4d. per lb.
16 ozs. Meal	...	6d. per lb.
4 ozs. Dripping	...	8d. per lb.
½ oz. Salt.		

This mixture, warmed up, kneaded together, and used when cold, makes one thousand baits of six grains each (the size of a hazel nut). Allowing for four thousand baits per week, the yearly cost amounts to about £8 5s. Time and labour in making and laying the baits are not

taken into account as the work is commonly carried out by the council's workmen in the course of their ordinary duties.

MILK PROSECUTIONS.

One so rarely sees a coloured milk in London in these days that it is worth while making reference to a case in which proceedings under Section 3 of the Milk (England and Wales) Order, 1921, were taken by the Bethnal Green Borough Council against a vendor for knowingly selling milk to which colouring matter had been added. At the time of purchase it was noted that the milk had a very yellow colour, and the public analyst's report showed that it contained a trace of annatto. At the hearing Dr. Oates, the medical officer of health, gave it as his opinion that while the presence of a trace of annatto was not prejudicial to health it would make a poor milk, such as the milk in question, appear rich in colour and so be misleading to the consumer. The defendant stated that he had no means of ascertaining the presence of colouring matter in the milk, but previous convictions having been proved, a fine of £2 2s., with £2 14s. 6d. costs, was imposed.

The itinerant milk vendor intent on retailing as "pure new milk" what is in fact the separated variety is only very rarely caught napping. The St. Marylebone Borough Council may therefore be congratulated for twice in one day capturing one of the fraternity and having him heavily fined for what the magistrate described as "a deliberate fraud." The "pure new milk" proved on analysis to be a mixture of new and separated milk, the percentage of milk fat in the one case being 1.0, and in the other 1.5. The price charged in each instance was sixpence per quart. No proper intimation that separated milk was being sold was given, and the fact that the words "separated milk" appeared on the outside of the hand-can lid, in which position they could not be seen while the lid remained open and milk was being taken from the receptacle, was unavailing as a defence. Fines and costs amounting to £43 were imposed.

QUACK ADVERTISEMENTS.

Nostrums claiming to be a cure for all the ills that flesh is heir to have long been a familiar feature of the advertisement columns of

certain types of papers and periodicals. Objectionable though these undoubtedly are in their panacean character, they appear even more undesirable when offering a remedy for a specific ailment and that not always a simple one. Those suffering from pulmonary tuberculosis are assured by one such announcement that "though your own doctor and the specialist have said they can do no more for you and sanatorium treatment and change of climate have failed to give relief," by taking daily a few doses of the remedy a cure may be effected. Another advertisement, which appeared recently in a West London local newspaper, gave its message with startling brevity: "Encephalitis Lethargica cured, send 1s. postal order . . ." These are but two examples typical of many others. At present it would seem that little can be done in these cases, but the attention that quackery has received in connection with venereal diseases leaves a hope that other serious conditions may not be exploited indefinitely by charlatans.

2.—WEST OF ENGLAND BRANCH.

THE TUBERCULOSIS SUB-GROUP.

A special meeting was held at Bristol on October 22nd, when Dr. Peters presided over a good attendance. It is evident from the number of subjects discussed and the nature of the resolutions passed, that members intend the group to undertake work of real value. Amongst other things, it was decided to collect information about difficulties encountered in drawing up reports for the Ministry of Pensions, to take such steps as might be possible to prevent the undesirable practice of confining certain senior residential posts in sanatoria to unmarried men; and to urge the extension to tuberculosis officers of the security of tenure now enjoyed by medical officers of health. Dr. Ward was asked to co-ordinate the work of the other tuberculosis officers on the effect of marriage, pregnancy and parturition on tuberculosis.

The group secretary is Dr. Bushnell, deputy medical officer of health and tuberculosis officer of Plymouth.

THE NEED FOR NEW MEMBERS.

By the time these notes appear in print branch members should have received a recently compiled list of medical officers of

county and local authorities in our area. It is evident from the list that the branch might well be at least two or three times its present size. Members would be helping the parent society, the branch, and the service generally, if they would give this question their careful consideration with a view of inducing, if possible, other eligible medical officers to join us. The most valuable help can probably always be given by a personal appeal to a friend. Errors and omissions have doubtless occurred in the list, in spite of a good deal of care which has been taken to avoid them, and the branch secretary would be grateful if he could be informed of such as may be noticed (address, Guildhall, Bath).

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

COUNCIL MEETING.

A meeting of the Council was held at the house of the Society on Friday, Nov. 18th, 1921. Prof. Kenwood presided until the arrival of the President, who was unavoidably delayed. There were also present Drs. Sanders, G. F. Buchan, Veitch Clark, Barlow, J. J. Buchan, Caldwell Smith, Pearce, Gibbons Ward, Snell, Wheatley, Kirkhope, Duncan Forbes, Stocks, McMaster, Herbert Jones, J. T. C. Nash, Auden, Clements, Ewart, Pedley, Peyton, Wilshaw, Lyster, and Lt.-Col. F. E. Fremantle, M.P.

The minutes of the last meeting having been approved and signed, letters of apology for absence were read from Drs. A. K. Chalmers, H. Kerr, G. W. N. Joseph, Charles Porter, H. E. Corbin, and T. Eustace Hill.

The late Dr. D. Drybrough Gold.—On the proposal of Dr. G. F. Buchan, it was agreed to send a letter of condolence to Mrs. Gold on the death of her husband.

Correspondence.—(1) From the Ministry of Health in reply to the suggestion that educational leaflets, memoranda, etc., issued by that department for the guidance of local authorities and the public, in regard to public health matters, should be submitted to the Society in draft form for any observations or criticisms they might wish to offer:—

MINISTRY OF HEALTH,

WHITEHALL, S.W. 1.

16th November, 1921.

Sir.—In reply to your letter received on the 3rd November on the subject of the issue of leaflets for the information of Local Authorities in regard to

the proper selection and use of foods, I am directed by the Minister of Health to say that arrangements will be made to furnish the Society with copies of any such leaflet in draft form.

The Department welcome the offer of assistance in regard to any similar documents contained in the second paragraph of your letter, and will not hesitate to avail themselves of it as suitable occasions arise.

I am, Sir,

Your obedient Servant,

MICHAEL HESELTINE.

The Executive Secretary,
The Society of Medical Officers of Health,
1, Upper Montague Street,
Russell Square, W.C. 1.

2. From the Association of Municipal Corporations stating that they had been asked by the Association of Inspectors of Midwives to take steps to institute the registration and inspection of lying-in homes by County Councils and County Borough Councils. The A.M.C. before acting in the matter requested to be informed how the Society of Medical Officers of Health viewed the proposal.—*Referred* to M. & C.W. Group for consideration and report.

3. From the General Council for the National Registration of Plumbers, asking the Society to nominate a representative on their managing committee.—*Resolved*: That Dr. Charles Porter be nominated to this committee.

4. From the Poor Law Medical Officers' Association of England and Wales conveying the following resolution: "That this Association protests against the dismissal of a qualified practitioner by a Local Authority solely on the ground of marriage."—*Resolved*: That the Association be thanked for their communication.

5. From the Institution of Municipal and County Engineers conveying a decision of the Board of Inland Revenue that officials in receipt of salaries are assessable under Schedule E of the Income Tax Act, and have no claim in law to deduct any proportion of their subscriptions to professional Societies, Journals, Libraries, etc., as an essential expense of their particular office. The Institution asked the Society to nominate a representative to attend with representatives of kindred societies at an interview with the Chancellor of the Exchequer to secure a reversal of the above decision.—*Resolved*: That the President of the Society be nominated for this purpose.

6. From the Central Association for the Care of the Mentally Defective inviting the

Society to nominate a direct representative on their Council.—*Resolved*: That Dr. G. A. Auden be nominated.

Report of Salaries Committee.—The Council, adopted, with minor amendments, a report of this committee embodying various conditions of service to be attached to the schedule of salaries now in course of preparation in co-operation with the N.A.L.G.O. The report also included the following paragraph, which was approved by the Council:—

It was reported to the Salaries Committee by one of the Society's representatives on the B.M.A. Maternity and Child Welfare Sub-Committee that at the first meeting of this Sub-Committee held during the current session, 1921-22, on 27th October, 1921, when certain motions relating to an increase of the scale of fees issued by the Minister of Health for Medical Practitioners called in on the advice of midwives were under discussion, the chairman of the Sub-Committee, Dr. H. B. Brackenbury, stated that Medical Officers of Health on the whole were not with the Association in asking for such increased fees. It was stated by another member of the Sub-Committee that the chairman had made the same statement in regard to the attitude of Medical Officers of Health when speaking on this question at the Annual Representative Meeting of the B.M.A. held at Newcastle in July, 1921.

Your Salaries Committee recommend that the secretary be instructed to inform the B.M.A. that the Society of Medical Officers of Health wish it to be known to the Association that the question of the scale of fees issued by the Minister of Health has not been referred to or considered by the Society of M.O.H., and no opinion has been expressed by the Society thereon.

The Report of the Committee also had the following reference to the action of the Willesden Division of the B.M.A. in calling a conference with the local Association of Ratepayers to discuss the amended report of the M.O.H. for the district (see "Public Health," November, 1921, p. 48):—

As a matter of urgency Dr. G. E. Buchan reported that the proposed meeting between the Willesden Division of the B.M.A. and the Willesden Ratepayers' Associations to discuss the annual report of the M.O.H. has been postponed to 20th December pending the final decision of the meeting of the Division on 15th November as to the proposed meeting, and Dr. Buchan had been specially asked to attend the meeting on 15th November. We have advised Dr. Buchan pending the final decision as to meetings between the British Medical Association and Ratepayers' or other non-professional Associations to discuss the work of official medical colleagues that he should refrain from attending the meeting of the Willesden Division of the B.M.A. on 15th November. The Salaries Committee recommend that their action be confirmed.

In reference to the above, the President read certain semi-official letters which had passed between himself and Dr. Cox (Medical Secretary, B.M.A.). The President was thanked for his action, and it was agreed to await the reply of the B.M.A. to the official communication already addressed to them in this connection.

The B.M.A. and the Public Health Service.

—On the proposal of Dr. G. F. Buchan, seconded by Prof. H. R. Kenwood, it was resolved: "That a Special Committee be appointed to consider a report on the position and policy of the Society of Medical Officers of Health in relation to the B.M.A. and its policy in regard to the Public Health Medical Services." The following were elected to form the Committee: The President (*ex officio*), Drs. Snell, G. F. Buchan, Veitch Clark, Lyster and Kirkhope, with power to add to their number.

Unification of Health Services.—The Committee appointed in reference to Section 3, Subsection 1, para. 3 of the Ministry of Health Act, 1919, submitted a report recommending unification of all health services. The Council approved the report in principle, but postponed consideration of it until the next meeting, in the hope that members who criticised the form of the report would submit drafts which they might think more suitable for transmission to the Government Departments concerned.

The Council then adjourned.

ORDINARY MEETING.

An ordinary meeting was held at the house of the Society on Friday, 18th November, 1921, the President (Dr. W. J. Howarth) in the chair.

The minutes of the last meeting having been approved and signed, letters of apology for absence were read from Prof. John Robertson and Dr. W. N. W. Kennedy.

The following candidates having been duly nominated, were elected by ballot:—

As Members

Alden (Mrs.) Margaret Elizabeth, M.D. Berne, L.R.C.P. & S. Ed., L.R.F.P.S.; Alderton, Wilfrid Herbert, M.C., M.R.C.S., L.R.C.P., D.P.H.; Barton, Edwin Alfred, M.R.C.S., L.R.C.P.; Beattie, Neil Robertson, M.B., B.S.Durh.; Briscoe (Lady), Grace Maud, M.B., B.S.Lond.; Brown, Alex. Middleton, M.A., M.D., Ch.B.Aberd., D.P.H.; Brown, Julia Marcella, M.B., B.Ch., N.U.I., D.P.H.; Burke, Edmond Tytler, D.S.O., M.B., Ch.B.Glasg., Cantab., F.R.C.P.; Carter, Hugh Ronald, M.D. F.R.G.S.; Cameron, Hector Charles, M.A., M.D. Brux., M.R.C.S., L.R.C.P.; Clarke, Fredk. Adderley Howard, Major R.A.M.C., M.R.C.S., L.R.C.P.,

D.P.H.; Cockerell (Mrs.), B. Marion, M.B., B.S.Lond.; Connan, Donald Murray, M.B., B.S.Lond., M.R.C.S., L.R.C.P.; Hannah, Robert, M.C., M.B., Ch.B.Edin., D.P.H.; Holden, Charles Walter, C.M.G., D.S.O., Lt.-Col., R.A.M.C., L.R.C.P. and S.I., D.P.H.; Jennings, Henry Cecil, M.B., B.S.Lond., M.R.C.S., L.R.C.P., D.P.H.; King, C. Alice, M.D., B.S.Lond., D.P.H.; Lakin, Cecil Lionel, M.D. (State Med.), B.S.Lond.; Lilico, Gordon, M.B., Ch.B.Edin., D.P.H.; McAlpine, Kenneth, M.B., Ch.B.Glasg.; Matthews, Edgar William, M.B., B.S.Lond., M.R.C.S., L.R.C.P., D.P.H.; Mitchell, Jas. Robertson, M.C., M.B., Ch.B.Glas.; Murray, John Oliver, M.B., Ch.B.Edin., D.P.H.; Newcome, Herbert, M.B., B.S., M.R.C.S., L.R.C.P.; Robertson (Mrs.) Helen Lawson, M.B., B.S.Lond.; Semple, Agnes London, M.B., Ch.B.Aberd.; Shepherd (Mrs.) Flora, M.B., Ch.B.Ed.; Smith (Mrs.) Sylvia Blackstone, M.B., B.S.Edin.; Smith, Witney C. P., M.R.C.S., L.R.C.P., D.P.H.; Tracey, Violet Milliecent, L.R.C.P., and S. Ed., L.R.F.P.S.; Thompson, Arthur, M.B., C.M.Edin., D.P.H.; Wear, Arthur Hyde, M.B., B.S., B.Hy.Durh., D.P.H.

As Associates:

Finnan, John Patrick, L.D.S.Glas.; Kingham, Roy Victor, L.D.S.Eng.; Jones, Wm. Meredith, M.R.C.S., L.R.C.P., L.D.S.; Ovey, Henry Kinnear, L.D.S.Eng. (Hon. Capt.).

A long list of nominations were submitted for election at the next meeting.

Professor E. L. Collis then delivered his address, as president of the Tuberculosis Group, on "Tuberculosis: Inspection, Immunisation, Sensitisation."

On the proposal of Dr. Howarth, seconded by Dr. T. H. Peyton, a cordial vote of thanks was passed to Prof. Collis for his valuable paper. Lt.-Col. F. E. Fremantle, M.P., Prof. Kenwood, Dr. R. J. Ewart, Dr. Horace Wilson, Dr. F. G. Caley, Dr. John Sorley, and Dr. Charles Sanders, in supporting the vote of thanks, referred to various points of interest in the paper. Prof. Collis, having briefly replied, the meeting adjourned.

NORTHERN BRANCH.

Annual meeting of the Branch Council at Newcastle, 28th October, 1921.

Present: Drs. J. A. Hislop (vice-president) and seven members.

The minutes of the last meeting (29th October, 1921) were read and confirmed, and duly signed by the chairman.

The annual report for 1920-21 of the hon. secretary was submitted, and was approved and it was directed that it be presented to the annual meeting of the branch.

The annual statement of the treasurer was presented, duly audited and signed by the hon. auditors, Drs. Mostyn and Renney. This also was approved and ordered to be submitted to the annual meeting of the branch.

On the motion of Dr. Taylor, seconded by Dr. Dickinson, the hon. auditors, Drs. Mostyn and Renney, were re-elected.

Postage expenses of groups. Dr. Taylor moved, and Dr. Renney seconded, that during the ensuing year postages necessary for the groups be defrayed, so far as the funds would allow, by the branch. This was agreed to.

Annual general meeting at Newcastle, on 28th October, 1921.

Present: The president (Dr. T. Eustace Hill) and twenty members.

The minutes of the last annual general meeting (29th October, 1920) were read, and as they were dealt with at the meeting on 10th December, 1920, their confirmation was not moved.

The minutes of the summer meeting on 2nd July, 1920, were also read and confirmed, and duly signed by the president.

Maternity and Child Welfare Group—The president stated that at a largely attended meeting of M.C.W. medical officers, it had been decided to form a Maternity and Child Welfare Group in the society.

School Dentist, Newcastle Education Committee. The hon. secretary reported that he had communicated with head-quarters on this matter, and was informed by the executive secretary that it had been agreed by the British Medical Association, the British Dental Association, and the Society of Medical Officers of Health, that a single dental officer, i.e., one working alone and not with or under the supervision of another dental officer, was to be regarded as holding a senior appointment and entitled to a minimum salary of £500 per annum.

A letter from Dr. J. W. Smith, apologising for non-attendance, was read.

Appointment at Swansea. The secretary reported that Dr. E. Catherine Jones, assistant medical officer (maternity and child welfare), Newcastle, had applied for, and obtained, a similar post at Swansea, which was advertised at £500 per annum, the offer of the appointment, however, being accompanied by the intimation that a reduction to £480 had been made in the salary. Dr. Jones thereupon de-

clined the appointment, with the result that the salary was put up again to the original figure of £500.

The secretary submitted a letter from a member complaining that he had applied for the vacant post of medical officer of health to the Leadgate Urban District Council, but that, notwithstanding the fact that he held the D.P.H., had held full time appointments in the public health service and was an ex-service man, a general practitioner who had occupied the position during the war, and who had no qualification in public health, had been appointed.

The secretary reported that he had sent on the letter to the executive secretary, who stated that the society was already dealing with a similar case, and hoped to get a decision from the Ministry of Health that no medical officer of health post should go to a non-D.P.H. man.

A letter from Dr. K. B. MacGlashan resigning membership of the branch was read. The resignation was regretfully accepted.

The reports of the council and hon. secretary and treasurer were read.

Dr. Hudson moved, and Dr. Bruce seconded, and it was agreed that the reports be adopted.

Vice-President. On the motion of Dr. Taylor, seconded by Dr. MacLachlan, Dr. J. A. Hislop was re-elected vice-president.

Council. The president moved that the present council, with the exceptions of Drs. J. Arthur and A. G. Glass, resigned, be re-elected. This was duly seconded, and agreed to.

Dr. Dickinson moved, and Dr. Renney seconded, that Drs. R. F. Lunn and W. Hudson be elected to the vacancies on the Council, and this was carried unanimously.

The Council now stands as follows: the President, Vice-President, and Hon. Secretary (*ex-officio*): Drs. Mabel Brodie, W. H. Dickinson, Dodgson, W. Hudson, J. MacLachlan, R. F. Lunn, S. G. Mostyn, H. Renney, A. Smith, J. W. Smith, A. F. G. Spinks, J. Taylor.

December Meeting and Annual Dinner. It was agreed that the next meeting be held on December 9th, to be followed by the Annual Dinner. On the suggestion of the Secretary, it was decided that the Dinner be held at the Medical Institute.

Dr. W. Hudson read a paper on "Some affections of the Gastro-Intestinal Tract," which was followed by a discussion.

Report of the Honorary Secretary and Treasurer for the year ending September 30, 1921.

The fully paid-up membership at the end of last year was 128.

During the period under report 19 members and 4 associates were elected. 17 fellows and members who left the area were transferred to other branches, and 3 fellows, who came into the district were transferred to this branch. 1 fellow and 1 member resigned, and 1 fellow and 1 member died.

The total membership is now 134.

The branch met six times, and the average attendance was 22, as against 19 last year.

The Annual Dinner was held on the 10th December, 1920, and 32 members were present.

Two papers, including the Presidential Address, were given during the session, and each was discussed at a subsequent meeting. The subjects, addresses and discussions were: "The inter-relationship of Curative and Preventive Medicine," (President), and "After-care in relation to Preventive Work."

The summer meeting was held at the Children's Sanatorium, Stannington, on the 2nd July, 1921, and the attendance was 16.

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

Dr. G. R. Bruce, Medical Officer of Health, Jarrow, was appointed Journal Correspondent for the Branch.

Special consideration was given to the question of salaries and the terms of certain appointments within the Branch area.

Owing to the increased attendance of members during the last year it was no longer possible to hold meetings in Dr. Kerr's office, and difficulties were experienced in procuring the necessary accommodation in the Newcastle Town Hall.

Thanks to the generosity of Dr. J. W. Smith, Medical Officer of Health, Ryton, an ex-President of the Branch, in presenting the Medical Institute, 7 Windsor Terrace, to the Medical profession in the North of England, a new and most appropriate home has been found for the Branch, and all meetings have been held there since February, 1921.

Sub-groups.—Two sub-groups of members of the Branch have been in active session during the year under report.

Tuberculosis Sub-Group.—Twenty-five names were on the active list and the average

attendance at the meetings was eleven. Owing to the miners' strike only four meetings were called, three being held at the Tuberculosis Dispensary, and the last at the Medical Institute.

The business of the session consisted largely of the discussion of administration questions and medical politics, but valuable papers were contributed by Dr. H. E. Gamlen on "The Value of the X Ray in the Diagnosis of Pulmonary Tuberculosis," Dr. D. F. Macrae on "Silicosis," and Dr. G. S. Dodgson on "Pulmonary Tuberculosis as a Secondary Manifestation."

In addition to the ordinary routine work a post graduate course in France was organised in the summer and proved a great success.

Dr. Dodgson was re-elected president and Dr. Dickinson honorary secretary for the year.

The School Medical Officers' Group number twenty-five, have met on six occasions with an average attendance of ten. Four meetings were held at the School Clinic, Newcastle, one at the Medical Institute, and one at the Royal Victoria School for the Blind, Newcastle.

There were papers and discussions upon the "certification of the mentally defective," and "Rickets in School Children," and a visit was paid to the kitchens of the Newcastle Education Authority.

The president of the sub-group is Dr. Geo. Foggin, principal school medical officer, Newcastle-upon-Tyne, and the honorary secretary is Dr. R. F. Lunn, assistant school medical officer, Newcastle.

Financial Statement.—At the beginning of the year there was a balance in hand of £10 6s. 4d. A cheque from the society representing the branch's proportion (2s. 6d. on each paid-up subscription) of the members' subscriptions was received amounting to £14 5s.

The bank interest for the year ending 31st December, 1920, was 8s. 3d., thus making a total income for the year of £24 19s. 7d.

The expenses during the year amounted to £8 19s. 4½d., leaving a balance of £16 0s. 2½d. to be carried forward.

The treasurer of the society reports that the year's work shows a deficit of £249. It is anticipated that the increased subscriptions will produce an additional £300. This is on the estimation that subscriptions are punctually paid which, unfortunately, is not the case in a considerable number of instances, and this is a cause of much embarrassment to the society.

Even with the increased subscription it will be a struggle to make ends meet, and the councils of the branches are asked to exercise every possible economy.

The Northern Branch has always found it difficult to keep liabilities, particularly since the heavy increased postage rates came into force, within its income. Now, however, that there are active sub-groups within the branch, which should receive every assistance and encouragement, some slight assistance will have to be accorded them in the matter of postages at least.

It is therefore urged respectfully and strongly that members regard the punctual payment of their subscriptions as a point of honour, since the highly important undertakings of the society cannot possibly be carried on without funds, while the branches receive a small capitation calculated on the punctually paid subscriptions of its members, and do not receive any benefit from those whose payments are late or still in arrears.

H. KERR,

Honorary Secretary and Treasurer.
24th October, 1921.

NORTH WESTERN BRANCH.

Ordinary meeting held in Manchester, Friday, November 11th, 1921.

Dr. Talent, president (in the chair), and 27 members.

A letter was read from Dr. Caley, hon. sec. of the Tuberculosis Group, inviting the branch to consider the formation of a sub-group for tuberculous officers. Dr. Peyton stated that the constitution of the group had recently been amended to permit of the formation of these sub-groups and also explained that negotiations had been proceeding between the branch and the N.-W. Tuberculosis Society in the matter. The N.-W. Tuberculosis Society had asked to send representatives to discuss the position with the committee of the branch, and it was resolved to proceed with the formation of a sub-group as soon as possible after this interview.

Lieutenant-Col. Burke, D.S.O., V.D. Officer, Warrington, read a very interesting paper on "The Efficiency of the V.D. Clinic." He alluded to the difficulties including the want of accurate statistics and considered that the number of patients attending any clinic mainly depended upon energetic advertisement, the

amount of support rendered by the local health authority and the efficiency of the staff of the clinic.

After discussing the criteria of cure and detailing the reasons for and best methods of obviating premature discontinuance of treatment by patients he submitted that although the V.D. Clinics were doing a vast amount of good it was essential that some standardisation of treatment and of cure should be laid down and some element of compulsion introduced into the schemes to ensure the attendance of patients at least until they were free from infection.

Dr. Barlow, in proposing a vote of thanks, pointed out how difficult it was in propaganda work to reach the individuals most concerned.

Dr. Clemmey, V.D. Officer, Bootle, seconded the vote which was unanimously accorded to Dr. Burke for his excellent paper. In the subsequent discussion, Dr. Prosser White, Wigan, gave some figures in justification of the expenditure entailed on the work of a clinic and stated that he considered that the fundamental point for the success of all V.D. schemes was the proper education in venereology of the general practitioner. He laid stress on the necessity of experimental investigation as to the infectivity of the gonococcus in chronic cases and considered that a special knowledge of skin diseases was essential for a V.D. officer.

The president (Dr. Talent), Drs. Morley Mathieson, Wood, Sharpe, and the hon. secretary joined in the discussion.

MIDLAND BRANCH.

Meeting held at the Council House, Birmingham, on Thursday, October 6th, 1921.

Present:—Dr. Snell (in the chair), and 18 members. Apologies for non-attendance were received from Drs. Tangye, Geo. Reid, Ridley Bailey, Banks and Hamilton Wood.

Dr. Snell inducted Dr. Drybrough Gold into the chair.

The President proposed a vote of thanks to the retiring President (Dr. C. E. Tangye); this was seconded and carried unanimously. The Minutes of the last meeting, having been published in "Public Health," were taken as read and were signed. The Report of the Honorary Treasurer was deferred until such

time as the Annual Grant has been received from the Society.

A letter was read from the Secretary (*pro tem.*) of the Tuberculosis Group (Midland Branch), calling a meeting of the Group for October 22nd, 1921.

The *President* delivered his address, "The rôle of the General Practitioner in Preventive Medicine," and a discussion followed in which Drs. Barwise and Wilkins took part and the *President* briefly replied.

A vote of thanks to the *President* for his interesting address was proposed by Dr. Hewat, seconded by Dr. Stocks and passed unanimously.

Midland Branch Meeting, held at Birmingham, on Thursday, November 10th, 1921.

Present: Dr. Robertson (in the Chair) and 20 members.

The Chairman reported to the meeting the sudden death on November 4th of Dr. Drybrough Gold, the president, and proposed that a vote of condolence be sent to Mrs. Drybrough Gold, this was seconded by Dr. Ridley Bailey and carried, the members standing.

The action of the secretary in arranging for representation and a wreath at the funeral of the president was approved.

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

The council reported with reference to the vacancy of the presidency, and recommended that Dr. Snell be asked to undertake the duties for the remainder of the session. Dr. Robertson proposed this, Dr. Ridley Bailey seconded and it was passed unanimously. Dr. Snell accepted the position.

Treasurer's Report.—The honorary treasurer submitted his report, for the past year; this was received and adopted.

Correspondence: A letter was read from the Tuberculosis Sub-group, calling a meeting for December 3rd.

Dr. Snell then read his paper on "Some Notes from the Old Minute Books of the Branch." The paper was of great interest as showing the great changes in the scope of public health work. Dr. Robertson, Dr. Middleton Hewat and Dr. Wilkins spoke. A vote of

thanks to Dr. Snell was moved and passed unanimously.

Dr. Auden moved a resolution, amended by permission of the meeting, as follows: "That representations be made in the appropriate quarters, that there should be transferred to the Ministry of Health, all the powers and duties of the Board of Education with respect to medical inspection and treatment of children and young persons, in accordance with the wish expressed by Parliament, in the passing of the Ministry of Health Act." Dr. Auden indicated the danger of the present position by reason of the modifications introduced by the Education Act of 1921, and emphasised the necessity of a unified health authority, both local and central.

Dr. Ridley Bailey seconded the resolution and stated that the question was coming up before the Public Health Committee of the British Medical Association. Dr. Stocks spoke and gave instances of the ill effects of divided authority. Dr. Snell also spoke, and Dr. Auden briefly replied.

The resolution was passed unanimously and the secretary was instructed to send a copy of the resolution with a short explanatory memorandum to the council of the society, and also to the various branches.

EASTERN BRANCH.

At a meeting of the Branch held at the Shire Hall, Norwich, on July 30th, 1921.

(1) The minutes of the last meeting were read and confirmed.

(2) The report of the Hon. Treasurer was received and adopted.

(3) The resignation of the Hon. Secretary (Dr. A. N. Stevens), was received with expressions of regret.

(4) The following members of the Branch were unanimously approved for nomination to the Council for the Fellowship of the Society:—

Dr. T. L. Lack, Medical Officer of Health, Forehoe.

Dr. K. T. Williams, Shire Hall, Norwich.

Dr. D. Wainwright, Town Hall, Gt. Yarmouth.

Dr. W. B. Christopherson, Shire Hall, Norwich.

Dr. G. E. Leggatt, O.B.E., Isolation Hospital, Norwich.

Dr. G. W. Riddel, M.C., Municipal Offices, Norwich.

Dr. Susan S. Bryce, Shire Hall, Norwich.

(5) The following were elected officers of the Branch for the forthcoming Session:—

President:—Dr. T. L. Lack.

Hon. Secretary and Treasurer:—Dr. J. T. C. Nash.

SCOTTISH BRANCH.

A meeting of the Scottish Branch was held in Glasgow on Saturday, Nov. 5th.

Present: Professor Matthew Hay (in the Chair) and 29 members.

A discussion on the subject of venereal diseases took place, in the course of which it appeared that the general view was: (1) that compulsory notification was not likely to meet with success, and (2) that it was desirable that the general practitioner should take a larger part in schemes of treatment.

Dr. Campbell Munro moved:—"That the Secretary for Scotland should be pressed to give effect to the proposal which he himself has put forward, namely, that fever nurses, who have served for three years in a recognised fever hospital should be qualified for a place on the General Register after serving for two years in a general hospital, and that nurses who have served for four years in a general hospital should be qualified for a place on the Supplementary Register on serving for a year in a recognised fever hospital." The resolution was favourably received, and it was agreed to remit to the Council to consider the whole question and report.

Dr. Wilson, by request, gave a sketch of the work done at Hairmyres Tuberculosis Colony, Lanarkshire. Poultry-rearing and cobbling were the principal occupations taught, and something had been done in the way of training in forestry. The scheme, however, was still in the experimental stage.

Dr. Robb introduced a discussion on the limitation of the reports required from medical officers; and, finally, a remit was made to the Council to report on the subject.

A discussion followed as to the measures to be taken to secure a clean milk supply for the public, when it was remitted to the Council to bring up a report on the subject.

A letter from the Hon. Secretary of the Tuberculosis Group of the Society inviting suggestions as to forming a Sub-Group of the Scottish Branch, was remitted to the Council for consideration.

The proceedings terminated with a vote of thanks to the chairman.

TUBERCULOSIS GROUP.

A Special General Meeting was held at 1, Upper Montague Street, Russell Square, on 22nd October, 1921, at 11 a.m.

Present: Dr. F. R. Walters in the Chair, Drs. H. B. Gibbins, G. Macdonald, R. J. Cyriax, H. Wilson, A. C. Renwick, H. A. Ellis and F. G. Caley.

Drs. Peyton, Dickinson, Dodgson, Faill, Guy, Jessel, Burra, Wingfield, Woodcock and Hebert wrote regretting that they were unable to be present.

The Secretary explained that the meeting was called in accordance with a resolution passed at the last Committee Meeting to amend the Regulations of the Group to provide for the formation of Sub-Groups within Branches or combinations of Branches of the Society. After discussion the necessary amendments were made and the Regulations now provide for the formation of Sub-Groups, which are to have control of their own meetings and business, but any resolution on matters relating to policy, constitution or discipline of the Society or Group will be referred to the Committee of the Group for consideration. The Regulations also provide that the Sub-Groups shall elect two of their members to serve on the Group-Committee, and one additional member for every completed 20 members.

The meeting was strongly in favour of the formation of Sub-Groups and suggested that it would be advisable to form them as soon as possible.

Some discussion took place as to whether the word SECTION was not more appropriate than SUB-GROUP, but as the latter designation had already been adopted by other Groups, it was decided to keep to it for the sake of uniformity.

A meeting of the COMMITTEE of the Group was held on Saturday, 22nd October.

Dr. F. R. Walters in the Chair, and four members.

The minutes of the meeting held on 23rd September were approved.

(1). The Secretary having reported that members of the Group in the West of England Branch, together with other Tuberculosis Officers in that part of the country were holding a meeting in Bristol that afternoon with the object of forming a Sub-Group.

It was unanimously *resolved* to sanction the formation of the West of England Sub-Group forthwith, and on the suggestion of Dr. Herbert Jones, who attended the meeting, a telegram was sent to the Meeting at Bristol, conveying this resolution.

(2). As it was reported at the last meeting of the Committee that a Sub-Group was in process of formation in the Midland Branch, it was unanimously *resolved* to sanction the formation of the Midland Sub-Group, and the Secretary was instructed to write to Dr. Dixon to that effect.

(3). The members of the Metropolitan Branch present at the meeting agreed that it would be advisable to form a Metropolitan Sub-Group, especially as the Branch had 32 members in the Group. It was suggested that it might be advisable to combine with the Home Counties Branch to form one Sub-Group for the two Branches. After much discussion it was pointed out that the latter Branch had 21 members in the Group and was thus able to form a Sub-Group of their own. It was *resolved* to form the Metropolitan Sub-Group forthwith, and that the meeting of London Tuberculosis Officers already arranged for the 28th October should be the first meeting of the Sub-Group.

(4). With regard to the Sub-Groups in the remaining Branches of the Society, the Secretary was instructed to write to the Secretaries of the Branches concerned and ask for their views in the matter, and for any suggestions they would care to make.

The Status of the Tuberculosis Officer with Special Reference to his Position in the Public Health Service.

Several members unable to attend the meeting sent their views on the memorandum drawn up to embody the main points in the discussion

on this matter which took place at the last Committee meeting.

Dr. J. Guy pressed for close association between tuberculosis and general public health work, as the two are inseparable. He objected to the Scale of Salaries drawn up by Medical Officers of Health, on the ground that heads of sub-departments were Specialists, and there should be no great distinction between their remuneration and that of the Medical Officer of Health.

Dr. L. T. Burra thought that tuberculosis work is essentially a branch of preventive medicine and that close co-operation between all branches of preventive medicine is essential. He considered that the conditions of the Tuberculosis Branch should be sufficiently attractive to keep men in the service and not force them to take M.O.H. or other appointments for financial reasons. The same conditions were necessary in order to supply consultants of sufficient standing to meet the needs of general practitioners.

Dr. H. de Carle Woodcock pointed out that the present dead-end career of Tuberculosis Officers could in some degree be remedied by allowing them to do consulting work. He was of opinion that it was wrong to place an administrative post on a higher plane than one requiring scientific knowledge and training, and that the man who knew intimately the complex problems of tuberculosis should administer laws for its prevention.

Dr. R. Wingfield thought that tuberculosis was essentially a branch of preventive medicine.

Drs. Dickinson and Dodgson were against a separate Tuberculosis Service, which would imply more centralisation of control, and so tend to encourage mediocrity and inefficiency, and thought this could be best avoided by developments on the present lines with more freedom of action for Institutional and Dispensary Officers. If tuberculosis were to be tackled properly, men must devote their lives to the work, and adequate remuneration was necessary to encourage this. They thought the Society's Memorandum on Salaries was unfair to Tuberculosis Officers in fixing a higher minimum for

the Medical Officers of Health of the smallest unit than for Tuberculosis Officers, and in classing the Specialist Officer with an Assistant Medical Officer of Health. There was too big a discrepancy between the salaries of Medical Officers of Health and Specialist Officers, the attainments of a sound clinician being more difficult to acquire than those of a purely Administrative Officer.

A good deal of discussion took place on the various points involved, and it was clear that the feeling of the meeting was against the suggestion of a separate Tuberculosis Service. As, however, the suggestion had already been decided against, the meeting agreed that it was unnecessary to move any resolution embodying this view. On the other hand, the necessity of close co-operation between all branches of preventive medicine was emphasised in order to produce the best results, but it was felt that the Tuberculosis Officer should have full control of tuberculosis in his area.

Accordingly it was agreed that the following *resolution* be conveyed to Dr. Peyton, Representative of the Group on the Council of the Society, as embodying the opinion of the Committee, to enable him to voice their views, as and when required:—

That tuberculosis is essentially a branch of preventive medicine.

That the successful administration of a Public Health Department requires the fullest possible decentralisation of authority to senior and responsible medical officers, who should be in charge of Sections of the Department, and entrusted with the management and direction of their Section.

That medical officers in charge of Sections should have direct access to the Committee or Sub-Committee of the Public Health Authority entrusted with their administration, and should be in a position to advise directly in regard to all matters affecting the organisation and development of their Sections.

Some discussion took place on the Society's "Memorandum on the Remuneration of Medical Officers of Local Authorities," and it was decided to defer the matter to the next meeting.

A meeting of the West of England Sub-Group was held at 10, Redcliffe Parade, E., Bristol, on Saturday, 22nd October, 1921.

Present: Dr. Peters in the Chair and 9 members.

A telegram was received from the Committee of the Group unanimously sanctioning the formation of this Sub-Group.

It was decided to hold the meetings on the same day as the meetings of the West of England Branch of the Society, and to ask them for a grant of £10 for Secretarial Expenses of the Sub-Group.

A Sub-Committee consisting of Drs. E. Ward, C. C. Faill and F. G. Bushnell, with the Chairman *ex-officio*, was formed to consider grievances in connection with drawing up reports for the Ministry of Pensions.

Dr. Ward was asked to co-ordinate the work of other tuberculosis medical officers of the Group on the effect of marriage, pregnancy and parturition on tuberculosis.

Resolutions dealing with the security of tenure of medical officers holding tuberculosis appointments, and residential appointments in sanatoria, were referred to the Committee of the Group.

The first meeting of the Metropolitan Tuberculosis Sub-Group, held at No. 1, Upper Montague Street, on October 28th. Dr. H. Wilson was elected Chairman and Dr. H. B. Gibbins Secretary for the session. It was decided to hold meetings on Fridays at 8.15 p.m.

The Memorandum from the London County Council entitled, "Treatment of Tuberculosis—Revised Procedure," was discussed, and it was decided to raise a number of points at the meeting on November 4th with Metropolitan Medical Officers of Health and Medical Officers of the London County Council.

The second meeting of the Sub-Group was held on November 18th, Dr. H. Wilson in the chair. The Secretary reported on the meeting with Metropolitan Medical Officers of Health and Medical Officers of the London County Council in reference to the "Revised Procedure." It was decided to hold the next meeting at the Society's House on December 9th, at 8.15 p.m.

MATERNITY AND CHILD WELFARE GROUP.

On October 20th, at University College, London, was held a meeting of medical officers engaged in Maternity and Child Welfare work. Thirty-three were present.

At the commencement of the meeting, Dr. H. C. Cameron, President of the Society of Medical Officers of Maternity and Child Welfare Centres, presented to members of that Society a report of the Committee, recommending its fusion with the Society of Medical Officers of Health. Professor Kenwood briefly outlined the advantages which would accrue to both societies by their fusion, and after a brief discussion the report was adopted unanimously with acclamation.

The meeting then proceeded to appoint a committee "to draft rules for the newly authorised Maternity and Child Welfare Group of the Society of M.O.H., and make recommendations for the offices of President, Treasurer and Hon. Sec. of the group." The committee appointed was as follows:—Dr. Cameron, Guy's Hospital; Dr. Churchill, Bermondsey; Dr. Cox, Chelmsford; Dr. Basbell Davison, Merton; Prof. Kenwood, Bedfordshire and Stoke Newington; Dr. Kidd, Chelsea; Dr. McMaster, Dover; Dr. Langmead, Bethnal Green; Dr. Robertson, Guy's Hospital; Dr. Scarfield, Folkestone (late of Sheffield); Dr. Shepherd, Hornsey; Dr. Stocks, West Bromwich; Dr. Waller, Poplar.

The business portion of the meeting being concluded, a very interesting and informative paper on "The Nature of Summer Diarrhoea" was read by Dr. Cameron, and followed by a vigorous discussion, in which Drs. Nash, Eustace Hill, Cockerell, Wilkins, Scurfield, Carter and others took part.

CORRESPONDENCE.

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

To the Editor of PUBLIC HEALTH.

INFECTIVITY OF SCARLET FEVER.

Referring to the paragraph in the introductory remarks of my Annual Report relative to the discharge of scarlet fever patients from hospital, I beg to say that I claim no priority in my action of dismissing uncom-

plicated cases of the disease from hospital after a stay therein of less than the orthodox period of six or eight weeks, and, as a matter of fact, Dr. Moore has reminded me that he had been doing this for some time previously with the precaution of using salicylic acid as a disinfectant of the desquamating cuticle, but my investigations, subsequently borne out by practical experience convinced me that this was not necessary, and that the ordinary precautions generally in vogue are all that is required.

JAS. T. NEECH.

Edinburgh.

Oct. 26, 1921.

To the Editor of PUBLIC HEALTH.

DENTAL DEFECTS.

Sir,—The Manchester School Medical Staff has been considerably interested in your Editorial on "Dental Defects" in the November number, for at one of the monthly meetings of the staff held a week before your date of publication this very subject had been under discussion. At that meeting Dr. Ritchie placed before us some of the evidence he and his assistant had collected about fourteen years ago, which showed fairly conclusively and to the great surprise of the investigators that a sound or diseased condition of the teeth has practically no relation to the general health of the child. Much of this evidence was not published for the very obvious reason that its publication might have created prejudice against dental schemes. In the Manchester Report for 1906-7, however, the figures for one school were quoted, and they were typical of many others. From these it appeared that the proportion of children of subnormal nutrition was as large, if not larger, when there were only one or two teeth diseased, as when there were many diseased. Dr. Ritchie added, "Your medical officers are unable to state that the condition of the teeth is necessarily reflected in the physical condition of the child." Dr. Priestley's results give further confirmation of this conclusion.

We can scarcely doubt, of course, that the results of unsound dentures appear in adult life, but even here it is questionable if definite evidence is available.

H. HERD,

Sen. Assist. School Med. Off.

Manchester.

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Editorial.

SALARIES.

A SERIOUS aspect of the present position with regard to salaries is the attitude of the Government Departments concerned. In February, 1920, the Southwark Borough Council resolved to increase the salary of Dr. Horace Wilson, Tuberculosis Officer, from £500 to £650 per annum, rising by annual increments of £25 to a maximum of £800 per annum. On being applied to for sanction to the proposal, the Ministry of Health stated that it was not prepared to approve so high a maximum as £800 per annum

exclusive of war bonus, but would raise no objection to the maximum salary being fixed at £750.

The Council drew the attention of the Ministry to the infectious nature of the work which Dr. Wilson was required to perform; that there was no pension attached to the post; that the maximum salary proposed would not be reached for a period of six years; and that in order to retain the services of a professional gentleman who had made practically a life study of this particular branch of Public Health work an increment salary was necessary.

The Ministry, in a further letter, however, intimates that, after a full consideration of the circumstances, it is unable to see its way to vary its previous decision. Such action on the part of the Ministry of Health needs the most serious consideration by every Public Health Officer in the country.

Still more unfortunate is the action of the Scottish Board of Health in connection with the appointment of Medical Officer of Health to the Burgh of Stirling. It was proposed by the Local Authority to appoint a Medical Officer of Health at a salary of £600 per annum, and the Society of Medical Officers of Health protested against such an obviously inadequate salary being paid for such a position, and suggested a salary of £800. The Scottish Board of Health, however, have replied to the effect that they have investigated the whole question of salaries of Medical Officers of Health in Scotland and that, as a result thereof, they are of opinion that a salary of £500 is reasonable. Accordingly they are not prepared to withhold their sanction to the appointment. If this extraordinary attitude is based on the fact that the proposed salary is commensurate with the salaries generally of Medical Officers of Health, then the only possible conclusion is that remuneration of the Public Health Service in Scotland amounts to a grave public scandal which is apparently being continued with the connivance and, in fact, with the open instigation and support of the Scottish Board of Health.

PURE MILK.

Dr. Meredith Young in a recent Annual Report commented adversely upon the conditions under which the Cheshire Milk Supply is produced and, as is inevitable in such circumstances, he has been attacked vigorously by those vested interests which draw their wealth from the ill health of the public and particularly of the poor. Everyone who has to deal with health conditions in rural areas knows how difficult the task is to secure a decent level of cleanliness in connection with milk production, and this being the case it is most unfortunate that the *Liverpool Daily Post* and *Mercury* is able to publish an alleged interview with an officer of the Liverpool Health Authority which represents that officer as saying that "It would be entirely wrong to infer that any but good hygienic conditions prevail." If this is correct then Liverpool is to be congratulated on being an area occupying a unique position in the country, and it would be interesting to know the results of a series of bacteriological analyses of Liverpool milk at the present time. It would, moreover, be surprising if these results did not give abundant confirmation of Dr. Meredith Young's criticism.

"SUMMER TIME."

One of the most important and interesting of the subjects dealt with in Sir George Newman's recent Report as Chief Medical Officer to the Board of Education is the part which deals with the Summer Time Act. Sir George Newman says:—

"There is an absence of any reliable evidence that the operation of the Act is detrimental to the health of the children. The general impression left on one's mind is that a certain proportion of the population have failed to adjust the bedtime arrangements for their children to the operation of the Act, and this is confirmed by the evidence that such ill-effects as have been observed—

- (1) Occur at the beginning of summer time.
- (2) Affect the younger children.
- (3) Occur more in the towns than in the country districts.
- (4) Are absent or negligible in the more northerly parts of the British Isles.

"Further, there is no evidence that the alteration in hours affects the children in school unfavourably. Indeed, the balance of advantage in moving the school time one hour earlier is to give the children the cooler hours of the morning in school.

"The difference in the afternoon is negligible; in any case the school curriculum in the afternoon

is always lighter, more practical, and less onerous, in order to provide for the obvious fact that children are less capable of sustained effort in the latter part of the day. No unfavourable effects in this respect have been observed as a result of summer time. If this view be correct, there is nothing inherently evil in the Summer Time Act, as regards its effect on school children. On the contrary, they reap, in even greater degree than adults, the same substantial advantages as the rest of the population. What is wrong is not the Act, but the failure of a certain fraction of the people to adapt their habits to its terms."

The L.C.C. Central Care Sub-Committee have reported that the Summer Time Act is an advantage to school children and young persons.

It is most satisfactory to know that this subject has received such definite consideration by the Board of Education and the Ministry of Health. Through the past summer there was evidence of a carefully engineered crusade against "Summer Time" and there was danger in such a crusade being taken seriously by the Authorities. Fortunately there now seems every reason to believe that this great triumph of common sense over ignorant prejudice has been secured definitely for the future.

MEDICAL HISTORY OF THE WAR.

The first volume of the Official Medical History of the War, which has now been completed by Major General Sir W. G. Macpherson, K.C.M.G., C.B., LL.D., is now available to the public.

This first volume is a record in narrative form of the medical services in the United Kingdom and in garrisons overseas, with an account of the same in the operations against the German colonies in West and South West Africa and in Tsingtan. The feature which stands out most prominently in the history, says Major-General Macpherson, is "the magnificent and harmonious co-operation afforded by the medical profession throughout the Empire, and by a host of voluntary and other helpers in the work of the Army Medical Service and the Royal Army Medical Corps."

Including labour units, provision had to be made at one time or another for the medical services of forces with a total strength of nearly 3,500,000 operating in every variety of country and climate. A total maximum of 637,746 hospital beds were maintained in the United Kingdom and in theatres of war, and some 770 medical units of all kinds were mobilised and despatched to expeditionary forces. In addition, 75 hospital ships or ambulance transports were equipped and administered by medical services in the United Kingdom, and 2,655,025 sick and wounded were brought

to its shores for further treatment and disposal between August, 1914, and August, 1920. The personnel for medical services numbered at the time of the Armistice, 144,514 officers and other ranks, most of whom joined the Royal Army Medical Corps and were trained in the United Kingdom.

As regards the operations in South West Africa it is interesting to compare the mortality rates through enteric fever with those in the South African Campaign, 1899-1902, and the German-Herrero Campaign, 1904-7. In the South African War the death ratio per 1,000 average strength for the whole period 1899-1902 was 38.8, the annual ratio being 14.7. In the German-Herrero Campaign the ratios were 46.5 and 16.3 respectively; while in the South West African Campaign, 1914-15, the ratios were 0.78 and 0.75 respectively. It will be seen, too, that in the operations in the Cameroons the number of deaths from disease compared with the number killed in action exhibits a great advance in the efficiency of the Army Medical Services, for whereas in the South African War the deaths from disease numbered nearly twenty-fold the number killed, in the Cameroons the numbers were approximately equal. The volume is available through any bookseller at the price of £1 1s.

ENTERIC FEVER IN WEST RIDING.

The County Medical Officer, Dr. J. R. Kaye, has reported to the County Public Health and Housing Committee on an outbreak of enteric fever which occurred at Bolton-upon-Deane. Careful investigations have been made by the County staff which appeared to point to polluted water as the source of infection. Action was taken by the County Health Department in order to deal with the emergency and a public elementary school was taken over for use as a hospital, nine patients being accommodated there three days after the school was taken over. A hostel was also provided by taking over four new houses set aside by the Urban District Council. Altogether 74 beds were fully equipped in addition to extra bedding being provided for other hospitals in adjoining areas, and a nursing staff for the hospital was provided from the County Council Health Visitors, one of whom was appointed matron. Altogether isolation was provided for over 200 beds. Complete house to house visitation was also carried out by the health visiting staff.

ENGLISH IN LATVIA.

An appeal has been received from the Lord Mayor of London for donations of books for the

University and Schools in Latvia, one of the new Baltic States, where English is to be the first officially taught foreign language. There must be hundreds of thousands of standard English books, disused school books, and also scientific, engineering and other professional works lying unused in libraries and lumber rooms, and the appeal is for such books, as well as any others which can be spared, to be sent to Sir Alfred T. Davies, K.B.E., c/o The Consul-General for Latvia, 329, High Holborn, London, W.C.

OBITUARY.

D. DRYBROUGH GOLD, M.D., C.M., D.P.H., C.M.O., Herefordshire.

Dr. D. Drybrough Gold was born in Fifeshire, in 1872, medically educated at Edinburgh University and St. Andrew's University, and after a short experience of private practice was on the staff of the M.A.B. at the North Eastern and South Eastern Hospitals. Later he was assistant M.O.H. for County of Essex and was elected M.O.H. for Herefordshire in 1910. During the war he acted as M.O. to a V.A.D. Hospital in Herefordshire, and for two years as M.O.H. for Hereford City, during the absence of the M.O.H. for Hereford on military duty.

Dr. Gold was very popular as a School M.O. and had the knack of pleasing all sections of the public. He interested himself in local affairs and was a past Master of the Vapa Masonic Lodge, holding provincial rank in the craft, and was a prominent member of the Hereford City Parliament Debating Society. In 1920, and again in 1921, he was elected a Member of the Public Health Committee of the B.M.A., and he was chairman of the Hereford Division of the B.M.A. in 1919. At the time of his death he was President of the Midland Branch of the Society of Medical Officers of Health. His reports were concise and well valued and he expressed his views in a remarkably clear and intelligible manner. His demise at so early an age is significant of the strain of public health work at the present time.

SHERIDAN DELEPINE, Professor of Public Health in the University of Manchester.

It is difficult for us to realise that Delépine is no longer with us, and we who have been associated with him in his work at the Public Health Laboratory will ever miss his striking personality and inspiring influence.

At a time when recent bacteriological research was of little more than academic interest, he was

quick to see its practical importance, and to endeavour to make it of benefit to the community in the diagnosis and stamping out of disease, for he was above all a philanthropist, not striving to make a great scientific name or to amass a fortune, but labouring all his life for the good of his fellow creatures.

The laboratory which he built up remains as a permanent monument of his faith and energy. Its success has been phenomenal, and he lived to see it fill an indispensable part in public health administration, and to become the forerunner of many others.

His industry and enthusiasm inspired all who worked with him; his pupils are to be found in all parts of the world, taking with them his methods, some of his enthusiasm and of his hatred and contempt for all records and theories which were not founded on accurate observations.

A master of technical methods, and a superb draughtsman, his early engineering training led him to the invention, perfecting and improvement of laboratory apparatus and sanitary appliances.

A great teacher, a brilliant conversationalist, and a genial friend, he will long be mourned and missed.

DR. G. S. ELLISTON, C.B.

Dr. George Sampson Elliston, who died at Felixstowe, on November 20th, was for over thirty years medical officer of health for the county borough and port of Ipswich. He was born in 1844 the third son of Dr. William Elliston, a well-known practitioner in the same town, who died while the subject of this notice was still at Guy's. George Elliston did notable pioneer work in public health administration, and finding Ipswich in a state of mediæval insanitation, he carried through a succession of schemes which earned the town a very different reputation. He was one of the oldest Fellows of the Society of Medical Officers of Health, having served on the Council as far back as 1878. At the time of his death he was a Vice-President of the Navy, Army and Air Force Group of the Society.

Apart from his public health duties the great interest of Dr. Elliston's life was army medical work. He was a Volunteer before he entered Guy's, and he only retired from the Territorial Force when he had already passed an extended age limit. He was a member of the War Office Committee that drew up the scheme for the medical services of the Territorial Force, and he was the first A.D.M.S. of the East Anglian Division. On his retirement, in 1912, he was entertained at dinner by a notable gathering of

R.A.M.C. (T.F.) officers, in recognition of his conspicuous services. For many years he took a keen interest in the St. John Ambulance Brigade, being Commissioner for the Midland and Eastern Counties. Part of this work he resigned before the War, but he retained command of the Eastern District to the time of his death. Dr. Elliston was created a C.B. in 1911, and was a Knight of Grace of the Order of St. John of Jerusalem.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

NOTICES.

The first award of the *Neech Prize* will be made at the close of the current Session. The conditions, which were published in full in *Public Health* (Sept., 1921, p. 226), stipulate that the prize shall be awarded for the best paper read at a Branch meeting of the Society during each session. The paper must have reference to public health subjects, and originality and research will be taken into consideration. Seniority and professional standing will not influence the assessors in awarding the prize, which is open to all members of the Society. If for any reason the paper is not published in "*Public Health*," two typewritten copies should be sent to the Executive Secretary.

The Index and Title-page for "*Public Health*," Vol. XXXIV., will be ready on Jan. 1st. Copies will be sent to members of the Society, Librarians and others who bind their volumes, on request addressed to the Executive Secretary.

Several members who pay their subscriptions to the Society by bankers' order have inquired why they have had no receipt sent to them. As such payment must be recorded in the pass-book of the subscriber and also in the pass-book of the Society, it is not usual to send a receipt unless by special request. This is the practice followed by those London clubs and societies whose subscriptions are largely paid by orders on bankers.

Owing to increasing demands on the space available in "*Public Health*," the Editor must ask the Hon. Secretaries of Branches and Groups to confine their reports of proceedings to matters of general interest to members of the Society. The domestic affairs of Branches and Groups must, of course, be recorded in their minutes, but the reports sent to the journal should refer only to resolutions, recommendations and discussions which it is desirable to bring to the notice of the whole membership of the Society.

PUBLIC HEALTH DENTISTRY.*

BY

SIDNEY BARWISE, M.D., Lond., D.P.H., B.Sc.,
M.O.H., Derbyshire.

I have accepted the invitation of your Secretary to address the Dental Officers' Group this evening for two reasons. First, because I believe that the method by which we are solving the problem of providing an efficient School Dental Service in Derbyshire is the only way in which this problem can be solved. In the second place, because what we are doing in Derbyshire, and what we propose to do, has been much misunderstood by the dental profession, and without their support my difficulties are enormously increased. If the Derbyshire school dentists do not feel that the dental profession are in agreement with the work they are undertaking, we shall be limited in our choice of dentists, and our ultimate success—of which I have no doubt—may be delayed several years.

In 1911 we started in one of our Urban Districts a Provident Club for dealing with dental caries. The dentist appointed was Mr. Harold Smith, of Chesterfield, and it was as the result of the work he did and the knowledge he had of the way in which this problem was being dealt with in America, which led to our employment of dental dressers.

At the outset I must emphasise the difference in the problem which has to be solved in a county to that in a town. In a town there are hospitals and there are dentists, and the children are aggregated together within a radius of a few miles. In many county areas there are neither. In one area I am responsible for, there is a population of 100,000 persons without a single dentist.

What we found, was in accordance with what we were led to expect from the pioneer work done at Cambridge and Bradford, viz.:—that hardly a single school-leaver could be found without dental caries, while 75 % of the children had four or more teeth decayed. The problem we had to face was, how were we to deal with the teeth of 70,000 children, living in small towns of 20,000 inhabitants and in villages of less than 100 persons, scattered over some 640,000 acres, in many parts inaccessible and miles from any railway station.

It is necessary that each child should be seen at least each year, and the first question was how many dentists would be necessary to carry out the work. I came to the conclusion that if all the children were to be treated we must appoint 24 dentists. On this basis the cost of the Dental

Service would be £15,000 a year. This figure was based on the assumption that each dentist was paid a salary of £400, while the cost of a clinic and travelling expenses would be £200 for each dentist. For the whole country, on the same basis, about 1,600 dentists would be required, but as only 50 per cent. of the parents accept treatment, the number of dentists required might be only half the number stated.

After Mr. Harold Smith had been working for us some 12 months, he told me that the great bulk of his time was taken up with work which any person with intelligence would be capable of performing after six months' tuition, and Mr. Charles Markham found the funds for providing salaries to two young women while Mr. Smith trained them. Without Mr. Markham's generous help there could have been no dental dressers. The scheme, therefore, is not my scheme. It is the scheme of a member of your own profession. I have simply been his organising instrument. Soon afterwards, Mr. Smith was called up, and my Council appointed a whole-time dentist, who came to us with an open mind. He very soon reported that one of the young women, who had been a governess, had exceptional aptitude for the work, while the other would never be capable of the same standard of work. Subsequently, my Committee appointed two other dentists, and we have now, altogether, 3 dentists and 5 dental dressers. In selecting candidates we have insisted on a secondary standard of school education, and I would give the preference to girls who are good at freehand drawing.

What is the work which the Dental Dresser should be called upon to do?

In the first place, she should be taught to examine the teeth with probe and mouth mirror, and chart the work to be done. When the children selected by her attend at the school clinic the dentist should examine each child, and mark on the dental card the work which he approves being done.

The work our dentists refer to the dressers is cleaning, removing of tartar, polishing, applying dressings, extraction of temporary teeth when this involves no difficulty, the drilling of superficial caries of milk and permanent teeth, and the filling of the same. When the work is done, it is inspected by the dentist, who sees that no child leaves until he is satisfied. The dressers do all the clerical work at the clinic and so save the dentist's time.

We have now been working experimentally on these lines for five years, and the conclusion I have

come to is that, if, instead of having 12 dentists at small salaries we had 4 dentists each with three trained dental dressers to work under him, we could get through more work, and we should be able to pay the dentists higher salaries so as to retain their services, the amenities of their lives would be greatly improved and their work made more interesting.

The position of school dentist is not one which gives any opportunity of experience in the more lucrative side of the dental profession. It is what is called a "blind alley." The work is monotonous, and in a country area, if the whole school population is being attended to, it is a life of considerable hardship. His whole outlook is improved by providing him with the assistance of dental dressers, and when he is working for an Authority like my own, that has provided a Pathological Laboratory, he has unique opportunity for research.

Each dentist is provided with a principal dental clinic. At the principal clinic he will have three dental chairs, one for himself and two for the dental dressers. One dresser would always be out inspecting and the other two working clinically under his supervision.

In a country area, to save travelling expenses of children coming long distances for treatment, we shall eventually have minor clinics at the larger schools, the children from the smaller schools around coming to the clinic at the school for treatment. The dentist will take two of his dental dressers with him to these schools in his car, and if the work is finished at one such clinic in the morning, he will move on to a second minor clinic in the afternoon. It is probable that in the large towns, where large numbers of children can be brought to the dental clinics, a dentist could supervise the work of as many as six dental dressers, the bulk of his work being supervising and dealing with special cases requiring exceptional skill. On this, I would say at once, that when we have proper dental service such a thing as the caries reaching the pulp cavity should be unknown.

The objection which has been urged against this scheme is—that we are setting up a kind of unqualified practitioner. This objection was raised against the registration of midwives. The duties of a midwife are much more onerous than what I propose for dental dressers. All the evils which were prophesied to follow the passing of the Midwives' Act have been falsified, and the lives of members of the medical profession have become infinitely more tolerable by the restrictions of

their night work and emergency calls. At the same time fewer women are dying from sepsis and accidents of child-birth. The midwives are inspected by us, and I can say, absolutely, that the giving of drugs by midwives or the treatment of minor ailments connected with pregnancy which were predicted, are unknown.

I would set up a Dental Dressers' Board, a new body constituted on similar lines to the Central Midwives' Board. It should consist of one representative of the Board of Education, two representatives of the British Dental Association, three representatives of the School Dentists' Society, one representative of the Society of Medical Officers of Health and one of the School Medical Officers' Society. It would be the duty of the Board:—

- (i.) To keep a register of trained dental dressers.
- (ii.) To prescribe the training of dental dressers.
- (iii.) To approve Dental Dressers' Training Schools.
- (iv.) To appoint examiners, two of whom should be dentists and one a Medical Officer of Health.
- (v.) To issue certificates to candidates who have satisfied the examiners.
- (vi.) To issue rules relating to the duties of dental dressers.
- (vii.) The act as a disciplinary body, with power in case of misconduct, to remove the name of any dresser from the roll.

I suggest that similar rules to those applying to midwives apply to dental dressers. I would not give them their training in a dental school so that they would never see anything relating to artificial dentures, crowning, or the like. The training should take place at the main school clinic of the larger Authorities who have their own bacteriological laboratories. I lay great stress on the practical training of the dresser in elementary bacteriology and the practice of asepsis. I would see to it that they were taught nothing except what would be of use to them acting as the assistants of a school dentist dealing only with children. I would allow the profession of dental dresser to be open to women only, and I should make each dresser sign an Agreement providing against her ever acting as a dental dresser, to any but the school dentist of a Local Authority.

Appended, is the form of Agreement I would make each sign before starting her training.

The Training of the Dental Dresser.

I would see that the training of the dental dresser is as complete as possible on the prophylactic side, so that there would be constant employment for her when dental caries becomes, as it will become, a diminishing quantity.

The theoretical training should be extended over a period of six months, after which she should serve as a dental probationer for a further period of six months, and then sit for the examination, which should be both theoretical and practical.

The training should be given in five subjects:—

- (1) *The Germ Theory of Disease*, with practical work on unicellular organisms and methods of sterilising.
- (2) *The Anatomy* of the superior and inferior maxillae, the development of the teeth, the anatomy of the individual teeth and the histology of a tooth. *Practical Work.*—Section cutting of a tooth, examination of museum specimens, practical examinations of the dentures of children between 2 and 14. The X-Ray examination of the teeth. Spotting of individual teeth.
- (3) *Physiology.*—Elementary general physiology, especially that relating to the blood stream and lymph stream. The development of the teeth, the functions of the teeth, the salivary glands and their functions as regards the mouth juices, the tonsil and its functions. *Practical Work.*—Testing for alkalies and acids, tests for sugar and starch, the conversion of starch to sugar by saliva.
- (4) *Pathology.*—Caries—its causes and consequences. Dental abscesses, septic tonsils, tubercle of tonsils, tartar, consequences of tartar, effects of dummy teeth, Riggs' disease. *Practical Work.*—The organisms of thrush, diphtheria, Vincent's angina. Fermentation of sugar to acid. Dissolving out of lime salts from teeth by acids.
- (5) *Practical Dentistry.*—Removal of carious teeth, teeth extraction with special reference to each tooth. The uses of dressings, and their action on the structure of teeth. Drilling out of caries, teeth which may safely be stopped at once with permanent fillings, teeth which must not be filled by dental dressers. Removal of tartar, cleaning and polishing of teeth. The advantages and disadvantages of various methods of filling. Dental charts, methods of chart-

ing out symbols. Extraction of teeth for regulation purposes. *Practical Work.*—Drilling out caries in teeth in dummy head, filling of teeth in dummy head. Use of dental engine and use of various dental instruments. Correct method of mixing various filling materials. Removal of bacterial plaques and dental polishing.

You will notice that under each section I suggest the dental dresser should be instructed in practical work. The amount of actual dentistry, I suggest, is small compared with the general knowledge which would be obtained from the thorough training in asepsis and the hygiene of the mouth.

If the dental dresser is to become a permanent institution in England, the first necessity is that an adequate handbook should be prepared for their training. My own staff are held back from doing this by a sense of loyalty to their profession. And one of the reasons for my meeting your Group this evening is that I hope it will lead to unanimity between us, and that I may get volunteers to help with the production of a handbook upon the training of dental dressers. I should be glad to undertake the preparation of the first section myself, the second and fifth sections should be the work of dentists alone, on the third and fourth sections the medical and dental profession meet on common ground, and these sections should be prepared in collaboration.

During the last 10 years our outlook with regard to mouth hygiene has been widely extended. We started with the idea that it would be sufficient to drill out early caries in the permanent teeth, and by keeping on doing this each year, and by removing carious milk teeth we hoped dental caries would be abolished.

The problem is, however, much more serious than this campaign envisages. Before the children come to school they have developed foul mouths with consequent septic tonsils. We now know that at least 10 per cent. of our school population are suffering from diseased tonsils and adenoid growths. We know too, that tonsils cannot become diseased unless infected with bacteria. We know, as the result of the researches of Rosenow, that many diseases, such as rheumatism and its consequent chorea and heart disease, tubercle and other conditions, possibly appendicitis, are the result of infected tonsils. Infected tonsils are secondary to septic teeth, though these teeth may be milk teeth.

Again, the researches of Mrs. Mellanby on Vitamines shows that lack of proper calcium absorption is dependent on food deficiency in

essential fats. Again, Eric Pritchard believes that the deficiency of lime in rickets is due to insufficient available base to neutralise the acids produced by the incomplete oxidation of excessive carbo-hydrate in infants' food. It strikes me that the same argument applies to the growth of those teeth which are easy victims to caries. The wide view, therefore, is essentially preventive. We must see to it that the food of the expectant mother is not deficient in essential vitamins, and the same applies to the infant after its birth, particularly if artificially fed. That the artificially-fed child while its milk teeth are erupting, is not fed on a diet containing an excessive amount of carbo-hydrates, as 90 per cent. of the children were 10 years ago. In this connection we have a great deal to be thankful for in the popularity of dried milk.

Again, under Maternity and Child Welfare Schemes the school dental service must be available for children under five years of age. The child from the earliest period must be taught to drink only after meals and to finish each meal with some hard fibrous food. Under civilised conditions of life I think we must still use the tooth-brush, especially at night time. I believe that in lime water we have a valuable adjuvant, which is cheap and could be in every home. I have tried it myself for nearly twelve months and cannot recommend it too highly. I saw it first advocated by Mr. Fones of Columbia University. He suggests that before going to bed at night the mouth should be filled with lime water which should be forced backwards and forwards between the teeth by cheek action. The action of lime water is not merely chemical by neutralising any acid on the teeth, but it dissolves the mucin which is precipitated on the teeth by acid, and so prevents the formation of bacterial plaques.

It will be seen in this programme there is an enormous field for work which it would be quite impossible for dentists themselves to undertake, and that in the future when we have dealt with the arrears of caries which we are now faced with, the great bulk of the dental work in our schools will be prophylactic. It is possible that in the future the whole of the dental dressers' time will be taken up with scaling of teeth, removal of tartar and the polishing off of bacterial plaques, leaving the dentist to deal with the limited number of carious teeth which we shall then have.

At the present time only the children with caries which can be detected by probe and mirror, are as a rule sent for dental treatment. I do not think that anywhere in England are all teeth

systematically polished for the removal of bacterial plaques. The reason is, that this is not work which a qualified dentist can be expected to do, but it is essentially suitable work for a dental dresser.

At the present time in England the school dental clinics are generally what the American calls "repair clinics," they are clinics at which the damaged tooth is repaired. The latest work in America is prophylactic. The scheme, which I am here to advocate, is a combination of both types. As far as I can see, the repair clinic alone does not get to the bottom of the problem, the prophylactic clinic would be impossible in county areas, and in any case the cost would be prohibitive, and I believe with the type of population we have in England, children and their parents could be taught to carry out prophylaxis in their homes.

Through the courtesy of Mr. Fones, Professor of Preventive Dentistry in Columbia University, I have obtained particulars of the work which has been undertaken at his inspiration in the town of Bridgeport, Conn., details of which are given in his text book for dental hygienists, called "Mouth Hygiene," published by Lea and Febiger of New York.

The population of Bridgeport is largely alien. During the war they were chiefly engaged on the manufacture of munitions. There are in the district 30 schools with a school population of 20,000. In 1913, eight dental hygienists and two supervisors were appointed, working under one dentist. The following year six additional hygienists were appointed. In 1918, there were altogether 26 dental hygienists and three dentists, the dentists being exclusively employed on repair work.

At the larger schools dental hygienists were stationed, the work they were engaged in is what Mr. Fones calls "polishing." They believe it is better to prevent teeth from decaying than to establish repair clinics, and their motto is, "*A clean tooth never decays.*" By a clean tooth they do not mean a tooth which is clean to the layman's eye, but a tooth which has no bacterial plaques. They base their work on the knowledge that the first stage of caries is the formation of a bacterial plaque on the tooth, which serves as a nidus for organisms which first dissolve out the lime salts of the tooth, so rendering it a ready prey to the germs of caries. The bacterial plaque is caused by the precipitation of mucin on the tooth by acids caused by the fermentation of carbo-hydrate food.

The teeth of the children are all polished with the wheel brush and wet pumice, the engine being run at a moderate speed, after which each tooth, especially the masticating and approximal surfaces, are polished by hand with the finest pumice, by orange wood stumps held in special holders. Mr. Fones emphasises the fact that the best results cannot be obtained by the dental engine, and that the hand polisher must be used in every case. It is only by the hand polisher that all plaques, films and stains and soft accretions can be removed, and that by hand polishing a hard surface can be given to the enamel which makes it resistant to bacteria. Further, that the light pushing of the stick against the gums has a massage effect, increasing the blood supply to the teeth. I am bound to confess that I am surprised at the minutiae which have been worked out with regard to hand polishing of the teeth in dental prophylaxis.

The dental hygienist gives class demonstrations on the use of the tooth brush, and the daily use of lime water as a dentrifice is urged. Again, a strenuous educational campaign is being carried on on dietetics, mouth hygiene, the use of fibrous foods to finish up a meal, the giving up of unnecessary sugar, especially chocolate creams and other soft sweets, and finally, the giving up of drinking fluids until after the meal has been finished.

In their last report I find that the 20,000 Bridgeport children had 28,000 prophylactic treatments during the year, the result is that in the six years the scheme has been in operation the dental caries has been reduced 50 per cent.

Bad as our conditions in England are, I gather that the conditions they have to deal with at Bridgeport were worse. I do not think in this country we could do without what our friends call "repair clinics."

We have made an excellent start in this country, but without dental dressers we cannot undertake the prophylaxis which I regard as an essential part of any complete scheme, and I hope that the School Dentists' Society will put their back into it and that we shall build up in this country a School Dental Service which will be a model for the world.

In conclusion, if your Group would appoint a small Editorial Committee to be responsible for bringing out a suitable handbook on the training of dental dressers, I shall be glad to co-operate in any way I can. We can make up our minds that the dental dresser has come to stay, and it is only a matter of a few years before the dental

profession will recognise that the dental dresser is as necessary to them as the midwife is to the doctor, and provided that the system of registration is on the lines suggested in this paper I am sure they will also recognise that their fears that dental dressers might set up as unqualified practitioners are groundless.

DISCUSSION.

The Chairman, in opening the discussion, congratulated Dr. Barwise on his Paper, and related his experience during a recent visit to Derby, where he had seen how the dental work was carried on. He had been impressed by what he had seen, particularly by the way in which the dental dressers performed their duties. In his opinion the dental dresser had come to stay, and in the future would be a great help to the school dentist.

Mr. C. E. Wallis said that he did not like the term "dental dresser," and much preferred the American term "dental hygienist."

Mr. Doswell Wallis substantially agreed with Dr. Barwise excepting on one important point; he was opposed to dental dressers undertaking operative treatment and inspection.

Mr. R. D. Pedley, in complimenting Dr. Barwise with all the responsibilities of a Medical Officer of Health for Derby, in taking up the question of dental treatment for the children of his county, said it seemed to him that the question of such dental treatment must be considered from two points of view, viz.:

- (1) Was it economical?
- (2) Was it efficient?

(1) Economy was the order of the day owing to the aftermath of war, and the expenses in connection with the scheme must be cut down to a minimum. From that point he entirely agreed with Dr. Barwise.

(2) Efficiency was a greater difficulty in some ways, because only time could prove whether the training of the assistants was sufficiently good for the purpose.

He (Mr. Pedley) could never understand why efficiently-trained women should be objected to. Such prejudices must inevitably pass away. There is not a hospital in the country which is, or could, be run without a proper supply of trained nurses. The physicians and the surgeons are dependent upon them; and the idea of objecting to their presence on the grounds that they might set up in practice was unworthy of consideration, especially in the light of the dental legislation which had been recently carried out.

If we consider the fact that there are not in this country a sufficient number of dental surgeons to treat the dental needs of the children, it was obvious that outside help must be obtained, and such proposals as were brought forward by Dr. Barwise deserved encouragement.

Mr. Geo. Thomson was opposed to the employment of operating dental dressers, as were Mr. H. W. Breese and Mr. Bampton.

In moving a very hearty vote of thanks to Dr. Barwise, the Chairman said that the Paper raised a very big question, which it was quite impossible to discuss adequately in so short a time, as they had had that evening. He, therefore, thought that the group should appoint a committee to discuss the Paper, collect information, and consider recommendations.

Dr. Barwise, in reply, thanked the meeting for the cordial way in which his remarks had been received, and hoped that the group would act on the Chairman's suggestion.

APPENDIX I.

COURSE OF TRAINING OF DENTAL DRESSERS.

SECTION I. THE GERM THEORY OF DISEASE.

Living Cells, Micro-organisms, and Method of Growth.

- (1) Yeast type or glastomycetes.
- (2) Mould fungi.
- (3) Micro-cocci.
- (4) Bacteria.
- (5) Bacilli.
- (6) Spirillæ.
- (7) Red blood cells.
- (8) White blood cells.
- (9) Pus.

Conditions of Bacterial Growth.

Temperature, moisture, light, gas formation.

Practical Work.

- (1) *Innocuous organisms*, studies of yeast, micrococcus *pituitalis*, the hay bacillus.
- (2) *Pathogenic organisms*, thrush organism, diphtheria bacillus, tuberculosis bacillus, staphylococcus *pyogenes aureus*.
- (3) Blood and pus.

Antiseptics.

Carbolic acid, iodine, methods of sterilizing.

Asepsis.

Dry heat, moist heat.

SECTION II. ANATOMY.

The superior and inferior maxillæ.

Development of the teeth.

Anatomy of the individual teeth:—

- (a) Primary.
- (b) Permanent.

Histology of a tooth.

Practical Work.

Preparation of teeth for section cutting.

Histology of teeth.

Examination of section through jaws.

Examination of museum specimens of human jaws.

Practical examination of dentures of children two to fourteen years of age.

X-Ray examination of dentures of children two to fourteen years of age.

Spotting individual teeth.

SECTION III. PHYSIOLOGY.

Elementary general physiology, especially relating to blood, and blood stream, circulation, lymph stream and lymphatics, phagocytosis and immunity, the nerves and muscular system of the jaws.

The development of the teeth.

The functions of the teeth.

The development of the superior maxillæ.

The effect of the dummy teat.

Salivary gland and its functions.

Reaction of mouth juices.

The tonsil and its functions.

Practical Work.

Tests for alkali and acids.

Tests for sugar and starch.

Tests for conversion of starch to sugar by saliva.

SECTION IV. PATHOLOGY.

Caries.

Its causes.

Its stages.

Consequences of caries.

Dental abscess.

Septic condition of tonsils.

Consequences of diseased condition of tonsils, *e.g.*, tubercle.

Tartar.

Consequences of tartar.

Rigg's disease.

Conditions to be watched for:—

Thrush.

Diphtheria.

Vincent's Angina.

Septic Tonsillitis.

Practical Work.

Fermentation of sugar to acid.

Dissolving of lime salts out of teeth by acids.

SECTION V.

Removal of carious milk teeth.

Teeth extraction with special reference to each temporary tooth.

The uses of dressings and their action on the structure of teeth.

Drilling out of caries.

Teeth which may safely be stopped at once with permanent fillings.

Teeth which must not be filled by dental dressers.

Removal of tartar.

Cleaning and polishing of teeth.

The advantages and disadvantages of various methods of filling.

Dental charts.

Methods of charting out by symbols.

Extraction of temporary teeth for regulation purposes.

Practical Work.

Drilling out caries in teeth in dummy head.

Filling of teeth in dummy head.

Use of dental engine and use of various dental instruments.

Correct method of mixing various filling materials.

Removal of bacterial plaques and dental polishing.

Care of dental instruments.

APPENDIX II.

Suggested Form of Agreement with Dental Dressers pending formation of Statutory Examination Board and Registration of Dental Dressers.

AN AGREEMENT made the _____ day of _____ 19____, BETWEEN THE COUNTY COUNCIL OF _____ BY _____

THEIR CLERK (hereinafter called "the Council") of the one part and _____

(hereinafter called "the Pupil") of the other part.

WHEREAS, by virtue of the Education (Administrative Provisions) Act, 1907, the Council has power to make such arrangements as may be sanctioned by the Board of Education for attending to the Health and physical condition of the Children educated in Public Elementary Schools.

AND WHEREAS the Council has requested the Dental Surgeons employed by the Education Committee to train for the purpose women selected by the Council.

Now it is hereby agreed as follows:—

- (1) The Pupil shall willingly and diligently serve as a Pupil to the Dental Surgeons employed by the Education Committee to be trained as a Dental Dresser for the term of six months from _____
- (2) The Pupil shall obey and perform all the lawful commands of the Dental Surgeons and shall not absent herself from her duties without leave during the said term.
- (3) The Council shall pay to the Pupil during the said term so long as the Pupil shall serve to the satisfaction of the said Dental Surgeons wages at the rate of _____ per annum payable by equal monthly instalments.
- (4) After the termination of the said term the Pupil shall if so required by the Council enter the employment of the Council as a Dental Dresser for the term of three years and shall be paid a salary of _____ per annum during the first year thereof _____ per annum during the second year and _____ per annum during the third year thereof and any subsequent years together with such travelling expenses as may be allowed by the Council from time to time Provided that the Council shall be at liberty to terminate her employment at any time by giving one month's notice of their intention so to do.
- (5) In the event of the Pupil leaving the employment of the Council or being discharged therefrom she shall not at any time thereafter be engaged or act as a Dental Dresser or for gain make use of Dental knowledge acquired except in the legitimate employment of and under the immediate personal supervision of a registered Practitioner acting as a School Dentist.

AS WITNESS the hands of the said parties

WITNESS to the Signature of the said

WITNESS to the Signature of the said

THE joint committee of the Carnarvonshire combined sanitary district have awarded Dr. Lloyd Owen, M.O.H., an increase of salary from £650 to £700 a year, the change to be reckoned from December last.

THE POSITION OF THE SCHOOL MEDICAL SERVICE.*

BY

LESLIE KINGSFORD, M.D.

The School Medical Service, which was inaugurated by Parliament in 1908, has from small beginnings gradually developed into a large and important service, and in many areas is regarded as, perhaps, the most important branch of Public Health. Prior to 1908 there was no systematic inspection of children, but a few Authorities had a modified medical service to deal with a small section of the work, mainly the examination of children for Schools for Mentally or Physically Defectives.

At the commencement, though the general principles governing medical inspection were outlined by the Board of Education, the work was carried out in a tentative manner whilst Local Authorities were ascertaining the extent of the problems which the inspection of the children was bringing to light. Medical staffs were at first much too small to cope with the two groups, namely, the entrants and the leavers, originally scheduled for inspection, and it was not until some years had elapsed that the Board brought pressure to bear upon the Local Authorities to carry out their full legal requirements, whilst subsequently the Board added a third group (the intermediates) for annual inspection. The numbers of Medical Officers carrying out this work, therefore, gradually increased year by year until the outbreak of the war, after which the service was with difficulty maintained until, after the cessation of hostilities, the various officers were released from military duty. It has now further become obligatory upon Local Authorities to make provision for treatment, and to extend their medical inspection to Secondary Schools; this extension of the work has naturally rendered further increases of the staff necessary.

At the outset Parliament was ill-advised to impose the duty of medical inspection upon Local Education Authorities instead of Local Health Authorities. The latter are responsible for all matter concerning the Public Health, including the welfare of infants and young children, whilst Education Authorities should be solely responsible for education. The opportunity was, unfortunately, lost, and consequently there has resulted in many areas the establishment of a service entirely separate from that of the Health

Service proper. Parliament subsequently realised that an error had been committed, and sought to remedy this in the recent Ministry of Health Act by arranging that the Ministry of Health should be the responsible Government Department for looking after the health of all persons whether of school age or not. During the passage of the Bill, however, the then Minister persuaded Parliament to allow the duties connected with the supervision of the health of school children to be carried out by the Board of Education on behalf of the Minister of Health. This was a most regrettable manœuvre and one reacting disadvantageously throughout the whole of the country, as until the responsibility is shouldered at headquarters by the proper department, it will be difficult to adjust matters in the local areas where the School Medical Service and the Public Health Service are quite separate. In some cases, however, even in areas where the organisations are separate, the two departments are under the same Chief Medical Officer; this, at the present time, also obtains in the case of the two Government Departments referred to, and no doubt tends to smoother working, but this is quite a different matter from the two services being one. That there are difficulties which would have to be met if the work were undertaken by Health or Sanitary Committees and not by Education Committees must be recognised; nor would the formation of a joint committee be entirely satisfactory if its proceedings required to be ratified by each of the main committees, but these difficulties are not insuperable. In this connection it is interesting to note that the Bradford Health Committee, acting on the advice of the Medical Officer of Health, have recently recommended to the Bradford Corporation that one Committee of the Corporation should appoint and have sole control of the whole of the medical and dental staff, with the nursing and ancillary clerical staff, on both the health and education sides, and that all the work, including that connected with Clinics, Sanatoria, Hospitals, etc., carried out by these staffs should be controlled by this Committee. The matter is, it is understood, not yet settled, but the recommendation is an excellent one. In the meantime the segregation of the School Medical Service has resulted in many areas in the School Medical Officers becoming specialised for one particular branch, and, from the very nature of things, they become, as time goes on, less and less suited for other public health posts of a different nature, though, at the same time,

each year of greater value to Education Committees. In the early days of the service the posts were comparatively few and candidates were numerous, as they knew that there were good prospects of obtaining, in the near future, better paid posts, such as Medical Officers of Health, and a considerable number of those then appointed eventually secured the objects of their ambition. But as the numbers of School Medical Officers throughout the country increased, and Tuberculosis Officers, Infant Welfare Officers, and Venereal Disease Medical Officers came on the scene in large numbers, the prospects of an individual School Medical Officer becoming a Medical Officer of Health became more and more remote, especially as these senior posts remained numerically about the same.

It was recently estimated that there are between 1,200 and 1,500 Medical Officers in the above categories and about 300 senior posts to which they may aspire. Perhaps 15 or 20 of these posts become vacant yearly by death or retirement. The result is that the period of probation is becoming more and more prolonged, especially when it is realised that the medical training and accessory qualifications and hospital experience may approach anything up to 10 years. By this time, the Medical Officer is at least 25 years of age, and usually older, and naturally anxious to be in a position to save some money. He applies for and secures a post as School Medical Officer, and after remaining as such for a year or two begins to realise that he has joined a service with faint prospects of advancement, whilst the salary attached is in many areas barely sufficient to live upon, and is insufficient to enable him to save anything at all unless he happens to reside with his parents. I know of School Medical Officers who have regularly, at the present time, to draw on their capital in order to live, and that quite apart from any extravagances on their part. Again, I have it on good authority that in certain parts of the country the School Medical Officers are expected to have private means.

To refer for a moment to the duties and qualifications for the post of School Medical Officer. The duties vary in accordance with the area, and whether or not the officers devote their whole time to the school work. In large areas, whether County Boroughs or County Areas, the officers usually devote their whole time to School Medical work, but in the smaller boroughs the officers, though they may be whole-time officials, frequently spend part of their time on other Public Health duties, including Infant Welfare work, Tuberculosis work, Bacteriology, Infectious

Diseases and general Public Health; such posts naturally give the holders a better chance of promotion because of their wider experience. In addition to the duties common to all School Medical Officers, namely, the inspection of certain groups of children, some examine children for the Schools for Mentally or Physically Defectives; others investigate infectious outbreaks in schools, and others undertake refraction work, or supervise treatment at Minor Ailments or Remedial Exercises Clinics. To those whose duties are almost wholly confined to medical inspection the work naturally becomes exceedingly monotonous, and the officers in consequence endeavour to improve their prospects by applying for better posts. Those whose duties are more varied are in less haste to make a move, provided that they are in receipt of reasonable remuneration.

Medical Officers join the School Medical Service for two main reasons:—

- (1) As a means of promotion to a higher post, e.g., Medical Officer of Health;
- (2) As a livelihood, and because they are interested in the work.

The majority enter for the first reason, but as mentioned earlier the chances of any individual eventually becoming Medical Officer of Health are small. Those who succeed in making a livelihood out of the service are few, as the Authorities offering satisfactory prospects are by no means numerous.

The importance of the School Medical Service in relation to the future health of the community has been abundantly proved by the reports of the medical examining Boards during the war, and its value in discovering and securing treatment of defects is recognised on all hands; yet during the last year for which figures are available less than £900,000 was spent in the country on Medical Inspection and Treatment. Further, a recent analysis made by Dr. Daley, of Blackburn, the comparative expenditure on the various branches of Public Health work showed that whilst 30 per cent. of the expenditure was in connection with tuberculosis, 26 per cent. on infectious diseases, 15 per cent. on general sanitation, and 13 per cent. on maternity and infant welfare, only 9 per cent. was in connection with the School Medical Service—a proportion certainly too small, considering its potentialities. Is it not possible that the explanation lies in the fact that the work is, in the majority of instances, under the control of Education Authorities with interests centred in matters purely educational? If the maximum of results are to be obtained from the expenditure of time and money on the service

* Paper read before the North-Western School Sub-Group, on November 11th, 1921.

it is absolutely necessary that only Medical Officers of proved clinical ability and wide experience should participate in the work.

The question naturally arises as to what should be regarded as the essential qualifications and experience.

In the first place the possession of the D.P.H. is desirable, and, for those who aim at promotion in the Public Health Service, essential, as in addition to the special knowledge thereby gained, the course trains the mind to think along the line of the causation and prevention of disease.

In the second place special experience in the diseases of childhood is essential, preferably obtained by a residential post at a Children's Hospital, whilst in addition post-graduate study should have been taken in Eye, Throat and Ear work, whether or not treatment of such cases is undertaken by the School Medical Officer. For these posts recently-qualified candidates are obviously quite unsuitable. In addition to medical experience, discrimination, tact, and a thorough understanding of local social and industrial conditions are necessary assets in maintaining cordial relations with the teachers and securing the confidence and co-operation of the parents.

Committees should realise that the School Medical Service is at least equal in importance to other branches of the Public Health Service, and consequently ought not to be regarded in any way as the junior service from which transfers to the other branches are considered as promotions; and, further, that there is considerable loss in efficiency when, for one reason or another, the staff is constantly changing its personnel. Consequently Committees should, when they have secured good officers, give them every encouragement to remain in their service.

Improvement in the service would be effected by its incorporation with the Public Health Service of the area, and it should then be possible for the officers appointed to undertake, if desired, other Public Health duties, but the standard required of officers would, of course, in this event, be somewhat higher. The system of watertight compartments which exists in some of the larger areas is inflicting a serious hardship on the Medical Officers entering the School branch of the Public Health Service. At the same time it must be realised that there are some officers who are specially interested in the work, and who would prefer to do school work and no other; in these cases there would be no difficulty in the larger areas in arranging for this.

To secure an appointment as Medical Officer of Health it is now almost essential to have had personal experience with the numerous branches, one might say specialities, of the following services: School Inspection, Tuberculosis, Welfare Work, Infectious Diseases, and Venereal Diseases. In many areas these are quite separate and distinct departments; consequently, the experience of individual members of the staff is limited, and they cannot hope to secure higher posts; the only thing that appears open to them is to qualify by taking subordinate posts in smaller boroughs where the work is combined but limited in extent, and this is what in practice is actually happening. This naturally magnifies the importance of the smaller boroughs from the promotion point of view, and, other things being equal, probably deters the best candidates from applying for the posts in the larger areas.

With regard to the salaries generally offered, these are by no means commensurate with the cost of preparation nor with the cost of living. The pre-war salary was barely sufficient to live upon, and although the medical journals have agreed not to insert advertisements for posts under £500 a year as a commencing salary, this sum has a purchasing power of considerably less than the £250 offered in the early days of the service. The position of the officers is, therefore, worse rather than better, and the remuneration in many areas is not sufficient to allow of the officers retaining, even with the utmost economy, the position in the social scale to which their qualifications and experience justly entitle them.

In "Public Health" for December, 1920, there was published in connection with Medical Officers holding posts under Local Authorities a scale of salaries which had been adopted by the Society of Medical Officers of Health. Since that date the Whitley Council, to which the scale was to have been submitted, has, unfortunately, broken down and has not yet been re-established, but the National Association of Local Government Officers which is getting out a scale of salaries for all officers in the Local Government Service, has accepted the above-mentioned scale so far as Medical Officers are concerned. It is probable that the N.A.L.G.O. scale for all officers will be shortly completed and published, and it will then be the subject for discussion by the Local Whitley Councils which, it is hoped, the Ministry of Labour will shortly succeed in setting up.

The scale, apart from its financial considerations, has this merit, that it shows that the Society of Medical Officers of Health recognise

officially that the School Medical Service is at least on a level with and not inferior in importance to the other branches of the Public Health Service, a fact by no means yet recognised by all Local Authorities, as evidenced by the advertisements in the medical journals. The medical journals have, unfortunately, not yet adopted the scale which provides for a commencing basic salary for all junior posts of £500, with Civil Service bonus in addition. By concerted action these journals would lose no advertisements whilst at the same time they would help on a branch of the profession greatly in need of assistance.

It is the knowledge of the unfortunate prospects of many of these officials which determined a paper on these lines, and it is desirable that a note of warning should be sounded for those who contemplate entering the school branch of the Public Health Service, and in this respect the advice given by Mr. Micawber to David Copperfield appears at the present time to be particularly opportune, viz. :—

" ' My other piece of advice, Copperfield,' said Mr. Micawber, ' you know. Annual income twenty pounds, annual expenditure nineteen nineteen six, result happiness. Annual income twenty pounds, annual expenditure twenty pounds ought and six, result misery. The bloom is blighted, the leaf is withered, the God of day goes down upon the dreary scene, and—and in short you are for ever floored. As I am! If in the progress of revolving years, I could persuade myself that my blighted destiny had been a warning to you I should feel that I had not occupied another man's place in existence altogether in vain. In the case of anything turning up (of which I am rather confident) I shall be extremely happy if it should be in my power to improve your prospects.' "

I do not know whether all Public Health Officers are equally confident of something turning up from the Society of Medical Officers of Health, but none more anxiously await it than the Dr. Micawbers of the School Medical Service.

SCHOOL MEDICAL SERVICE AND THE MINISTRY OF HEALTH.

BY A SCHOOL MEDICAL OFFICER.

In a passage in his Republic, in which he discusses the cohesion of the ideal state, Plato opens his argument with the question " Shall we begin by asking ourselves what ought to be the chief aim of the legislator in the organisation of

the state?" He immediately follows this question with another. " Can there be any greater evil than discord and plurality where unity ought to reign?" It was in order to secure this unity where plurality had existed that the Ministry of Health was created. As a means to that end it was enacted that there shall be transferred to the Minister all the powers and duties of the Board of Education with respect to the medical inspection and treatment of children and young persons " . . . provided that for the purpose of facilitating the effective exercise and performance of these powers and duties, the Minister may make arrangements with the Board of Education respecting the submission and approval of schemes of local educational authorities and the payment of grants."

Now the history of this clause is of considerable interest in the light of subsequent events.

In the Ministry of Health Bill as introduced by Dr. Addison, supported by Mr. Fisher, Major Astor and others, Clause 3 (a) proposed the transference of medical inspection and treatment of school children to the Ministry of Health. When the Bill was before Standing Committee A (18th March, 1919) an attempt was made to amend this clause out of the Bill. This attempt was frustrated, and despite this opposition, Mr. Locker Lampson's amendment was agreed upon without a division, which in the words of the School Government Chronicle (20th March, p. 153), made *immediate and absolute what had* (in the original draft) been *permissive and deferred*."

On 9th April, Dr. Addison, moving an amendment to facilitate the payment of grants, stated that his proposal was a temporary measure only to tide over the period of transference. He said: " *We have endeavoured to secure to the Minister of Health the responsibility which the Committee wished to attach to him directly in respect of medical inspection and treatment, and at the same time to set out arrangements which would make the formulation of schemes and the determination of grants thereon possible of continuance upon the same lines upon which they have been found workable.*" Here is a definite and unequivocal acknowledgment of the determination of Parliament that, save for an interdepartmental arrangement for the

payment of grants, the School Medical Service should become part and parcel of the activities of the Ministry of Health.

Yet in spite of the intention to secure unity of administration of all health services, in the Education Act, 1921—which is in essence, and is described in the preamble as, a consolidating act, a clause has been inserted which introduces a new principle not expressed in the clause of the Ministry of Health Act which it thereby repeals. Clause 80 whittles down the responsibility of the Minister of Health and in a modified degree re-transfers to the Board of Education the duties imposed by the Ministry of Health Act, by perpetuating the dual local control of activities for the promotion of health, which has done so much to impede the real progress of school hygiene. We readily admit that the great majority of local education authorities have striven to develop this side of their work, but the fact remains that they are appointed for the administration of education and not for the promotion of health. The vast sums which must be raised for education proper of necessity compels them to regard the cost of medical inspection and treatment as an additional charge which may be pruned when economy is called for. The argument that it is all to the good that the members of education committees thus learn to take a more real and personal interest in matters pertaining to health is a specious one, for health is a subject of so many ramifications that the same argument will apply in equal force to the Baths Committee or that for sewage disposal and refuse destruction. All councillors and members of local government units are elected by the suffrages of their fellows, presumably in order that they may take a special interest in all matters whereby the well-being of the community is served, whether they serve on the Health, Education, or any other Committee. In practice we do not find that members of the local education authorities are more alive than their fellows to the necessities of preventive medicine. The provision of open-air schools for debilitated children, the ventilation of schools, the proper seating and lighting of school rooms, the prevention of infectious disease, and all the other agencies for the maintenance of a healthy school life, but rarely receive the attention which their intrinsic importance

demands. In these matters the advice of the school medical officer is but rarely asked for and still more rarely followed. Moreover, it is clear that when a local education authority does undertake health measures, as it is not primarily the local health authority, re-duplication and overlapping almost inevitably ensue. The maintenance of institutions for the treatment of tuberculous children, the provision of dental clinics for tuberculous persons, for nursing mother, by the Health Committee, and for dental treatment of school children, housed in different buildings and under different staffs, all show this overlapping—necessary only so long as there are two committees dealing with health questions. One committee may be arranging with a hospital for accommodation for expectant mothers, or for infantile diarrhoea, another committee may be arranging with the same hospital for the removal of adenoids, or the refraction of visual errors of children. The Health Committee administers the Blind Persons' Act, but the Education Committee is responsible for the training of blind children, and so on. The greatest overlap, however, occurs in the supervision of infectious disease, by far the greatest part of which occurs during the period of school attendance. Here, the Medical Officer of Health, the School Medical Officer, the Health Visitor, the School Nurse, and the School Attendance Officer may be, and often are, concerned in a duplication of domiciliary and school visitations. It would be easy to multiply examples, but difficult to estimate the enormous cost of labour and money entailed by this re-duplication. But there are other results which are of peculiar interest to the medical profession. A local education authority naturally looks to its executive officer as its adviser in all matters relating to the duties imposed upon it. This attitude tends to affect very adversely the status of the School Medical Officer, who is more and more reduced to an entirely subordinate position, even in those matters in which he alone is able to give expert advice. This subjection to lay domination more than anything else leads to lack of harmony and a paralysis of effort. It lowers the prestige of the medical profession as a whole. In one of the larger authorities the School Medical Officer is not permitted to attend the meetings of the committee

which deals with the blind, deaf, crippled, mentally defective and debilitated children. In many the School Medical Officer has no voice in the provision of meals. More frequently still there is an effort to make the annual report of the School Medical Officer subject to revision by the executive officer, or an attempt on his part to interfere with matters which belong strictly to the domain of the medical officer.

But there is another and still more serious result. The multiplication of assistant School Medical Officers, who are not associated with other branches of health work, has already made the school medical service a blind-alley from which there is little hope of escape, and in which there is no prospect of ever earning an income commensurate with their professional status and qualifications, and from which there is no possibility of making provision against age and sickness. To allow a considerable body of the medical profession to eke out a livelihood on or near the poverty-line is a short-sighted and unworthy policy. It is against the interests of the people and profession alike. The rest of the duties of the Minister of Health enumerated in the Act have already been transferred to him, and it remains only to complete the work therein contemplated by the definite and explicit transference of the health powers and duties hitherto exercised by the Board of Education. A unification of all health activities under one central and one local authority is the only solution of these difficulties. This is the solution offered by the creation of the Ministry of Health, and one which no pride of place nor jealousy of prescriptive rights should be allowed to prevent. We can only repeat with Plato, "Can there be any greater evil than discord and plurality when unity ought to reign?"

*CO-ORDINATION OF MEDICAL SERVICE
IN BRADFORD.

J. J. BUCKLEY, M.D.

The difficulties which arise by having two staffs doing essentially similar, and in some cases, the same work controlled by two different committees

* Report adopted by a Special Joint Sub-Committee of the Health and Education Committee, Bradford.

mittees of the same authority, may be briefly summarised under the following headings:—

1. *Conditions of Service.*—Up to two and a-half years ago, the Health and Education Committees made little attempt to set down conditions of service in the two departments along similar lines. Since that time there has been an earnest attempt to do so, but for a variety of reasons it has not always been possible, and there are differences in the conditions of service which give rise to a number of petty grievances and interfere with smooth working. Thus, there are not quite uniform rates of remuneration, there are not quite uniform lengths of holiday, and there are not quite uniform hours of working. The appointment of the staffs by different committees leads the members of each staff to think that they are solely engaged in the work of that committee, and they do not feel free to undertake willingly work under the charge of another committee which has not appointed them. This is only true in some cases. Generally the better members of both staffs have been willing to help one another, but on both sides there have been notable exceptions in both the medical and nursing staffs. Such a condition of affairs leads of necessity to uneconomical working. Nowhere is the difference in the conditions of service seen to a greater extent than in the clerical staff. Health Clerks are in the third class and Education Clerks in the second, yet of the two probably the Health Clerks are not the less skilled in the special kind of work required. Further, the Education Clerks have up to recently been given to understand that their special duty is to report to the Education Department and to some extent to consider themselves independent of the School Medical Staff, and this has been a constant source of difficulty. Generally the difference in the conditions of service on the clerical side has in the school medical service led to an overweighting of clerks whose energies are not sufficiently available for the actual work which is being performed.

2. *Duplication in Administration.*—Two committees carrying out the same or exactly similar work of necessity adopt different methods of administration. The medical services of the Health Committee are medically administered with the key-note of health as the main factor; the medical services of the Education Committee are educationally administered with the key-note of school attendance as the main factor. Such an attitude as that of the Local Education Authority has long been recognised by the authority itself as irrational, and they have had to alter and extend

L. S. WILSON, M.D.
M.B. 1925

their administration accordingly, and now practically the whole of the administration of the educational medical services is a duplication of administration of the health medical services. These two administrations are extremely costly and confusing. Letters are constantly passing from the one to the other involving many delays, much expense, and little efficiency. It is ludicrous to contemplate the amount of inter-departmental reporting and clerical work that is involved in dealing with some of these cases. To most of the members of the Education Committee the position with respect to mentally-defective cases will be known, but much the same duplication exists in tubercular children and other cases.

3. *Duplication of the Actual Work.*—The Health Committee deals with all conditions of health and disease at all ages in all classes of the population. Its powers, though not its duties, cover the work done by the Education Committee. The duties of the Local Education Authority have relation strictly to children of school age, and a definite duplication occurs in two sets of circumstances.

(a) *Duplication Arising from Diseases.*—The duties of the Health Committee in infectious disease, in tuberculosis and in venereal disease, cover the whole population whether they are school children or not. Thus, scarlet fever, diphtheria, measles and whooping-cough, conditions rife among school children, are dealt with by the Health Committee. All the arrangements for the care and treatment of these are made by the Health Committee. Again, tuberculosis, pulmonary and surgical, is dealt with by the Health Authority as a duty, and here the Educational Authority has tended to deal in a fashion with a variety of the cases, and this has to some extent duplicated the work and will render the whole effort of the Council less effective. Thus, the Health Authority has considered sanatorium arrangements, hospitals, and institutions for pulmonary and surgical tuberculosis, while the Education Authority has considered open-air schools and cripple schools. A residential open-air school is in effect a children's sanatorium, and a residential cripple school is in the largest part a surgical sanatorium. Both Authorities have been considering in effect the same subject so far as school children are concerned and overlapping each other's work. Again, venereal disease profoundly affects the school child, yet the duty lies with the Health Authority. Apart from ophthalmia neonatorum there are at the blind, deaf and mentally defective schools, numerous results

of venereal disease, and these should be treated along venereal disease lines, while in the nursery schools particularly one finds actual cases of venereal disease contracted quite innocently, but requiring active venereal disease treatment.

(b) *Duplication at Particular Ages.*—At the age period 2 to 5 years, the status of the Local Education Authority and the Local Health Authority is exceedingly ill-defined. Arrangements may be made and have been made by the Health Authority for dealing with this age period, yet in the case of nursery schools, the children may also be cared for by the Education Authority so that the Education Authority is also responsible for making arrangements for these. If the Education Authority continues to develop its own medical service as this Authority extends its nursery schools, an increasing duplication and confusion will result. In order to deal effectively with paralytic and rachitic cases in young children, residential treatment along hospital lines is essential, but this will not be met with further extension of residential accommodation at the cripple school nor by the institution of cripple nursery schools. The school or nursery school idea of approach to the treatment of the young cripple is erroneous and obstructive to the greatest benefit to the individual and the community. It may be stated definitely that the measure of efficiency in treatment at present existing at the cripple school is due to a large extent to the hospital treatment provided by the Local Health Authority. Had one authority with sufficient powers been dealing with the subject this measure of efficiency would have necessarily increased.

Conclusion.—(1) The City Council of Bradford is the sole authority for both health and education in the City, and the present method of carrying out its medical duties is needlessly cumbersome and leads to a loss in efficiency and increased cost.

(2) The medical and dental staff, with the nursing and ancillary clerical staff on both the Health and Education sides should be appointed and controlled solely by the one Committee of the Corporation.

(3) All clinics doing medical and allied work should be provided and controlled by this Committee.

(4) All institutions whether called schools, sanatoria or hospitals concerned chiefly in the preservation of, or restoration to health of the person attending should be provided by this Committee.

(5) An institution should be primarily regarded as educational and under the control of the Education Committee, when its main object is a modification of education so as to suit the defect itself. Thus, Blind, Myope, Deaf, Stammering and Mental Deficiency Schools and Classes should be regarded as primary educational, while open-air and cripple schools should be regarded as primarily concerned in health.

(6) It might be held that certain cases at the Open-Air School and Cripple School are attending for a primary educational purpose, but this would not apply to any cases in residence there. It should, therefore, at least be held that all open-air residential schools and residential cripple schools should be provided and controlled by the aforesaid Committee.

(7) This Committee should be responsible for the whole of the medical and allied work in the City and all other Committees of the Corporation requiring medical services should hold it responsible for the duty of providing an efficient service to meet the varying needs of these Committees.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

NOTES FROM BRANCHES.

WEST OF ENGLAND BRANCH.

A VISIT TO TORQUAY.

On November 30th about a dozen members spent a most interesting and enjoyable afternoon at Torquay. Immediately after the business meeting of the Branch, Dr. Dunlop read his Presidential address, in the course of which he offered some valuable criticisms on the Government Committee's Report on Meat Inspection. The party then motored to the Destructor Works and the Council's Housing Estate, the drive being continued through several of the more picturesque parts of a very beautiful district. On their return members were entertained to tea by the President, who was cordially thanked for this and for the trouble he had taken in making such complete arrangements for their enjoyment. After tea a meeting of the Tuberculosis Sub-Group was held.

DIPHTHERIA INVESTIGATION AT BRISTOL.

A great deal of valuable work in connection with epidemic diseases has been done from time to time at Bristol by Dr. Davies and others. It is interesting to note, therefore, that the important Report on Diphtheria (No. 10) recently issued by the Ministry of Health is based largely

on investigations carried on in the same City by Dr. Copeman, who was assisted by Dr. Davies, Professor Walker Hall, and Dr. Nixon. A serious outbreak at Southmead led to a careful enquiry into the merits of the Schick reaction, and in reporting this, the opportunity was taken of reviewing the whole question of the prevention of diphtheria.

In addition to this, Dr. Peters, the Superintendent of the Bristol City Fever Hospital, has been studying an outbreak of diphtheria of an unusual type and has written a very interesting description for the benefit of local practitioners. The cases at the onset appear to present few symptoms at all characteristic of the ordinary type of disease. If overlooked or neglected, however, a serious and often fatal toxæmia sets in with alarming rapidity. Early treatment with adequate doses of antitoxin is of the utmost importance, and without it the mortality is very high.

SOME BRANCH STATISTICS.

The total membership of the West of England Branch, corrected up to the middle of November, is 78. Of these, 48 are Fellows, 15 Members, and 15 Associates. The same number subdivided in another way shows that of 43 Medical Officers of Health, 19 are whole time, 17 part time, and 7 assistants. Of the remaining 35, 7 appear to be engaged wholly in school medical work, 7 in connection with tuberculosis, 13 as school dentists, and 8 in other branches of service.

As regards attendance at meetings, the average during 1919 was 7, during 1920 it was 8.4, and in 1921, 12.5.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

COUNCIL MEETING.

A meeting of the Council was held at the house of the Society, on Friday, December 16th, 1921. In the absence of the President owing to illness, Dr. R. Veitch Clark (Vice-President) took the chair. There were also present Drs. Barlow, G. F. Buchan, Forbes, Clements, Snell, Stocks, Evans, Blackett, Pearce, Auden, Peyton, Lyster, Wilshaw, Joseph, Gibbons Ward, Kirkhope, Sanders, Herbert Jones, Ewart, Caldwell Smith, and Pedley.

The minutes of the last meeting having been approved and signed, apologies for absence were read from the President, Lt.-Col. F. E. Fremantle, M.P., Col. Grattan, Drs. McMaster,

Eustace Hill, Chalmers, J. J. Buchan, and Prof. Harold Kerr.

On the proposal of the Chairman, it was agreed that a letter of condolence be sent to the widow of Dr. H. E. Corbin, whose death had occurred since the last meeting of the Council. The North-Western Branch reported that they had elected Dr. J. W. Talent to succeed Dr. Corbin as one of their representatives on the Council.

Correspondence.

(1) From the Lord Chancellor and the Minister of Health in regard to the proposal of the Society that the time has arrived for the modification of the *Public Health Acts*:

HOUSE OF LORDS,
S.W.1.
25th November, 1921.

SIR,—I am directed by the Lord Chancellor to reply further to your letter of the 22nd November, and to say that his Lordship has been in communication with the Ministry of Health upon the subject and has been furnished by the Minister with a copy of a letter written to you from the Ministry upon the 24th November.

In the circumstances, the Lord Chancellor concurs with the Minister of Health in thinking that at this stage the attendance of a deputation from the Society would not serve any useful purpose, and the calls on his Lordship's time are at present so numerous and so urgent that it would be impossible for him to receive any such deputation at any date in the immediate future.

The Lord Chancellor will communicate further with the Ministry of Health upon the subject of the preparation of a Consolidation Bill. He is desirous of giving every support to proposals for the more systematic arrangement of Statute law, but he is disposed to concur in the view taken by the Minister that it may be desirable, in the first place, to amend the law relating to public health in certain matters of detail, and having regard to both this and to other considerations, his Lordship doubts whether it would be possible to prepare and introduce any such bill next Session.

I am, Sir,
Your obedient Servant,
CLAUD SCHUSTER.

G. S. Elliston, Esq.

MINISTRY OF HEALTH,
WHITEHALL, S.W.1.
24th November, 1921.

DEAR SIR,—I am desired by Sir Alfred Mond to refer to your letter of the 22nd November, and to say that he appreciates to the full the urgent need that exists for the codification of the law relating to public health, and has for some time been considering how this essential reform can most conveniently be effected. Preliminary steps for the purpose have already been taken by his Department, but your Society will recognise that the task is both a difficult and a complicated one, and the Minister doubts whether it will be practicable to introduce a codifying Bill in the next Session of Parliament. It may also be found desirable first to amend the general law and bring it up to date in a number of minor details, and the Minister feels sure that your Society will agree that

before a comprehensive scheme of consolidation is attempted, this should, if necessary, be done. In these circumstances, the Minister hardly thinks that at this stage a deputation from the Society would serve any useful purpose, but he will gladly avail himself, when the time comes, of any suggestions which your Society may wish to make on the details of the measure. I am to add, for the information of your Society, that a measure for consolidating the Acts relating to National Health Insurance has reached an advanced stage of preparation, and work on a measure to consolidate the Housing Acts has been started. Both these measures are intimately related to public health.

Yours faithfully,
C. R. KERWOOD,
Private Secretary.

G. S. Elliston, Esq., M.A.,
Society of Medical Officers of Health,
1, Upper Montague Street, W.C.1.

It was agreed that the work of the Committee appointed to submit the case for codification of the Public Health Acts should be suspended until further notice.

(2) From the Board of Inland Revenue:

INLAND REVENUE,
SOMERSET HOUSE,
LONDON, W.C.2.
5th December, 1921.

SIR,—As regards an allowance for Income Tax purposes, to a Medical Officer of Health, in respect of the cost of replacement of a motor-car, I am to state that the Board are unaware of any general practice under which, the similar allowance granted to medical practitioners assessed under Schedule D, is refused in the case of persons whose office or employment of profit is assessable under the Rules of Schedule E. of the Income Tax Acts.

I am, Sir,
Your obedient Servant,
E. W. VERITY.

G. S. Elliston, Esq.

(3) From the British Medical Association inviting the Society to be represented at a conference regarding the desirability of a Whitley Council for medical men in Local Government services. Resolved: That Dr. G. F. Buchan be nominated.

(4) From Dr. C. Petgrave Johnson, drawing attention to a letter from Lord Dawson of Penn, published in the "*Staffordshire Sentinel*." It was agreed that the Editor be asked to deal with this matter in "*Public Health*," and that a copy containing the reference should be sent to the "*Staffordshire Sentinel*."

(5) From Dr. A. H. G. Burton, asking if the Society was taking any steps to watch the interests of medical officers of health in regard to the proposed extension of the County of London. The letter was referred to the Metropolitan and Home Counties Branches.

(6) From the British Medical Association, suggesting joint action in regard to the transfer of

the medical functions of the Board of Education to the Ministry of Health under Section 3 (1) (d) of the Ministry of Health Act, 1919. Resolved: That Drs. Auden, Barlow and J. J. Buchan be nominated to meet the representatives appointed by the B.M.A. to consider this matter.

(7) From the Yorkshire and Midland Branches of the Society submitting that "*Public Health*" should not be used for the advocacy of controversial subjects, unless the policy of the Society had been definitely decided by the Council. It was pointed out that the Journal Committee has been appointed to advise on matters of policy.

(8) From the West of England Branch asking if the Hon. Treasurer would be in a position to sanction an increased capitation grant on those members now paying a higher rate of subscription. It was agreed that the Hon. Treasurer should submit a statement on this matter at the next meeting of the Council.

(9) From the Maternity and Child Welfare Group, submitting their Group Regulations. These were approved as consistent with the constitution of the Society.

(10) From the Home Counties Branch, regarding Section 125 of Circular 235 regarding transfer of powers from the Home Office to the Ministry of Health under the Factories and Workshops (Powers) Order, 1921. It was agreed that the Ministry should be asked to send a written explanation in elucidation of the Section, and that later the matter might be a subject for discussion in conference with Sir George Newman.

(11) From the Maternity and Child Welfare Group approving the proposal of the Association of Municipal Corporations regarding the registration and inspection of lying-in homes, and recommending that such registration and inspection should be undertaken by the county councils, the councils of county, non-county, and metropolitan boroughs, and by district councils responsible for administering the Maternity and Child Welfare Act in the areas within which such lying-in homes are situated.

(12) From the Midland Branch and the School Medical Group, urging representations in favour of transferring the powers of the Board of Education in regard to the medical inspection and treatment of school children to the Ministry of Health.

Treatment Schemes and Unprofessional Conduct.—The Council discussed the resolution of the Willesden Division, B.M.A., recorded in the "*British Medical Journal*," December 3rd, 1921 (Supplement, p. 213), and the Executive Secretary

was directed to ask the Association what steps would be taken to deal with those medical practitioners who thus publicly assume that colleagues are guilty of unprofessional conduct without any sort of judicial investigation.

Medical Inspection and Treatment of School Children.—The Committee appointed regarding Section 3, Sub-section 1, Par. 3, of the Ministry of Health Act, 1919, submitted a report urging that the Minister of Health should undertake all the powers and duties now delegated to the Board of Education with respect to medical inspection and treatment of children and young persons as was originally intended and as was the expressed wish of Parliament during the passage of the Act, 1919. After slight amendments, the report was approved, and it was resolved that it should be forwarded forthwith to the Ministry of Health.

Directors of Education and the School Medical Service.—Dr. Lyster drew attention to a memorandum recently submitted to the County Councils' Association by the representative body of Directors of Education. It was agreed that the Ministry of Health should be informed at once that the Society takes strong exception to various proposals in the memorandum in reference to the direction of school medical work, and that a further communication would follow. Drs. Auden, Barlow, J. J. Buchan and Lyster were appointed a committee to consider and report in detail on the memorandum referred to, before the next meeting of the Council.

The Qualifications and Training of Health Visitors.—The report on this subject adopted unanimously by the joint committee representative of the Society and the Royal Sanitary Institute, and since approved by the latter body, was submitted for adoption. Several members of the Council objected that the hour was too late for adequate discussion of the report and consideration of it was postponed until the January meeting.

The Sanitary Inspectors' Examination Board.—The Hon. Treasurer reported that members of the S.I.E.B. had inquired if the meetings of their Board could be held at the house of the Society, and whether it could be arranged for the Executive Secretary of the Society also to act as Secretary for the Board. The Council agreed that such arrangements would have their approval, subject to acceptance of the terms proposed by the Hon. Treasurer and the Executive Secretary.

The meeting then adjourned.

ORDINARY MEETING.

An ordinary meeting was held at the house of the Society on Friday, December 16th, 1921. In the absence of the President, owing to illness, Lt.-Col. Herbert Jones took the chair. There was a large attendance.

The minutes of the last meeting having been approved and signed, messages of apology of absence were received from the President, the Directors-General of the Navy and Army Medical Services, Dr. A. B. McMaster, Surg.-Cdr. R. J. Mackeown, C.B.E., Lt.-Col. F. E. Fremantle, M.P., and Major W. N. W. Kennedy.

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

As Members:

N. W. Clemmey, Wm. Newlands, M.R.C.S., L.R.C.P.; De Lacey, Robert Charles, M.B., B.S.Durh., L.D.S.; Hammond, (Mrs.) Margaret, M.A.Lond., M.R.C.S., L.R.C.P.; Hawksworth, E. Dorothy; Holt, Henry Mainwaring, M.R.C.S., L.S.A., D.P.H.; Horsburgh, Percy Gilbert, M.R.C.S., L.R.C.P., D.P.H.; Judd, Walter Rossell, M.R.C.S., L.R.C.P.; Kidd, Beatrice Mary, M.B.Lond.; McCallum, Peter Alex., M.B., Ch.B.Glasg., D.P.H.; Milne, Wm. Alexander, M.B., Ch.B.Glasg., D.P.H.; Ormiston, Margaret Gemmell, M.A., M.B., Ch.B., St. And.; Porteous, Harold Burnett, Squad-Ldr., R.A.F., M.S., M.B., Ch.B.Edin.; Richardson, Edmund Douglas, M.R.C.S., L.R.C.P., D.P.H.; Robinson, Arthur Lowry, L.M.S., S.A.Lond.; Shaw, (Mrs.) Emily Helen, M.D., B.S.Lond.; Symons, Arthur Denis, M.D., Ch.B.Brist., M.R.C.S., L.R.C.P., D.P.H.; Taylor, Jas. McWilliam, M.D., M.R.C.S., L.R.C.P.; Warden, Lloyd Huntley, M.B., Ch.B.Edin., D.P.H.; Wild, Mary Howarth, M.B., Ch.B.Liv.

As Associates:

Benson, Elizabeth; Brown, Arthur, L.D.S.Ed.; Cowin, Daniel, M.B., Ch.B.Vict., L.D.S.; Keenan, Stephen, L.D.S.Glasg.; Maurice, A. J., L.D.S.; Nixon, Joseph, L.D.S.Ed.; Tyson, John, L.D.S.Liv.

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

Surg. Rear-Admiral Sir P. W. Bassett-Smith, K.C.B., C.M.G., then delivered his address, as President of the Naval, Military and Air Force Hygiene Group, on "The development of Hygiene, Pathology and Bacteriology in the Naval Medical Service."

A vote of thanks for the address was proposed by Maj.-Gen. Sir W. G. Macpherson, and seconded by Col. W. W. O. Beveridge. Others who spoke in support were Surg.-Cdr. R. St. G. S. Bond, Lt.-Col. P. Caldwell-Smith, Dr. Charles Sanders, and the Chairman. After a brief response from Sir P. W. Bassett-Smith the meeting adjourned.

MIDLAND BRANCH.

Meeting held at the Council House, Birmingham, Thursday, December 1st, 1921. Present, Dr. Cowie (in the chair), and 19 members.

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

A letter was read from Mrs. Drybrough Gold thanking the Branch for their vote of condolence in the death of her husband.

A letter was read from the Yorkshire Branch enclosing a resolution and asking for the support of the Midland Branch. The resolution "That the Branch strongly disapproves of the use of its Journal, *Public Health*, for propaganda purposes on behalf of a policy, unless approved by the Council of the Society," was passed unanimously.

A letter was also read from Dr. Banks resigning his position on the Council of the Branch.

Dr. Wilkins read his paper on "The place of the Country Practitioner in Preventive Medicine." The paper was of great interest, and was discussed by Drs. Stocks, Auden, Goldie, Clendinnen, Hewat and Cowie. Dr. Wilkins briefly replied. A vote of thanks to the reader of the paper was passed unanimously.

Dr. Hewat moved a resolution, amended by permission of the meeting, "That the Branch consider what steps shall be taken to meet cases of threatened salary reductions when no adequate increase of salary was paid." The resolution was seconded and passed unanimously.

The following resolution was passed unanimously:—

"That the Society resist to the utmost of its power any reduction of salary, which will bring such salary below the scale set out recently by the Society of Medical Officers of Health."

NORTH WESTERN BRANCH.

On Thursday, 24th November, 1921, a further conference took place in Manchester between members of the Committee of the N.W. Branch and of the N.W. Tuberculosis Society with reference to the formation of a Tuberculosis Sub-Group in the area.

There were present—representing the N.W. Branch—Drs. J. W. Talent (President), Barlow, Hitchon and Joseph; and representing the N.W. Tuberculosis Society, Drs. Sutherland (President), Cox, Jessel, Peyton, Leigh and Tinker. After a few opening remarks by Dr. Talent, Dr. Joseph gave a résumé of the position up to date and Dr. Sutherland pointed out the difficulties that Tuberculosis Officers might be faced with if they threw in their lot with the Society of Medical

Officers of Health entirely and allowed the newly formed Tuberculosis Society to go out of existence.

Dr. Peyton referred to the new rules of the Tuberculosis Group, and stated that the question of the representation of Tuberculosis Officers on the Council of the Society of Medical Officers of Health was receiving further consideration. The subsequent discussion was joined in by all those present.

It was finally decided that "Members of the N.W. Tuberculosis Society who are members of the Society of Medical Officers of Health be recommended to form a Sub-Group with the other Tuberculosis Officers within the Society." It was suggested that the new Sub-Group should devote its energies to the political and administrative side of the Tuberculosis problem and that the meetings of the Sub-Group should be held on the same afternoon as the meetings of the N.W. Tuberculosis Society which, as in the past, should devote its energies to scientific and clinical matters.

Ordinary Meeting of the North Western Branch held in Manchester, Friday, December 9th, 1921. Present, Dr. J. W. Talent (President) in the chair, and 16 members.

The President (Dr. Talent) referred to the death of Dr. H. E. Corbin, and reported that Dr. Hitchon attended the funeral on behalf of the Branch and that the Hon. Secretary had sent a message of sympathy to the relatives. It was resolved "That the members desire to place on record their appreciation of the valuable services always willingly rendered to the Society by the late Dr. H. E. Corbin and their deep regret at his loss."

A letter was received from Col. Dunbar Walker intimating that owing to the removal of the R.A.M.C. School of Hygiene from Blackpool to Aldershot he was reluctantly compelled to withdraw his invitation to the Branch for the visit that had been arranged for February next.

A letter from the Yorkshire Branch enclosing a resolution disapproving of the use of the Journal for propaganda purposes was considered and no action taken. It was decided, at the invitation of Dr. W. Allen Daley to hold the March Meeting of the Branch at Blackburn on March 17th, on which day a Cessional Meeting of the Royal Sanitary Institute would be held in that town.

A letter from the Executive Secretary drawing attention to a list that had been drawn up by the West of England Branch of all Medical Officers

of Local Authorities in their area, and it was decided in view of the great usefulness of this step in any attempt to increase the membership of the Society that the Hon. Secretary should begin to compile a similar list for the North Western Area as soon as possible.

A report was received from the Committee of the Branch with a recommendation that "Members of the N.W. Tuberculosis Society who are members of the Society of Medical Officers of Health should be invited to form a Sub-Group with the other Tuberculosis Officers within the Society," and this was approved.

It was suggested that the new Sub-Group should devote its energies to the political and administrative side of the Tuberculosis problem, and that the meetings of the Sub-Group should be held on the same afternoon as the meetings of the N.W. Tuberculosis Society which, as in the past, should devote its energies to scientific and clinical matters.

Attention was drawn to the recent circular of the Board of Education, *re* the Annual Reports of School Medical Officers, and it was pointed out how difficult it would be in some areas to comply with the conditions laid down unless an adequate staff is provided for the School Medical Service.

A discussion on the "Sale of Food Order, 1921," was opened by Dr. Rees Jones (Blackpool), and joined in by Drs. Talent, Burton, McClure, Mathieson, Daley and Wheatley.

The Annual Dinner of the Branch was held the same evening at the Queen's Hotel, Manchester, when about 40 Members attended. Among the guests were the Lord Mayor of Manchester (Councillor E. D. Simon, J.P.), Colonel Sir Walter De Frece, M.P., the Mayor of Ashton-under-Lyne (Councillor H. T. Greenwood), the Ex-Mayor of Heywood (Alderman Hargreaves, Lincs. C.C.), and others.

After the usual loyal toast, the Lord Mayor proposed the toast of the "North Western Branch of the Society of Medical Officers of Health." He dealt with the importance of the work of the chief officials of the Health Services and went on to refer to the latest report of Lord Newton's Committee, *re* Smoke Abatement, of which body he was a member. He considered the only likely source of help and the only body which could make people realise the danger of the smoke nuisance was the general body of Medical Officers of Health. The only thing to prevent the exodus of citizens from the towns they worked in was to clear the air, once that was done, townships could start thinking about art and architecture

and such things. The President (Dr. J. W. Talent) in responding on behalf of the Branch, drew attention to the growth in membership and importance of the Society and the advantages of this, not only to the officials of the service, but to the public generally.

Dr. T. W. N. Barlow, O.B.E., proposed the toast of "The Guests" in a happy little speech punctuated by many humorous stories.

In replying on behalf of the guests, Colonel Sir Walter De Frece, M.P., spoke approvingly of the cleanliness of German towns owing to the more general use of gas. He thought that the most important and most useful of all public work was the preservation of the health of the people.

Councillor H. T. Greenwood (Mayor of Ashton-under-Lyne) mentioned the difficulties a local body is faced with in enforcing any smoke abatement order and considered that the powers should be exercised by a central authority. Alderman Hargreaves considered that the only solution of the problem was the general substitution of electric power for steam.

Dr. S. G. Moore (Huddersfield), a visitor from the Yorkshire Branch, pointed out the need for a keener appreciation of the benefits of propaganda work throughout the health services. Popular opinion only would move the Ministers and politicians and prevent the "utter mistakes" of the past and present.

MATERNITY AND CHILD WELFARE GROUP.

A general meeting of the Maternity and Child Welfare Group was held at the house of the Society at 8 p.m. on Thursday, November 17.

There were 23 members present.

Dr. Herbert Jones was voted to the chair. Apologies were submitted from the President of the Society (Dr. W. J. Howorth), Dr. Cameron, Cox, Kenwood, Langmead, McMaster, Porter and Adams.

The meeting considered the draft rules of the Group drawn up by the Committee appointed for that purpose and after considerable discussion and amendment passed them to be printed and circulated to members.

The following officers were elected:

<i>President.</i>	Dr. H. C. Cameron.
<i>Vice-Presidents.</i>	Dr. H. K. Walker (for 1 year).
	Dr. Harold Scurfield (for 2 years).
	Dr. H. Robertson (for 3 years).

Hon. Treasurer. Dr. Flora Shepherd.
Representative on
Coun. of Soc.M.O.H. Dr. A. B. McMaster.
Hon. Secretary. Dr. R. Woolsey Stocks.

The following were elected to the Committee of the Group pending the receipt of nominations from branches or sub-groups.

Drs. Churchill, Cox, Roskell Davison, Kenwood, Kidd, McMaster, Langmead, Robertson, Scurfield and Waller, with the President, Hon. Treasurer and Hon. Secretary, *ex officio*.

Unfortunately the lateness of the hour prevented the discussion of the clinical subject which was on the agenda.

METROPOLITAN TUBERCULOSIS SUB-GROUP.

The third meeting of the Metropolitan Tuberculosis Sub-group was held at the house of the Society on December 9th, Dr. H. Wilson in the chair. A discussion took place on record-keeping in London Dispensaries with the view to obtaining uniformity; Dr. G. T. Hebert was appointed to report to the next meeting on the "case sheets" used. The salaries of Metropolitan tuberculosis officers were considered.

CORRESPONDENCE.

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

To the Editor of PUBLIC HEALTH.

Sir,—The sentence in my contribution on "Dental Defects" in the November number of PUBLIC HEALTH, commencing "That the processes concerned in the prevention of dental caries are known with accuracy," should read "That the processes concerned in the production of dental caries are known with accuracy."

Yours sincerely,

JAMES WHEATLEY.

December 19th, 1921.

DR. JAMES BATES WILKINSON, medical officer of health for Oldham, has been appointed a Knight of Grace of the Order of St. John of Jerusalem in England.

DR. F. J. STEVENS, medical officer of health for the borough of Camberwell, has been appointed examiner in Forensic Medicine and Public Health for the University of Oxford.

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Editorial.

MANCHESTER MEDICAL OFFICER OF HEALTH.

A CONSIDERABLE amount of discussion has taken place with regard to the proposed appointment of Medical Officer of Health for the City of Manchester. In November last the City Council was approached by the M.O.H. Society and was reminded that in the opinion of the Society the minimum salary should be £2,000. Medical men on the City Council have recently expressed very strongly the opinion that the salary for such an important and responsible appointment should be £2,500, but, as a compromise with the extreme economists, a decision has been arrived at to advertise the post at £1,500. We understand

that the present Medical Officer of Health is receiving about £2,000 per annum, and it will be a serious blow, with permanent injury, to the whole of the Public Health Service if this niggardly action of the City Council succeeds in obtaining the services of an experienced officer at such an extraordinary low sum, and we trust that no member of the Society will be so ill-advised as to make an application. A salary of £2,000 per annum represents only the well-earned income of a fully-occupied panel practitioner, and is considerably below that of a successful practitioner or consultant. It is a matter for congratulation that we have secured the definite backing of the B.M.A. in this matter, and we have no doubt that the Association will take a firm stand on behalf of the Public Health Service. The Local Division of the B.M.A. will warn off all members of the Association until an adequate salary is offered. There is no doubt at all that if the offer of £1,500 per annum does not attract suitable candidates, the City Council will alter its opinion, and will offer an increased remuneration, as they must realise that their Chief Medical Officer must be a man of good standing, and with established reputation in the Public Health Service. The Society could have chosen no more favourable case than Manchester for making a stand against the present inadequate salaries paid to members of the Public Health Service, and the occasion will serve as a test of the loyalty of our members and of the efficiency of the M.O.H. Society, and also of the practical value of the assistance which the British Medical Association is able to give.

Members of the M.O.H. Society are, therefore, urged to have nothing to do with this grossly underpaid appointment, and to act loyally in accord with the M.O.H. Society in this vitally important campaign.

An interesting and significant fact is that a vacancy which has occurred at Manchester at the same time as that of Medical Officer of Health is the post of Town Clerk, and the Council have just appointed a gentleman at the salary of £2,250 per annum, with fees estimated to amount to £1,000 per annum.

POOR LAW FIGURES FOR 1921.

It will be interesting to observe how the public health records for 1921 compare with those of 1920, as the Poor Law returns for the former year cause grave disquietude as to the possible effects of the enormous increase in poverty and destitution that took place in the latter part of last year. At the end of 1920 there were 567,909 paupers (excluding casuals, lunatics, and those in receipt of medical relief only) of whom about one-third were in the workhouses, and two-thirds on outdoor relief. The destitution caused by the coal dispute caused a steep rise in these figures during the second quarter of 1921, and by the end of May the total had reached 1,000,000, and a month later, 1,299,000. During July and August the numbers decreased somewhat, but the October figure was 1,476,000 persons in receipt of parish relief. No figures are yet available as to the cost of this enormous scheme of relief, but it will be surprising if the cost amounts to less than £40,000,000, and also if the amount of distress indicated is not reflected in the public health returns to some extent.

SALARIES AT PORTSMOUTH.

At the time when wages and salaries and incomes (outside the Public Health Service) were extending enormously and when all civil servants and some local government officers were enjoying war bonuses the Town Council of Portsmouth entered into an agreement with their officers whereby the payment of the scale war bonuses was avoided and permanent increases in salary were substituted with a resulting large economy in public expenditure. To the standing disgrace of local government in this country, the Town Council, now that salaries are being reduced, and the scale of war bonuses is working adversely to officers in those districts where war bonuses were accepted, have decided upon drastic reductions of those salaries which were declared, when the previous agreement was made, to be permanent. The Medical Officer of Health has shared in this unfair treatment and his salary has been reduced from £1,750 to £1,250. The Town Clerk, under the agreement, received £1,500 and fees and the present reduction means, in his case, the confiscation of all fees, leaving him with a clear salary of £1,500 as compared with his salary of £400 in 1914, when he was Deputy Town Clerk. Before the war all salaries at Portsmouth were considered to be below the standard for towns of the same size, and when war bonuses

became the vogue the Council never gave their officers the full benefit of the Civil Service Scale. As the result of a circular from the Ministry of Health recommending the Council to adopt the Civil Service Award No. 102, the Town Council decided at their meeting in September, 1920, to do away with bonuses and to stabilize salaries. The resolution was as follows:—

"Your Committee have given very careful consideration to the recommendation above referred to, and in order to stabilize salaries in such departments of the Corporation, your Committee recommend that the present war bonus be discontinued and definite post-war salaries fixed as follows."

At that meeting the boast was made that by doing away with bonuses and stabilizing salaries the Council were saving the ratepayers no less than £20,000 a year. The subsequent proceedings would reflect considerable discredit upon any public body. The method of the election of the Sub-Committee, and still more the method of procedure of such committee are almost incredible to anyone accustomed to modern local government. The Committee met in secret; their minutes were taken by an alderman on the Committee; the minutes were printed by an outside unknown printer; not a single official or head of department was consulted by the Committee in any way, directly or indirectly, as to the value of the different members of his staff; every member of the Committee was pledged to secrecy until the report was before the Council. The report to the Committee was then passed *en bloc* by the Council on the plea that if any modifications were made the whole report would fall through and the work of the Committee be lost. It is true that a pledge was given that any hardships or anomalies would be considered if application was made, but so far, although nearly every officer in the Corporation has pointed out the hardship in his particular case, no alteration has yet been made. This action on the part of the Portsmouth Town Council amounts to a definite breach of faith between a Local Government Authority and its officers and such a breach will render future negotiations difficult.

We are not directly concerned with the other officers, but the salaries of the Medical Staff at Portsmouth constitute, undoubtedly, one of the most important interests of the Society of Medical Officers of Health, which has lost no time in pointing out to the Town Council that the Chief Medical Officer of such an important borough should be in a position at least as dignified as that of the leading borough practitioners in other branches of medicine and

surgery. It is not reasonable or proper that a great county borough should offer its Medical Officer of Health a salary which bears no fair relation to the earnings of his medical colleagues of equal standing in private practice.

The effect of such reductions as are proposed in the case of the Assistant Medical Officers must be equally prejudicial to efficient public health administration. It means that as such appointments fall vacant only those medical men who have failed in private practice will be candidates for the posts, and it will not be surprising if no candidates at all try for employment by a local authority with such an ominous record. If this unfair attitude with regard to salaries is persisted in by the Corporation, the Municipal Medical Officers will come to be regarded by the community as a class of doctors inferior to the successful practitioner, but quite good enough to safeguard the health of the townspeople of Portsmouth.

"THE TIMES."

In our issue of December last we called attention to the peculiarities exhibited by the "Medical Correspondent" of *The Times*, whose contributions to that paper showed a grievous ignorance of nearly every part of public health work and administration. It appears, however, that this is no new feature of *The Times*, and our readers will probably be interested to peruse the following extract from the Annual Report of the Herefordshire Medical Association for 1865.

"In short, legitimate medicine has held well its own during the past year; nor has the further proof of success failed it, of an attack as unjust, as it was uncalled for. It has pleased *The Times* to attack the Profession because it cannot cure the cholera, nor stay the cattle plague. As well might it reproach Divinity for the existence of crime, or the Law, that disputes should arise! It is true that we cannot yet arrest the mortality from these diseases, but the secret has been given us to rob small pox of its victims, and it may be that we may rejoice hereafter in being able to meet other pestilences in an equally successful manner. *The Times*, unfortunately, neglects no opportunity of attacking the Profession, but as long as its articles display ignorance of the first principles of medicine as they have lately done, they certainly can do us but little lasting injury."

DEPTFORD MATERNITY HOME.

The Maternity Home at Deptford was opened in July, 1921. As the result of communications from the Local Division of the B.M.A., a deputation was received by the Health Committee, who reported as follows to the Borough Council:—

"A deputation representing the local branch of the British Medical Association and the Medical Practitioners' Union has been received with regard to the medical arrangements at the Maternity Home.

"The chief complaint of the local medical practitioners is that their interests may possibly be prejudiced owing to some of the patients accepted at the Home being in such a financial position as would have enabled them to pay the fees of a private doctor; a further point which was made by them is that the medical practitioners of the borough generally have not had an opportunity of being placed on the rota of doctors who are prepared to attend at the Home in cases of special emergency.

"We see no serious difficulty in meeting the wishes of the local doctors on the latter point, but we are not prepared to accede to their suggestion that they should be empowered to send any case to the Home which they consider suitable, consequently attending such cases themselves; we should, however, be quite prepared to consider sympathetically applications for the admission of any cases sent by local doctors. We therefore recommend that communications be addressed to the local Secretaries of the British Medical Association and the Medical Practitioners' Union, asking them to nominate a rota of local doctors, who are on the telephone, and who would be willing to attend in cases of emergency at the Maternity Home, and also that the organisations above-named be informed that any case recommended by a medical practitioner in the Borough will receive careful and sympathetic consideration."

VENEREAL DISEASES.

Circular 281, dated January 10th, 1922, has been issued by the Ministry of Health. After referring to the necessity for estimates for the financial year 1922-23 to be forwarded to the Ministry as early as possible, and after the usual reference to the "present financial pressure and the urgent need for reducing the burden on the taxpayer and ratepayer," the Circular gives

specific instances in which economies may be effected. It is suggested that the charges now being made for pathological work under the scheme of payments laid down originally by the Ministry of Health are too high and that authorities should consider whether it is possible to secure some economy in this branch of the work, either by arranging for a reasonable lump sum payment in respect of the services performed by the laboratory, or for a reduced payment per specimen.

In connection with Treatment Centres, emphasis is laid upon the necessity for cutting down services which are not necessary, and a reduction of the number of clinics per week, or the closure of some clinics with a concentration of the work at others is proposed.

OBITUARY.

DR. H. E. CORBIN, M.O.H., STOCKPORT.

A wide circle of friends and relatives mourn the loss of Dr. Corbin, who died on November 24th at his residence, Beech Road, Stockport. There is no doubt that Dr. Corbin's premature death was due entirely to his war service. He was mobilised on the eve of the declaration of war and was appointed Specialist Sanitary Officer of the 66th East Lancashire Division. In 1916 he went to Mesopotamia in command of a field ambulance with the rank of Lieutenant-Colonel, and subsequently, during 1917 and 1918, he was Military Medical Officer of Health of the City of Baghdad, where his services were of the greatest value and where his enthusiasm for public health had great scope. Subsequently he was invalided home and continued his military duties for a short time on the east coast, finally being released from the Army at the end of 1918, and returned to his duties at Stockport, where he had been Medical Officer of Health since 1908.

Locally, Dr. Corbin was regarded as a most successful officer and administrator, and was held in the highest regard by his Committee and Council. His special scientific training, previous to proceeding to the study of medicine, placed him on a higher level than the ordinary medical officer, and his work was distinguished particularly for its scientific accuracy. He contributed freely to public health literature, and one of his latest contributions was an article in *Public Health* upon his work at Baghdad.

ENGLISH BOOKS FOR LATVIA.

The Lord Mayor of London tenders his thanks to all who kindly responded to his recent appeal for English books for Latvia. The announcement of the shipment to Riga of several thousands of books (forming the first instalment of the New Year gift of 50,000 volumes which the Lord Mayor hopes, with the further help of the public, to get together) has been received with the liveliest satisfaction in the newly-founded Baltic State, which has decided to adopt English as its second language and is anxious to assimilate English ideals, particularly in Education. Latvia, it may be recalled, successfully resisted the Bolshevism which at one time threatened to overwhelm the country and, if only for that reason, is deserving of such sympathy and help as can now be extended to it in a way which the practical scheme set on foot by the Lord Mayor makes possible. Further contributions of English books are solicited. Parcels should be addressed (carriage paid, if possible) to Sir Alfred T. Davies, K.B.E., C.B., c/o The Consul-General for Latvia, 329, High Holborn, London, W.C.1.

THIRD INTERNATIONAL CONGRESS OF THE HISTORY OF MEDICINE.

The Third International Congress of the History of Medicine will be held in London, under the Presidency of Sir Norman Moore, from July 17th to July 22nd, 1922.

Meetings will be held at the Royal Society of Medicine, the Royal College of Physicians, the Royal College of Surgeons, and the Wellcome Historical Museum, where there will be an exhibition of objects connected with the history of medicine, surgery and the allied sciences, including ancient manuscripts, early printed books, pictures, sculptures, and engravings, ancient surgical instruments, medals, etc.

The subjects suggested for discussion by the International Society of the History of Medicine are:—

1. The principal seats of epidemic and endemic disease in the middle ages, including plague, gongrenous ergotism, leprosy and malaria.
2. The history of anatomy.

Further information may be obtained from the General Secretary, Dr. J. D. Rolleston, 21, Alexandra Mansions, King's Road, London, S.W.3.

TUBERCULOSIS: INFECTION, IMMUNISATION, SENSITISATION.*

BY

EDGAR L. COLLIS, M.A., M.D., M.R.C.P.,
Mansel Talbot Professor of Preventive Medicine,
Welsh National School of Medicine.

The present moment may not be inopportune for attempting a review of our knowledge in relation to tuberculosis; the difficulty is to present an adequate picture.

Landmarks.

Whether tuberculosis prevailed among prehistoric man is not known, but modern research suggests the possibility, since men employed in prehistoric factories in manufacturing flint implements must have suffered from pulmonary silicosis and so have been sensitised to tuberculosis. Bone tuberculosis occurred in Egypt 2,000 B.C.² Records of tuberculosis in its pulmonary form are as old as history; some exist made in the time of the Assyrian Empire. Hippocrates, Aristotle, Aretæus, Galen, Avicenna, Lommius, Morton and Morgagni all speak of it; and all deal with it as being endemic rather than as occurring in outbreaks as do the Zymotic diseases. The next important landmark was the demonstration by Villemin that the disease was infectious, the proof of which was later given by Koch who discovered the infecting organism.

The important facts derived from history are that for long ages the human race has been afflicted by the disease, that it is infectious, and that it is endemic.

Prevalence.

Reasonably accurate information as to the prevalence of the disease is only in existence since the middle of last century and then only for the British Isles. Previous to 1850, The London Bills of Mortality provide data going back to 1631 which establish the percentage of all deaths due to phthisis. Brownlee³ has shown that this percentage reached a maximum of over 25 between 1790 and 1810. We may surmise from such a percentage that the disease was then more prevalent than now, but the exact mortality can only be roughly guessed at. Phthisis is generally claimed to be an index disease, which means that its prevalence rises or falls with that of the death-rate from All Causes; but examination of data since 1850 discloses that the fall in phthisis mortality has been more than twice as great as that of the general death-rate. (See Table 1.) Hence is the relation

* Presidential Address given on November 18th, 1921, to Tuberculosis Group of Medical Officers of Health.

existing now between the percentage of all deaths due to phthisis and the general death-rate were applied to 1850, the result would give a general death-rate twice as large as that known to have prevailed. Possibly statisticians may, some day, produce a formula which will permit, with approximation to accuracy the calculation of the general mortality from the known percentages of all deaths due to phthisis; for the moment the matter of interest is that the disease was certainly more prevalent at the beginning of last century than it was in the middle, that its incidence commenced to fall before that of the general death rate, i.e., before the sanitary measures of 1866-1894 were inaugurated,⁴ and that now it is less than half as prevalent as it was in 1850.

Table 1.—Comparative Mortality of England and Wales since 1851.*

Period.	MALES.		FEMALES.	
	Phthisis	All Causes	Phthisis	All Causes
1851-60	100	100	106	91
1861-70	97	102	96	91
1871-80	88	99	79	85
1881-90	73	90	62	78
1891-1900	61	88	46	75
1901-10	50	75	35	62

* The death rates are expressed as percentages of the male rate for 1851-60 which was for All Causes, 22.1 per 1,000, and for Phthisis 2.6 per 1,000.

No little importance attaches to ascertaining the influence or influences which have led to this reduction, since action in the future may reasonably be aimed at increasing such influences if in any way possible.

The subject, with its voluminous literature, is far too extensive to discuss in all its bearings. All I can do is to refer to some aspects of the case, and to some possible influences which may advantageously be more fully debated in the light of present knowledge and recent research. The well worn paths have been trodden by you all, and the conclusions to which they lead will be in your minds as they are in mine. For the most part, however, there is no clear evidence that such influences as constitutional liability, inherited tendency, and climatic conditions, have, during the past seventy years, altered sufficiently, if indeed they have altered at all, to account for the change which has taken place, nevertheless, they may have played, and be continuing to play, their part.

OTHER INFECTIOUS DISEASES.

Certain diseases, recognised to be infectious, e.g., the common cold, scarlet fever, mumps and influenza, are held to pass from individual to individual by aerial transmission; pulmonary tuberculosis, which is the most important manifestation

of the disease, is also held by most to pass from individual to individual in the same way. Clinically these other fevers have a definite incubation period, and run a definite course; epidemiologically they appear in epidemics which run a course as definite as the clinical symptoms. Moreover, there would appear to be some relation between the length of a simple uncomplicated case and the period of the epidemic; thus the febrile stage of influenza is less than three days, and a simple epidemic in a definite group of the community lasts six weeks; small-pox and plague, if the later suppurative stages are looked upon as sequelæ, last four days, and their epidemics about three months; scarlet fever and measles last from seven to eight days and their epidemics about four months. The incidence of these fevers has no definite relation to the general death rate. In other words, the community suffers from these fevers in a similar way to the individual; and since the individual is held to recover from an attack by establishing an immunity temporary or permanent, the idea suggests itself that the community recovers from an epidemic in a similar way.

In the case of tuberculosis the clinical course and the epidemiology of the disease differ from those of other infectious fevers; there is no definite incubation period and no definite clinical course, while the epidemiology, if it can be so called, of the disease, is found to be positively correlated with that of the general death-rate. In other words, the community suffers from tuberculosis in a similar way to the individual. Surely this is not mere coincidence.

Analogy—a dangerous support for an argument—might be held to suggest that immunity, such as occurs in the case of other infectious diseases, if it occurs in the case of tuberculosis—and there is evidence in support of its occurrence—only occurs to a limited and short-lived extent.

Diseases, in the clinical manifestations of which microorganisms are held to play a necessary part, may be graded from those, like anthrax, tetanus and the zymotic diseases, in which the part played by the microorganisms overshadows biochemical or predisposing changes; to those, like gout and rheumatism, in which the part played by the organism or organisms is subservient to biochemical disturbances. To the former, the body reacts by establishing an immunity. In the latter the biochemical disturbances must be rectified or the symptoms will persist, and, even though some temporary immunity be established to an exacerbation (probably due to microbial invasion) such immunity is transient.

Tuberculosis appears to hold an intermediate position in the scale; and we need to decide whether, in order to gain control of the disease, we should expect most help from the side of immunity or of biochemistry.

This intermediate position is shared by the septic organisms, the streptococci and staphylococci. The manifestations of tuberculosis resemble more closely those of these septic organisms than those of the zymotic diseases. The number of septic cases, which give rise to discomfort and go no further, would be, indeed, hard to estimate; but many are the cases in which slight symptoms develop, such as boils and abscesses in the skin or under the teeth; numerous, too, are ulcers and bone trouble, and septicæmia. Indeed, everyone, with few exceptions, may be claimed to be infected with septic organisms before the age of 14; but this is not usually held a reason for ignoring the factor of infection after that age. Infection by these organisms is recovered from by establishing an immunity which, however, is of a temporary character, and the same person, sometime later, if the circumstances are the same, will again become liable to infection. A healthy person requires a more massive dose to overcome his resisting power, than an unhealthy one. Vaccines are used to help in throwing off an infection, but general health is relied upon to resist infection.

No one thinks, with regard to a septic case aged 45, of going behind immediate infection to search for lesions in order to establish that the patient had a septic infection in the first decennium of life, and so to claim the present attack to be a reawakening of the old trouble; nor, indeed, is a second attack of measles usually ascribed to a recrudescence of the first. This suggestion that the body throughout adult life nurtures a snake within its bosom is reserved for tuberculosis which, by the very hypothesis is accepted to be ubiquitous and so ever present to reinfect at any age. Moreover, if it is ubiquitous now, it must *a fortiori* have been ubiquitous in 1850; why, then, do fewer persons now succumb to the infection? That, after all, is the question to which an answer is needed.

The incidence of one acute fever, pneumonia, which tends to occur in miniature epidemics, resembles that of phthisis and differs from that of the other fevers, in having a definite relation to the general death-rate. This fever, however, is caused by different types or groups of disease-producing pneumo-cocci. Herein it probably differs from the other fevers, but, according to Brownlee, it may possibly be found in this respect to resemble

phthisis. There is question whether an attack of pneumonia confers a definite immunity against subsequent attacks; here the type of the illness suggests the establishment of immunity in the individual, and Watkins Pitchford⁵ considers an attack does establish definite immunity against the same type (or group) of the pneumonia germ; while work done in South Africa has proved that by anti-pneumonia inoculation, immunity against the disease can be established. An interesting fact is, that the general death-rate has at the same time been favourably affected by the inoculation over and above the effect produced by diminishing the death-rate from pneumonia; in other words, we have here an example of an influence affecting a disease (the incidence of which moves with that of the general death-rate) also affecting the general death-rate in the same way.

The result may be explained on either of two hypotheses; either the influence, in this case inoculation, not only increases resistance against the specific disease, pneumonia, but also against other forms of disease; or inoculation, by decreasing the case incidence of pneumonia as well as the mortality, decreases the number of persons who, though recovering from the disease, are left with their general resistance lowered. The latter hypothesis seems the more likely.

In the case of phthisis the position is not clear whether the order of events has, or has not, been the same; certainly, as has been mentioned, the incidence of phthisis commenced to fall before the general death-rate declined, but until the influence, which has produced the fall in the incidence of phthisis, is known, we can only speculate as to whether the fall in the general death-rate is associated with that influence in a way similar to the effect produced by anti-pneumonia inoculation in South Africa, or whether the influence which has caused the general death-rate to fall, has acted reflexly upon the incidence of phthisis.

CONTROL OF INFECTIOUS DISEASES.

Some infectious diseases have been brought under control by dealing with the infecting agent. Malaria disappeared from these Isles when the marshes, the haunt of the mosquito, were drained. Typhus gave way before personal cleanliness, which is now known to have dealt with the transmitting agent, the body louse. Enteric fever retired as a pure supply of food and water was established. The reason why these diseases came under control is now known, but at the time they were disappearing, no definite campaign against them was being waged. Looking back we can now see that the disease came under control not

by eliminating the transmitting agent—the louse and the mosquito still flourish in the land—but by weakening the link of infection by reducing the number of transmitting agents, when natural resistance completed the process and broke through the chain.

Action on these lines has no promise for controlling infections which pass from person to person by an aerial transmission. Nevertheless, some fevers so transmitted, notably scarlet fever, small-pox, and pneumonia on the Rand, have been brought under control; the first by isolation, the second by vaccination combined with isolation, and the third by prophylactic inoculation.

Possibly the most useful instance of control is that established in Norway over leprosy by segregation, which has never been complete⁶; in 1861-65 only 27 per cent. of the known cases were segregated, rising to 52 per cent. in 1901-5. Here, again, is an instance of weakening, rather than of breaking one of the links in the causation of a disease and of the natural resistance of the community doing the rest.

In all these cases other influences which may be referred to as improved hygiene, environmental and personal, have contributed their quota; but without the specific influences named, the full control would not have been established.

THE FALL IN TUBERCULOSIS.

The position in relation to tuberculosis is that the prevalence of the disease commenced to diminish before any definite steps were taken to prevent the disease, and has continued to diminish steadily, notwithstanding such steps. Notification, and the sanatorium and dispensary campaign, have, however, not yet had a fair opportunity of exhibiting their influence, for the intervention of the war period has not only interfered with the campaign, but has rendered statistical information for the last decennium of but little value for comparative purposes.

Tuberculosis appears to be steadily coming under control, just as did malaria in this country, and typhus before the means of control were known. Environmental and personal hygiene have been steadily improving; so have many other things during the last seventy years, railway transport, export trade, water supply, the number of letters sent, to mention only a few. Karl Pearson⁴ has humorously pointed out that "We can show that the consumption of bananas has risen continuously during the past 50 years, also the number of newspapers; and there is a very high correlation between the increased fruitarian diet or the perusal of halfpenny newspapers and

the fall in the phthisis death-rate! All these things, however, are measures of wealth and the standard of living; they are indications of less poverty in the community.

A Pestis Pauperum.

The old saying that tuberculosis is a *pestis pauperum*, supported, as it is, by a close relation between a high death-rate from tuberculosis and poverty, points to poverty being able to open the door to the disease. Newsholme⁶ has pointed out that "the correspondence between the variations of phthisis and those of pauperism has been so marked as to justify the use of the figures of total pauperism as approximate indexes of the total amounts of phthisis when the actual phthisis figures cannot be had."

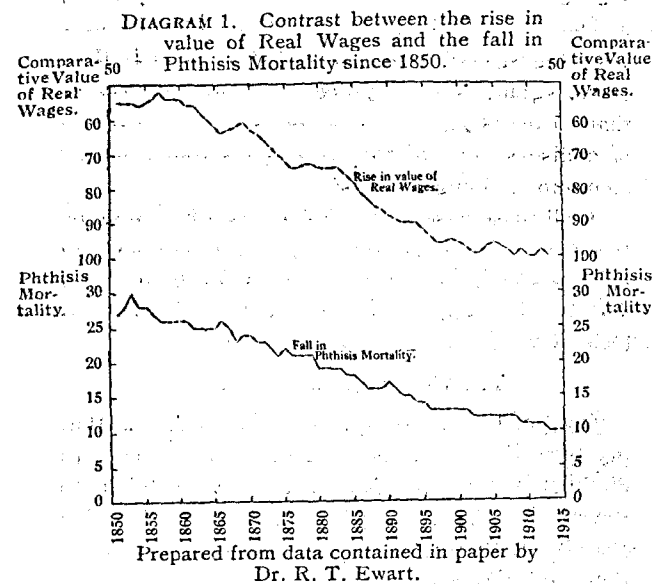


Diagram 1 brings out the relation. Probably the most important influence associated with poverty is under-feeding, and under-feeding is accepted to be an adverse influence in relation to tuberculosis. Newsholme, on the other hand, held that "over-fatigue probably causes a much larger number of attacks of tuberculosis than mal-nutrition, and much of the excess of pulmonary tuberculosis among men as compared with women is due probably to this." Modern knowledge that increased physical work calls for increased supply of vitamins, in addition to increased caloric value of food, might possibly lead him to modify this opinion; since it is arguable that the effect of over-fatigue is related to a deficient vitamin content in food. This view is supported by Vernon's recent work⁷ on industrial fatigue which leads him to conclude that "fatigue has comparatively little direct effect in increasing either sickness or mortality"; he lays stress rather on the importance of conditions of

labour, among which food supply is included, and quotes an instance where after a canteen was established "the sickness rate among the workers using the dining-room fell gradually, until it stood at half its former height." During the Great War the lack of food, and particularly of fat, in Central Europe, was accompanied by a marked rise in mortality from tuberculosis.⁸ Professor Möllers calculates that so far as Prussia is concerned, the mortality increased by 67 per cent. between 1913 and 1918, and that whereas in the first half of 1914 it was 1.75 per 1,000, in the first half of 1919 it was 3.44. With improvement in the food supply a rapid fall took place; thus, compared with corresponding periods of 1914, the mortality for the first half of 1919 was 97.1 per cent. higher, that for the second half 36.3 per cent. higher, while that for the first half of 1920 was only 18.9 per cent. higher. The incidence of the disease by age-periods, as published by Professor Selter, who compares the data of 1910 and 1919, are also of interest; in the first year of life when the child would be mostly dependent upon breast-feeding there was little rise in mortality, but a marked rise occurred between one and five years of age; then followed a curious and unexplained slight decline from ages 5 to 10; after which a marked rise occurred up to age 31, when the mortality again became stationary until age 50 and over. Professor Selter ascribes the average rise which amounted at all ages to about 50 per cent., to under-feeding.

This country during the War suffered less from under-feeding; if the average mortality from tuberculosis for 1912-14 is compared with that for 1917 and 1918, it is found to have fallen in the first year of life, but to have risen for males and females in the age-periods 1 to 5, and 6 to 10. After that age period, owing to war service, male records are unreliable, but the female mortality rose up to age 55, after which it was practically stationary. The records for this country contrast with those of Professor Selter particularly at ages 6 to 10 and over 50. Dr. Greenwood⁹ has shown good reason for considering the rise of tuberculosis among females to have been influenced by industrial occupation; this influence may have been exerted through under-feeding brought about by the necessity for expending more energy than usual, while the dietary was limited both in quantity and quality. The need for increasing the vitamin content of a dietary, when the amount of energy expended is increased, has already been referred to.

In this country, as in other countries, when food supply became more plentiful after the war, the rise in tuberculosis which took place during the war, was converted into a fall, even to below the level of pre-war years.

The war period may be held to have provided an interesting experiment in relation to tuberculosis. Its incidence rose in every country directly as stringency in relation to food became more pronounced; the simultaneous need for increased activity probably accentuated the position. After the war food became procurable again, and wages, which had attained a high level, provided means for obtaining it. Down fell the incidence of tuberculosis, even though the housing position had become more and more acute.

to factory influence and unfavourable home environment, succumb at a higher rate to tuberculosis." He further suggests that unphysiological conditions of employment may be the important factor. The facts are, however, also open to the explanation that those industrially employed, because they are expending more energy, require a more adequate diet than others in order that they may maintain their resisting power.

Recent work upon food accessory factors,¹¹ with the demonstration of the value of the factor, fat soluble (A), of its possible relation to rickets, and of its presence in articles of food, such as cod-liver oil, which have long been recognised as of value to the tuberculous, concentrates attention from another point of view upon

Table 2.—Consumption of the Principal Articles of Food in the United Kingdom in the years 1860, 1880, and 1909-13.

Commodities.	Total Consumption.—Thousand tons.									Consumption per Head per Week.—Lbs.		
	1860.			1880.			1909-13.			1860.	1880.	1909-13.
	Impts.	Home Production.	Total.	Impts.	Home Production.	Total.	Impts.	Home Production.	Total.	Pop. 28.7 mil.	Pop. 34.9 mil.	Pop. 45.2 mil.
Wheat (grain)...	1,070	3,070	4,140	3,300	2,070	5,370	5,876	824	6,700	6.20	6.60	6.40
Meat and Bacon	150	1,050	1,200	310	1,147	1,457	1,067	1,574	2,641	1.80	1.80	2.50
Milk fresh min. gals.	—	328	328	—	500	500	—	961	961	pt. 1.75	2.20	3.20
" condensed	—	—	—	—	—	—	54	—	54	—	—	0.05
Butter ...	36	80	116	114	89.5	204	203	113	316	0.17	0.25	0.30
Margarine ...	—	—	—	—	—	—	58	59	117	—	—	0.10
Cheese ...	28	50	78	87	45	132	115	60	175	0.12	0.16	0.14
Potatoes ...	28	4,500	4,528	121	4,500	4,621	—	4,183	4,138	6.80	5.70	4.00
Rice ...	17.5	—	17.5	218	—	218	303	—	303	0.03	0.30	0.29
Tea ...	34	—	34	71	—	71	133	—	133	0.05	0.09	0.13
Sugar ...	439	—	439	980	—	980	1,501	—	1,501	0.66	1.21	1.40
Cocoa ...	1.4	—	1.4	4.7	—	4.7	35	—	35	0.00	0.01	0.03
Coffee ...	16	—	16	14	—	14	12.7	—	12.7	0.02	0.02	0.01

Compiled by Miss W. A. Mackenzie.

Meanwhile, among that part of the community, the armed forces, whose supply of food was not curtailed, the incidence of the disease was conspicuously low.

Ewart's recent paper,¹⁰ in which the matter was carefully set forth, relieves me from pursuing the war effect further.

Particular attention has been paid by Greenwood⁹ to the whole question of the effect of industrial employment upon the prevalence of phthisis; he writes: "The industrial employment of men (as of women) lowers their resistance to tubercular infection; the principle focus of such infection is domestic; those exposed both

the influence food supply may exert upon the prevalence of tuberculosis.

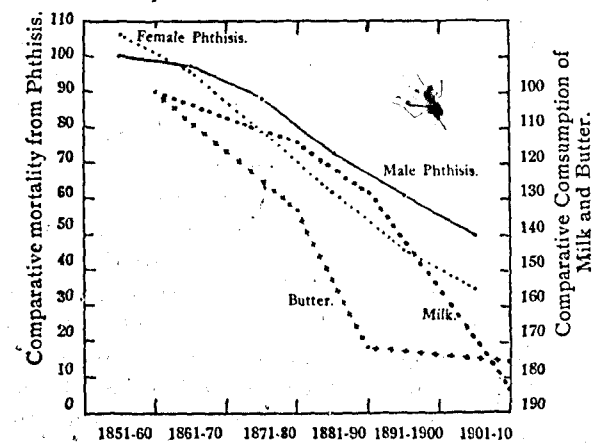
Interest in this connection attaches to the War-time experience of Dr. T. K. Stansfield¹⁰ at the Mental Hospital, Bexley. Under-rationing the health of the two to three thousand persons in the institution suffered, which he ascribed to insufficiency of the fat vitamin. Ordinary methods of cooking meat being wasteful of fats in order to ensure that all the fats in the food reached the customers, all meat was minced and converted into a broth thickened with vegetables and flour, whereupon the patients improved in health, gained in weight, and the death-rate dropped to normal.

Food Consumption.

Importance, therefore, attaches to the consumption of the principle articles of food in the United Kingdom during the period in which the mortality from tuberculosis is known to have been falling. There is considerable difficulty in obtaining accurate information upon this matter; but I am fortunate (through the courtesy of Miss W. A. Mackenzie, Rothampstead Experimental Station, Harpenden), in being permitted to use the data of the following table compiled by her in the course of a separate inquiry.

Examination of the data discloses that (omitting tea) the consumption of only three articles has increased in any way comparable with the fall in tuberculosis, namely, milk, butter, and sugar. The increase in sugar is probably more than counter-balanced by the decrease in potatoes, and may be disregarded. Further, the consumption of wheat does not suggest that the carbohydrates are particularly concerned. The fact that the consumption of meat and bacon remained stationary between 1860 and 1880, while tuberculosis was steadily falling, is also against ascribing any marked influence to them. But in the case of milk and butter (which in the absence of green vegetables are the only "protective foods" in the table) the case is different; if the consumption of milk is taken at 100 for 1860, then it was 126 in 1880 and 183 in 1910-13; while if that of butter is taken at 100 for 1860, then it was 147 in 1880, and 176 in 1910-13 (see diagram 2). An interesting point is that the consumption of cheese has not steadily increased, which does not place the protein constituent of milk prominently before us for consideration. Attention is rather directed to the cream or fat constituent of milk.

DIAGRAM 2. Rise in consumption of Milk and Butter compared with fall in Phthisis mortality.



Further information, also provided me by Miss W. A. Mackenzie, is used in this diagram, which gives for 1890 comparative consumption figures for Milk of 132, for butter of 171, and for cheese of 176.

The deduction that possibly the increased consumption of milk may have been a factor in the reduction of tuberculosis is capable of explanation in two ways. First, we can hold that the more milk is drunk the greater is the likelihood of swallowing bovine tubercle, and that as a consequence some degree of immunity is established against human tubercle; secondly, we might hold that cream, by supplying the body with the food accessory factor, fat-soluble A, allows it to build up a resistance against tubercle. From this point of view predisposition to tuberculosis would be a result of deficient metabolism.

Milk Immunisation.

The suggestion that the consumption of more milk may have acted by creating immunity through bovine tubercle, a kind of vaccination, calls for thought. The view has been put forward that every newly-born babe is virgin soil upon which tubercle can grow, and, indeed, under conditions of modern civilisation, does grow; and that to resist the disease immunity must be established, and, indeed, is established, as the direct outcome of sub-minimal infection, the fight against which results in the formation in the tissues of anti-bodies. Individuals so immunised, like individuals in whom the infection has been sufficient to cause clinical manifestations, give a positive reaction in the Von Pirquet test; and there is evidence in support of the view that such persons are at least harder to infect with tuberculosis.

The fact that bovine tubercle and human tubercle are distinct and have not been proved to be convertible one into the other, in the way in which human small-pox can be converted into cow-pox, does not entirely rule out the suggestion that bovine tubercle may protect against human. Nor, again, does the fact that (although the campaign in favour of pure milk has resulted in fewer samples of milk to-day being found to be contaminated with tubercle), the prevalence of tuberculosis of bovine origin has been falling, while that of human origin has been falling.

Nevertheless evidence that administration of subminimal doses of bovine tubercle protects against human tubercle is to-day not complete; and we must be content with the verdict "non proven."

Immunisation by Attack.

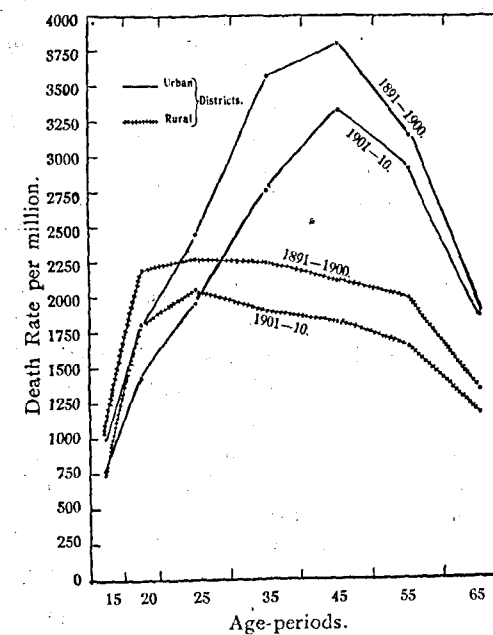
The possibility may here be considered of so ubiquitous an infection as human tuberculosis establishing immunity against itself.

During last century, due to a phenomenally rapid growth of industrial areas associated with a

great aggregation of population, and due to an extraordinary increase in transit facilities, opportunities for infection vastly increased. In other words the alteration in social conditions which commenced in the last half of the eighteenth century, and which might be held to account for the increase of tuberculosis then considered to have taken place, when far more pronounced, has been associated with a steady fall in the prevalence of the disease.

The population of England and Wales between 1750-1800 rose from about six and a half millions to nearly nine millions, an increase of 72 per cent. in 50 years; but in 1901 the population was

DIAGRAM 3. Male Death Rate per million from Phthisis.

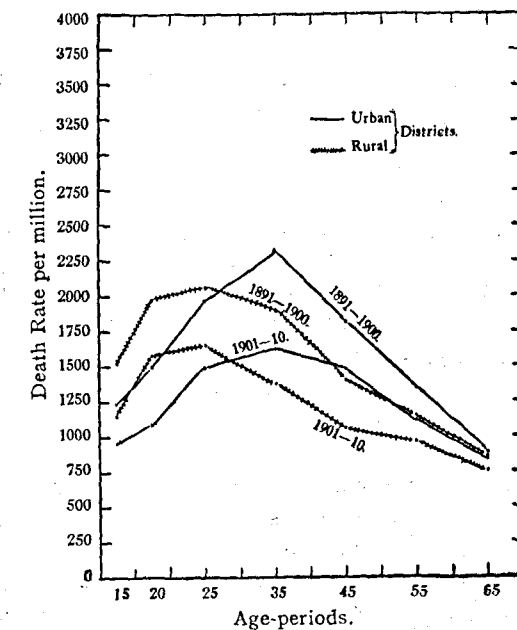


thirty-two and a-half millions, an increase of nearly 280 per cent. in 100 years, or 140 per cent. in 50 years.

On the theory of immunity put forward, a community in which an infectious disease exists comes to possess a degree of immunity against it; if the disease is prevalent, infection will often be massive when fatal cases will occur, but there will always be enough subminimal infection to ensure a proportion of the population being protected. In other words the disease vaccinates against itself and leads to its own decrease. On the other hand, when it decreases below a certain amount, a proportion of the population will escape even sub-minimal infection, and become virgin soil for the disease to attack; then the disease should increase. Gradually, on this view, a balance would be established, and if no other influence were at work we might expect the toll

taken by the disease to become fixed. Then the only hope for reducing the disease would lie in the discovery of a vaccine, and in rigorous isolation of every case on the lines adopted to stay the ravages of small-pox. Should, however, an infected population tend to be more crowded together, as occurred with the altered distribution of the population brought about by the industrial development in the last half of the eighteenth century, then a temporary increase in the disease would be expected, such, indeed, as appears to have taken place in London between 1730 and 1800. This increase should diminish again until a new balance became established. This new

DIAGRAM 4. Female Death Rate per million from Phthisis.



balance among a population more closely aggregated might theoretically be even lower than the old standard; but if so, this phenomenon could only be expected to appear in the densely-populated areas which then might fall below the rural areas, a condition of things which has not manifested itself. On the other hand, the new balance might not be so low as the old one, in which case the densely-populated areas would remain permanently above the less populated, where the incidence of the disease would remain but little altered. But in the nineteenth century (during a period in which the increasing density of population in urban districts and vastly increased transport facilities, called in to explain the increase of the disease in the eighteenth century, were becoming more and more marked), the disease, after falling by 1840 to about its prevalence in the middle of the eighteenth century,

has continued to fall ever since, while the position of urban and rural districts has been maintained, i.e. the fall has affected the less-populated areas as well as the increasingly densely-populated areas.

The only instance to the contrary with which I am acquainted is the City of New York, where the prevalence of the disease has shown a tendency to fall below that of the surrounding districts, the instance is remarkable, but the conditions are hardly comparable with British data. The information at our disposal appears to suggest that immunity acquired through infection, although a possible influence is not the main influence which has determined the steady decrease in tuberculosis which has taken place in the last seventy years.

The view that every child at birth is virgin soil ready to fall a prey to a sufficient dose of infection hardly explains the prevalence of tuberculosis by age periods of life; this prevalence (leaving out the first years of life) increases steadily up to the fifth lustrum for urban males, and to the fourth for urban females, and only then begins to decline with advancing years, possibly because its place is taken by other ills to which the flesh is heir. This suggestion that tuberculosis does not really lose its potency in late life in the way its diminishing prevalence seems to suggest, has something in its favour; for, as the general mortality has been falling and the expectation of life has been increasing, that is as the capacity for resisting the onset of disease has been extending into the later periods of life, the average or median age at death from tuberculosis has been increasing. In other words as the other vegetation at the edge of the forest of death has been pushed back, tuberculosis has, in comparison with the rest, been becoming more frequent. This fact might appear to establish the suggestion made, were it not open to a different interpretation in the light of Brownlee's work, namely, that the fall in tuberculosis has mainly affected his young adult type, leaving the middle age type less affected.

Be that as it may, on the virgin soil theory, surely the disease should claim most of its victims among the young less immunised population, rather than among adults whose immunity arising from exposure to infection should steadily increase with age.

There is a tendency for tuberculosis to claim most of its victims in early adult life, both among males and females in rural districts where the disease is least prevalent and where, therefore, immunity set up by previous infection should be

least manifest. On the other hand, in urban districts where the disease is more prevalent and where immunity increasing with age should be most manifest, the age incidence of the disease is markedly later (see Diagrams 3 and 4).

A theory which seems more tenable is that the disease as adolescent life is passed, takes its toll from those who, during the period of development, have acquired less resisting power—where, as among women in rural districts, the subsequent strain and stress of life is not sufficient to produce fresh victims, the incidence of the disease falls off; where, as among men in rural districts, the stress of life is rather heavier, resisting power is lowered sufficiently to keep up the supply of victims in later years; in urban districts, where life is more strenuous, the incidence of the disease continues to rise among women until the period of their occupational employment has past, while for men, among whom the length and influence of occupation is more extensive, the incidence rises higher and extends into the later periods of life. This theory supposes that the infection requires the body to be prepared for its attack rather than that it finds every child at birth virgin soil. The high mortality from tuberculosis experienced in the first years of life, when the food question in relation to health is more important than at any other period, does not appear to me to be in opposition. The theory precisely represents what is generally held to hold good for the incidence of septic infections to which the incidence of tuberculosis has already been likened. It lays stress on the importance of maintaining that healthy metabolism which depends upon a correct balance between an adequate intake of food and an adequate expenditure of energy, that metabolism which, as Dr. Leonard Hill has demonstrated, is activated by stimulating atmospheric conditions.

The fact that white races among whom tuberculosis is endemic, resist the disease more than do native races (among nomadic tribes and aboriginal races in all climates, when in their normal surroundings, it is rare²) when exposed to similar risk of infection, is hardly positive evidence of the presence of an acquired specific immunity among the whites, since the resistance of the whites may be due to a constant weeding out by an ever-present disease of the less resistant, so that "the mean resistance of the race towards the particular disease is raised."¹² Another point in this connection is that native races, when exposed to infection on being brought into contact with white races, have had

the entire environment of their life altered, their natural diet profoundly modified, and usually their normal output of physical energy increased. "The noble savage has other blessings of civilisation to endure as well as the bacillus of tuberculosis." The argument might be put forward that these blessings might be in themselves sufficient to account for lack of resistance to tuberculous infection rather than absence of immunity; but, when an infected native returns home to the tribe which has not been subjected to the weeding-out process, the disease often runs riot. Undoubtedly, white races resist the disease better than natives; but this by no means establishes that white men have acquired a specific immunity, or that such immunity is the factor determining the fall in the incidence of the disease now under discussion.

The fall in the prevalence of the disease which has taken place synchronous with the fall in the general death-rate, but twice as rapid, suggests that the fall may have been due to increased power of resistance to disease generally. Each case which resists infection affords one less focus for disseminating the disease; and so we find that, although tuberculosis bears a relation to the general death-rate, when the general death-rate falls owing to improved hygiene, the tuberculosis death-rate falls faster than the general death-rate.

Metabolic Deficiency.

We may now return to the suggestion that milk consumption may have been a factor in the fall of tuberculosis, producing its effect by increasing the resisting power of the body, possibly due to providing a supply of vitamin, fat-soluble A, but the presence in skim milk of a water-soluble vitamin should not be forgotten. Poverty, the effect of which is probably to be attributed mainly to dietetic insufficiency, can produce marked effects upon the human being as has been shown by Dr. Arkle⁷; he found boys in higher-grade schools at age 14, no less than 6.5 ins. taller and 23.4 lbs. heavier than the sons of casual labourers. On the theory now under consideration, predisposition to tuberculosis is considered to be set up by metabolic insufficiency, rendering the body more liable to succumb to infection. I advisedly say "more liable to succumb" because the human race most probably, like guinea pigs, will always succumb if the dose is sufficiently massive.

Greater height and weight have just been quoted as examples of what better food can do; but to-day too little is known about development

and disease to ensure confidence that fine physical development necessarily goes hand in hand with increased power of resisting disease, or that fine physical development, if a sign of good resisting power while it is being acquired, continues to confer an advantage in this respect under the strains and stress of life. Probably we cannot go farther than to hold that during a period of under-feeding resistance to disease is lowered; if this under-feeding occurs in youth, physical development is also interfered with. I do not know of definite evidence that those of inferior physique, if well nourished in later life, fall victims to disease more readily than those of fine physique. Possibly the type of development which is useful for resisting disease, is distinct from fine physical development. Further, since resistance to disease is a thing which requires to be continually maintained, deprivation of some necessary factor may be a more serious matter for the big than for the small person; instances will readily occur to all where men of fine physique have succumbed before those of inferior physique.

The rapidity with which the tuberculosis rate rose among adults during the war, certainly suggests that dietetic insufficiency can quickly lower a resisting power previously present. This point has been noted by Ewart¹⁰ who, as the result of his investigations, has written "the war period, as far as judged by the supply of free meals, shows not only the relationship of the phthisis death-rate to the supply of food, but also indicates that the response is rather more rapid than as measured by a mean of the previous three years, and may be measured from year to year." At the present moment, although no figures as to the real value of wages are to hand, the unemployment prevailing is seriously affecting the feeding of an appreciable portion of the community; hence the fall in the tuberculosis death-rate noted in 1920, cannot be expected to continue; on the contrary, the figures for 1921, when known, may be anticipated to show a rise.

The incidence of tuberculosis previous to the war may be taken as proof that resisting power was greater then than during the war. If this resisting power depended upon an immunity acquired through sub-minimal doses, why did it diminish? If an individual who has been vaccinated is semi-starved or exposed to any other heavy strain, does he become liable to contract small-pox? If the reply be made that the immunity, when established, is not complete and can easily be disturbed by under-feeding, then under-feeding is at once allowed to be the more

important of the two factors, and the one upon which attention should be concentrated.

Should further inquiry give firmer ground for considering vitamin A to be of importance in relation to tuberculosis, then interest would attach to the facts recently reported by Drummond and Coward¹³ that vitamin A can be separated from fish oils and green vegetables, and that animals fed on a diet from which all fat has been removed, but to which this vitamin has been added, show no signs of metabolic deficiency such as is otherwise associated with a fat-free diet.

Here it may be useful to distinguish between diminution in racial resistance—such as some metabolic deficiency might bring about—and direct sensitization to disease. If physiological terms may be used—in the former case, inhibition is removed from a natural tendency, while in the latter there is direct excitation.

the occurrence of pulmonary fibrosis which paved the way for tuberculous infection. This dictum was based upon the alarming mortality from phthisis well known to prevail among grinders of metal, potters, tin-miners, stone-masons, gold-miners, and others. Investigations, however, in many dusty industries¹⁴ disclosed that no relation existed between the amount of dust present and the prevalence of phthisis; coal-miners even were found to experience less phthisis than normal, although their lungs were black with dust; cement-makers working in clouds of dust were not affected; brick-makers were remarkably free from the trouble; cotton-strippers afflicted with asthma from exposure to dust nevertheless escaped phthisis; in Sheffield, cutlers exposed to far more dust than grinders suffered three times less from phthisis; workers exposed to irritating dust of slag wool showed no tendency to succumb; and other instances might be quoted. Then an inter-

Table 3.—Percentage Mortality from Phthisis among Masons who died in certain large Towns.*

Class.	District.	Period under review	Percentage Mortality from Phthisis	Stone used
Stone Masons	Bristol	1871-1911	12.0	Limestone, e.g., Bath and Portland.
	Plymouth		12.5	
	Dundee		18.6	
	Cardiff		21.8	Leoch Sandstone in which Quartz is subordinate in amount.
	Falmouth		24.9	
	Birmingham		37.6	
	Bradford		44.2	Four parts Limestone to one part Sandstone. Granite, i.e., one-third Quartz.
	Edinburgh		46.1	
	Liverpool		48.1	
	Newcastle-upon-Tyne		53.0	About equal parts Limestone and Sandstone.
	Manchester		56.7	
All Males aged 20 years and over	England and Wales	1871-1900	14.6	Sandstones only of various kinds.
	Scotland	1901-1908	12.7	

* Further extensive statistical detail will be found in Minutes of Royal Commission on Metalliferous Mines and Quarries, Vol. III., Appendices P, Q, and R, pp. 222-38, 1914. Wyman & Sons, Ltd. (Cd. 7478).

Sensitisation.

Is tuberculosis ever associated with direct sensitisation to infection? One form of tuberculosis—tuberculous silicosis—appears to present what may be looked upon as a case of definite sensitisation. This form of disease is associated with the inhalation of silica dust. Here a normal adult, not as the result of metabolic deficiency, but as the result of changes which follow upon the inhalation of silica dust, becomes unusually liable to succumb to pulmonary tuberculosis. A summary of the case may be of interest.

Twelve years ago the teaching was that inhalation of dust of all kinds was associated with

esting inquiry among flint-knappers at Brandon drew attention to flint dust, i.e. the dust of silica. A review of dusty occupations known to be associated with an undue prevalence of phthisis, then brought to light the fact that in every case silica dust was present. The silicon had, however, to be present as Si O₂; no undue prevalence of phthisis was found with exposure to dust of silicates, such as clay or cement. The silica theory was next put to a close test by examining the mortality of stonemasons, some of whom, as in the Isle of Portland, work entirely on limestone, while others, as in Edinburgh or Manchester, work only on sandstone. Exposure to

dust is, if anything, more pronounced working on limestone; but, everything considered, the conditions of work, of wages, and of life for the two groups of men, were as closely similar as possible. The result was conclusive, as may be seen by referring to the data of Table 3.

One notable exception was found in the case of a stone used at Dundee known as Leoch Stone, which belongs to the old red sandstone series described by Hugh Miller, the literary stonemason who has left behind a word picture of his own experience of tuberculous silicosis. Dundee masons, however, did not consider the dust of this particular sandstone dangerous; and the mystery was cleared up by Dr. Teal, of the Government Geological Museum, when he declared the stone to be an abnormal sandstone and one in which "quartz is in subordinate

for millstones in grinding flour; previously the occupation was so injurious that friendly societies would not accept millers as members. Now no objection to their membership is heard of. A more recent instance is even now developing; phthisis has been rife for 150 years among grinders of metal at Sheffield; eleven years ago steps were taken by stringent regulations to improve the hygienic conditions of workplaces, but the disease failed to react. Next, in accordance with the law just stated, this prevalence of occupational phthisis was ascribed to dust arising from the sandstone wheels at which the grinders work. Recently for trade purposes these wheels have found rivals in composition wheels, which contain very little silica and wear away about twenty times less rapidly. Composition wheels have during the past five years been steadily

Table 4.—City of Sheffield.

Mortality among Grinders. 1908-1912 and 1913-1920.

YEAR.	PULMONARY TUBERCULOSIS.			ALL CAUSES.		REMARKS.
	Number of Deaths.	Percentage of all Deaths.	Average age at Death.	Number of Deaths.	Average age at Death.	
Total for five years 1908-12.	291	51.2	44	568	49	
1913.	61	45.5	46	134	50	From this year onward silica grindstones have been steadily giving place to composition wheels.
1914.	69	58.0	45	119	49	
1915.	55	53.3	46	122	50	
1916.	61	48.8	46	126	50	
1917.	49	45.4	46	108	52	
1918.	48	38.4	45	125	49	
1919.	33	36.3	44	91	51	
1920.	34	30.4	47	112	53	

amount to the other constituents." Thus by investigating mortality records, some approximation to the silica content of this stone had been arrived at, and the apparent exception proved the rule. Simultaneously Barwise¹⁵ was carrying out his interesting investigation into the geological distribution of phthisis in Derbyshire as determined by the occupations of males and exposure to silica dust.

The position was now clear that exposure to different dusts caused different results, some caused no trouble, others caused asthma, some bronchitis and pneumonia; but only one was found associated with the occurrence of true dust-phthisis, namely, dust of silica. This discovery, taken together with the pathological findings of cases after death, conclusively establishes that dust-phthisis is really tuberculous silicosis. Further evidence has been provided when exposure to silica dust has been removed. This happened when steel rollers were substituted

replacing sandstone wheels. The result is to be seen in the figures of Table 4, supplied me recently by Dr. Wynne, the Medical Officer of Health for Sheffield. Grinders' rot, for so long the scourge of the cutlery trade, is now doomed to extinction as the sandstone wheel is banished.

Silica dust does not differ markedly from other dusts in physical properties, such as hardness, angular and spicular form, or in minuteness; hence the conclusion was arrived at that particles of silica exerted their influence by chemical action.

Interesting though this instance of sensitisation may be, there is no clear evidence to-day that sensitisation has exerted an important influence in the fall of tuberculosis which has taken place.

SUMMARY.

(1) Tuberculosis for ages past has been endemic among civilised nations.

- (2) It is an infectious disease of which the clinical course resembles its epidemiology in being indefinite.
- (3) In contrast, certain other infectious diseases run a definite course which is held to be terminated because the patient requires an immunity, temporary or permanent. The incidence of these diseases possesses certain definite epidemiological characteristics.
- (4) Clinical and epidemiological evidence suggests that, in the case of tuberculosis, immunity, such as occurs for other infectious diseases, is difficult to establish.
- (5) The prevalence of tuberculosis has been steadily diminishing in this country since the early part of last century, during a period in which poverty has been decreasing.
- (6) Under-feeding is necessarily associated with poverty; and better feeding with a general increase in wealth. Under-feeding has long been held to be an influence predisposing to tuberculosis. The term "under-feeding" possibly means deficiency in some food-accessory factor.
- (7) Synchronous with the fall in tuberculosis there has been an increase in the amount of milk and of butter consumed per head of the population.
- (8) If the increase in milk consumption has any connection with the fall in tuberculosis, the result might on theory be due to either of two causes:—(i.) immunisation due to administration in milk of bovine tubercle, or (ii.) an increased supply of one or more food accessory factors, possibly of fat-soluble A. The balance of probability would seem to favour the latter.
- (9) The possibility of a sufficient supply of fat-soluble A vitamin in food being an influence which increases the power of resisting tuberculosis calls for consideration.
- (10) Silica is a substance which definitely sensitises the tissues to succumb to tuberculosis.

When addressing you 14 last January I dwelt upon the importance of the bio-chemical link in the chain of events which determines one form of tuberculosis. There can be little doubt that somewhere the chain in the causation of tuberculosis in general is weakening; and, in suggesting that this weakening is taking place in the bio-chemical link, I do not minimise the importance of the other links in the chain. Quite possibly,

if the fall in tuberculosis continues and accommodation increases, segregation in sanatoria may provide, as in the case of leprosy in Norway, the assistance needed to bring under control the incidence of the disease which has been falling, due to some other cause or causes; in that case we should be directly controlling the infective organism. Indeed, if Brownlee's suggestion that the fall in the disease is largely an epidemiological phenomenon and that a rise must be expected soon—just as sun-spots wax and wane in number—then our only hope would lie in segregation.

If, on the other hand, a relation of cause and effect exists between dietetic insufficiency and the disease, we must concentrate on establishing what form that insufficiency takes, and then on supplying the deficiency. In this direction, coupled, possibly, with segregation, there would appear to be great hope.

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THE EFFICIENCY OF THE V.D. CLINIC.*

BY

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The report of the Royal Commission on Venereal Diseases demonstrated both to the laity and to the legislature what was already tolerably evident to the medical profession, namely, that there existed in the midst of the community a vast population of venereally infected persons. It was abundantly evident that for various reasons a large proportion of these people were inadequately treated, or were receiving no treatment whatever. They thus constituted the great reservoir of venereal infection from which the disease was easily spread into the healthy community. It was obvious, therefore, that here was a problem of national importance requiring immediate solution. Public opinion was aroused; and no sooner had the newly created Ministry of Health put up its plate in Whitehall, than the first patient on the door-step, clamouring for attention, was "Venereal Disease."

It is doubtful if the full urgency of the matter is even now thoroughly appreciated; but at all events, certain main lines were then laid down upon which to commence operations. These were:—

- (1) To provide free treatment for all.
- (2) To make the treatment secret.
- (3) To advertise the fact that such treatment was available.

Hence came into being the V.D. Clinic, the chief objects of which then are, in the first

* A paper read at a Meeting of the N.W. Branch held in Manchester on November 11th.

instance, to prevail upon venereally infected persons to attend there for treatment; and secondly, so to treat them that they will be cured. What we are concerned with here, is how efficiently the clinic is performing these functions, and to suggest further means to increase that efficiency.

The clinic must be judged according to the results obtained. The general intention is good: but we have been assured that a certain wide and dangerous road is paved with just such intentions. The usefulness of the anti-venereal highway is to be regarded, not so much from the point of view of its excellent paving, but rather from the directness with which it leads to its objective. In assessing the results obtained by the clinic we are immediately met by a great difficulty. It is the want of accurate statistics.

The Royal Commission was of the opinion that the time was not yet ripe to advocate the adoption of compulsory notification. That is the standpoint adopted at the present moment by the Ministry of Health; the thesis being that the public are not yet ready to accept the principle. That is true; and the public never will be until their attention is directed to it. It seems indicated, therefore, that every effort should be made to convince people of the necessity for this measure. The truth would appear to be that when the people of Great Britain are fully in possession of the facts with regard to venereal disease, notification will be demanded.

The principle of notification is essential for success in dealing with any infectious or contagious disease. We must know exactly what—to use a vulgarism—"we are up against." In the beginning the notification is essential in order that the forthcoming campaign may be gauged both with regard to its character, and its vigour. It is equally essential, once the campaign has begun, in order to obtain an index of progress. Until we have such figures our judgment cannot be an accurate one. The first point to consider is whether we are getting as many venereal patients as we ought, to use the clinics provided. Experience would seem to show that success in this varies directly with three factors:—

- (1) The energy with which the clinic is advertised.
- (2) The interest and support rendered by the local Health Authorities.
- (3) The efficiency of the clinic staff.

The advertising of the clinic is of great importance, and the paucity of attendance in certain areas is undoubtedly due to a failure to bring the

matter to the notice of the public. This question should be carefully considered by the M.O.H. and his V.D. Officer. In all public lavatories there should be exhibited notices giving the location of the clinic, and the hours at which it is held. This should be repeated in the local press at short intervals. Periodical lectures should be given upon the subject at which suitable literature should be distributed. Finally the cinematograph can be utilised as a means of advertising. A publicity campaign should be thought out, and then launched and carried through with energy and determination. It should not be done by fits and starts, but should be continuous. So long as compulsory notification is absent, and the voluntary principle remains, for just as long will intensive advertising be required.

Apart altogether from bringing the matter to the notice of the laity, a duty devolves upon the medical profession. The M.O.H., the School Medical Officer, the Tuberculosis Officer, the Maternity, Child, and other Welfare workers all possess an oar which can effectively be plied in the anti-venereal boat. The histories and the bodies of mentally deficient children should be investigated for syphilis; and, if such is discovered, not only the child, but its brothers, sisters, and parents, should be persuaded to attend for treatment. The School Medical Officer and the Dentist have great opportunities for getting congenitally syphilitic children, and, therefore, their parents, under treatment. To the Tuberculosis Officer I would suggest that an outlook should be kept for pulmonary syphilis; and that cases of phthisis with negative sputa, which show little or no improvement under an anti-tubercular regimen, should, no matter what the blood-Wassermann findings may be, be referred to the V.D. clinic. Such cases are at least entitled to have the advantage of the therapeutic test. Within the last eighteen months I have seen three cases presenting the classical signs of phthisis, which signs have disappeared under anti-syphilitic treatment.

The general practitioner might do more to help. At present he does not make sufficient use of the clinic. In many cases it is regarded as a last resource; that is to say, the patient is only sent there after his treatment in private has proved ineffective. In many instances cases are sent in diagnosed as syphilis and having been treated as such, in which that disease is not really present. For example, there has come under my observation recently, three cases of psoriasis with a typical distribution, one case of eczema rubrum

of the scrotum, one of pityriasis rosea, and two of herpes of the prepuce, which were sent in as syphilis. Cases of undiagnosed syphilis are even more common, especially neurosyphilis. The trouble lies with the faulty teaching of Venereology in our medical schools. It would suggest itself as part of the work of the clinic that the surgeon in charge should give a series of lectures and demonstrations which might prove of interest and value to the man in general practice. In this way an earlier diagnosis of syphilis would be made more frequently with great benefit to the patient and to the reputation of his medical attendant.

The subject of treatment is bound up with that of the efficiency of the staff. To the latter one can only make reference in a very general way; but the following points would seem to be worthy of consideration. The surgeon in charge should be one who is not engaged in general practice. The work demands a special temperament, and, in addition, it requires a very special training. Before he can be efficient in diagnosis and treatment the surgeon must have been put to a considerable private outlay in expensive diagnostic instruments and in learning their use. Moreover, he ought to be a competent dermatologist. He must have spent, and continue to spend, a great deal of time in research and in the study of current venereological literature, both British and foreign. From the very nature of his private work the leisure to so equip himself cannot be obtained by the general practitioner. The chief of the clinic should not have to learn his venereology there, he should come to it already fully equipped.

The principle requirements in the male and female nurses are kindness, and enthusiasm for the work. One's experience, based upon the statements of numerous patients is that, unfortunately, in many cases the venereal patient is regarded with contempt, and is made to feel that he is a moral leper. That must be a potent factor in causing sensitive men and women to discontinue attending.

The efficacy of the clinic is ultimately to be measured in terms of its power to cure. Here arises the question of treatment and what constitutes cure. Concerning gonorrhœa there is the well defined criterion that the patient must no longer harbour gonococci in his urethra and appendages. It is not the intention to discuss here the various procedures that have been advocated for ascertaining when this has been achieved, except to point out that it is quite time that there was some official standard that should be compulsory in each clinic under the scheme.

At the present time these vary from the needlessly elaborate to the wickedly slipshod; and hence the statistics collected and issued by the Ministry of Health upon this matter, are of no scientific or other value. The clinic which discharges a man as cured when his urine is merely free from heavy threads, will have at least double the number of cures in a given time than will the clinic which only regards a cure when urethroscopic, microscopic, complement fixation, and other tests are negative.

With regard to syphilis the case is more complicated. In my opinion it is not possible to say when syphilis is cured. We have, it is true, some sort of indicator in the form of the Wassermann reaction, but it must be used at all times with great caution. One can with a fair degree of confidence tell a man when he is not infectious to others. But one cannot, in any given case, guarantee that in the future that man's central nervous system will not become involved. This is not pessimism, but is the only view that is justifiable in the present state of our knowledge. We know, for example, that the cerebro-spinal fluid shews abnormalities in a certain proportion of cases of even primary syphilis, when the blood is negative, has never been, and probably never will be, positive. It is not, therefore, possible at the present time to formulate an accurate criterion of cure which will embrace the disease in relationship to the patient himself, and also in his relationship to others. In so far as his power of infecting others is concerned one must endeavour to steer a course of safety, taking care on the one hand to avoid exhausting the sufferer's patience and establishing in him a mental condition of despair and syphilophobia, and on the other hand, to avoid under-treatment. My practice is to discharge as cured a man who has completed a long course of treatment administered in accordance with my conception of the pathology of the stage of the disease in which he first came under treatment, and who presents no clinical signs, and whose blood and cerebro-spinal fluid are normal for twelve months after the cessation of treatment. In the clinic one has often to be content with the blood alone, as there is an objection on the part of many patients to allow lumbar puncture. A patient who conforms to this criterion, I consider fit to marry. But I always retain the mental reservation that the whole truth is that while he is not infectious to others, he would be well advised, as an "Insurance Policy" for his central nervous system, to have a course of mercurial treatment once a year for the rest of his life. That is the prudent course indicated

by experience. We are still very ignorant as to the essential pathology of syphilis.

The position of treatment has an aspect of soundness, but this is merely on the surface. An examination of the textbooks reveals the fact that hundreds of pages are consecrated to diagnosis, while the one important thing—treatment—is disposed of in a few paragraphs. Since the introduction of the Wassermann and of Arsenobenzol, the treatment of syphilis seems, in many quarters, to have degenerated into a sort of competition as to who can get a negative Wassermann with the fewest doses of Salvarsan or one of its derivatives. Treatment has tended to depart from the method of attending to "John Smith," who is suffering from syphilis and to confine itself to getting No. 123 to have a negative Wassermann. I am convinced that the present day early appearance of neurosyphilis is due mainly, if not entirely, to the unjustifiable optimism which hopes to cure syphilis with eight injections of Arsenobenzol and a short course of mercury and potassium iodide. I have in mind one example of this among many others. The patient had, while in the Army in 1915, a chancre. He was treated with eight intramuscular injections of Salvarsan and a corresponding number of mercury. His blood was then, of course, negative—it never having been positive. He was discharged cured. He was sent to one of my clinics in September, 1920, by his own doctor as a case of syphilophobia, with a note to say that he had been suffering since 1918 from indigestion and rheumatism. On investigation he was found to have some bladder trouble, his attacks of indigestion were gastric crises, his rheumatic pains were lightning in character, and, in short, he was a case of *tabes dorsalis*. Courses such as that described are common, and so, unfortunately, are their results. Here again standardisation is required both as regards adequate treatment and what constitutes cure. Without some kind of standardisation the official statistics on the cure of syphilis are valueless. It may be of interest to sketch the course adopted in such a case of early primary syphilis at my clinic at Warrington:—

COURSE No. 1.

EARLY PRIMARY SYPHILIS.

N.A.B. once weekly for 6 weeks.		
Hg. " " 4 "		Hg. is given intramuscularly as Lambkin's Cream.
N.A.B. " " 3 "		
Hg. " " 4 "		
N.A.B. " " 2 "		
Hg. " " 4 "		
N.A.B. once in last week.		

If blood is negative apply discharge technique, viz:—
A negative blood test once every three months for a year.
If blood is positive give course No. 5.

COURSE No. 5.

Pot. iod., gr. 40, daily for 4 weeks.

N.A.B. once weekly for 8 weeks.

Pot. iod., gr. 40, daily for 4 weeks.

N.A.B. once weekly for 8 weeks.

H. once weekly for 8 weeks.

If blood is now negative repeat above course, but substitute Hg. for Pot. iod., and then apply discharge technique.

If blood is positive repeat course No. 5 exactly; if then negative repeat above but substitute Hg. for Pot. iod., and then apply discharge technique. If, however, blood is still positive, go back and treat from the beginning.

In the vast proportion of early primary cases the blood becomes and remains negative after course No. 1. It might also be stated here that it is advisable at the same time to administer tonic treatment as may seem indicated, and to continue this during the twelve months in which the reaction of the blood is under observation. As an adjunct to the ordinary treatment, the use of hot sulphur baths as carried out by Dr. R. Prosser White, is extremely valuable.

In connection with treatment arises the question of keeping the patient in attendance at the clinic until he is cured or at least incapable of infecting others. In private one finds no difficulty, but in certain clinics there appears to be a very high percentage of patients who fail to complete even one of the very short "optimistic" courses. One may adduce two reasons for this:—

- (1) The patient has not had it sufficiently impressed upon him the seriousness of the disease from which he is suffering, and the surgeon has failed to secure his co-operation. It is not the least important part of the treatment to spend a good deal of time in getting the patient into the frame of mind in which he will realise his condition and take an intelligent interest in his treatment.
- (2) The second reason is to be found in the fact that it is only very rarely that the private patient discontinues treatment. The solution lies in this, that the private case has to pay fees, and, having paid, he is keen to get his money's worth. There is, in the clinic patient, the tendency to value but slightly anything that is free.

There are several further factors which may conspire to reduce the attendance of patients. Among these may be mentioned unsuitable premises; uncomfortable arrangements in the

clinic; want of privacy; unpopularity of the staff; faulty technique in administering arsenobenzol, e.g., the giving of "bad arms," and so on. Like the poor, we shall always have with us the stupid patient who, whenever his syphiloderm has cleared up, stops treatment. To combat several of these factors there are remedies, but the general measure to be adopted seems obvious, namely, some sort of compulsion must be used. Were compulsory notification adopted, compulsory treatment would naturally be a part of the scheme, and the problem of attendance would disappear. At the very least it should be that once a person has commenced to attend the clinic, he should be compelled to continue attending until he ceases to be infectious. It is probable that the falling off in attendances is often more apparent than real. A point which must be kept in mind is this, that although perhaps 30 per cent. of cases do not complete their cure at a certain clinic, a certain proportion of them can be accounted for by having left the district, by having died, by having gone to some other clinic, or by having consulted some private practitioner. Thus the figures given as regards non attendance have very little value, and they never will have much, until there is some form of compulsory notification.

Until that time comes to pass, one can only palliate, and a follow-up system should be adopted. Several methods of this kind are in use in the various clinics in the United States and they work well. The theoretical objections which are raised in this country when some such scheme is mooted, are there found to be groundless.

While the ordinary civil population are fairly well catered for, the venereally infected sailor is not so fortunate. The establishment of V.D. clinics at all large seaports all over the world is very much overdue. It is only in this way that the sailor may secure continuity of treatment without loss of employment. At present there is a large floating population of venereal mariners who are sowing and reaping syphilis and gonorrhoea in every port. This is a break in our defensive armour which it is to our interest to repair at once.

There is only one more point to which I would refer and it is prophylaxis. This is the most powerful weapon in the whole armoury, and is the beginning of the sanitary attack upon venereal disease. Two thousand years of moral suasion finds us faced with the venereal problem in a more threatening manner than ever. By all means let us support the inculcation of a

higher standard of morality, but at the same time—and it is in no way antagonistic—let us teach immediate self disinfection. There has been a vast deal of nonsense written, and more talked, over this subject, but in spite of all the side issues and the hair splitting over such terms as "Packets" and "Early Treatment Centres," the policy of the Society for the Prevention of Venereal Disease has been abundantly proved. Our function is to prevent as well as to cure. It is by the wholehearted and enthusiastic adoption of the principle of immediate self disinfection, the provision of the necessary materials or the authorisation of their sale by the Ministry of Health and the Local Authority, that the incidence of venereal disease can be reduced to the vanishing point. Merely to preach chastity, and to treat the disease when it does occur, is like trying to hold back the tide with a broom.

It is not an edifying public spectacle to find the N.C.C.V.D. and the S.P.V.D. engaging in strife together. The value of immediate self disinfection has been so often demonstrated that no longer can the National Council or the Ministry of Health resist it. Public opinion is already forcing it into their scheme. The antagonism between the two societies has been caused by this, and as that cause is now disappearing one society should be formed which will work towards the goal. It was with great regret that those of us who were amongst the earliest members of the N.C.C.V.D. decided to resign from that body, but practical experience showed that self disinfection was essential, and that other methods were only auxiliary to it.

The following conclusions are submitted:—

- (1) The V.D. clinic is doing a vast amount of good in dealing with a serious medical problem; that it is an economically sound proposition, and that whatever else is done, the V.D. clinic has become an essential component of Public Health machinery.
- (2) The efficiency of the clinic can be further developed.
- (3) That some degree of standardisation as regards treatment and cure is necessary.
- (4) That the clinic should be more intensively advertised.
- (5) That some element of compulsion is necessary to ensure attendance until patients are non-infectious.
- (6) That there should be special clinics at all docks for the use of sailors only.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

NOTES FROM BRANCHES.

THE METROPOLITAN BRANCH.

FOREWORD.

The appearance of this month's notes is marked by the entry into a new year and what may well be the threshold of a new era in the history of public-health activities in London. A glance through the minute books of the Branch for the past twenty years makes apparent at once the important and responsible part it has played in the many phases of metropolitan health administration that have received prominent notice from year to year. In initiative and co-operation with the Central Authorities and other bodies its efforts are constantly directed toward the betterment of the health conditions of London, and in the work which lies ahead it is imperative that the unity of purpose which has characterised so markedly the labours of the Branch in the past should be preserved to the full.

"PESTOLOGY."

The few medical officers who visited the London Pavilion recently to witness the exhibition of a film on rats entitled, in true kinema fashion, "The Enemy Within our Gates," were probably not altogether surprised to discover that the film itself was intended to be but of secondary importance in the afternoon's programme, the principal object of the meeting proving to be the formation of an Institute of Applied Pestology, the sole aim of which was stated to be the repression of all kinds of pests, from the rat to the micro-organism, on truly scientific lines. Subscriptions to the institute vary from half a guinea to five guineas, and the prospective member is required to undertake "to promote the Dignity and Wellbeing of the Profession of the Science of Pestology."

REGISTRATION OF ITINERANT MILK SELLERS.

Dr. Allan, Medical Officer of Health, Westminster, sends an interesting note of a case in which the City Council prosecuted a street milk vendor for failing to register as such in Westminster, in which district he had a "round." The man in question, it appeared, lived at Toxting, alleged he was registered in Shoreditch, kept his barrow in Camberwell, and obtained his milk (two churns of separated and one of new milk) at Waterloo. The magistrate at Great Marlborough Street Police Court, in imposing a fine of £3,

upheld the contention that such a vendor must be registered in each borough in which he sells milk. Apparently the standard case on this matter—*Emerton v. Hall*, High Court of Justice, King's Bench Division (Divisional Court), 24th May, 1910—in which the magistrate's decision to dismiss a similar case was confirmed, was not referred to in the present instance. Owing to the boundaries in the metropolis being so indefinite these cases are more likely to occur in London than elsewhere, and Dr. Allan is of opinion that if Westminster's example is followed and upheld in each borough it should lead to better control of itinerant vendors. A memorandum prepared by the solicitors to the Westminster City Council to show that the authority had power of registration is reproduced below in full as it will doubtless prove of service to a number of members:—

As to the Local Authority for enforcing the Dairies, Cowsheds and Milkshops Orders of 1885 and 1886.

The Privy Council made the Order of 1885 under Section 34 of the Contagious Diseases (Animals) Act, 1878.

Under that Act (Section 9) the Local Authority is the Authority mentioned in the 2nd Schedule. The 2nd Schedule makes the Local Authority the Metropolitan Board of Works. Art. 4 provides that in the Order terms are to have the same meaning as in the Act of 1878.

By the Contagious Diseases (Animals) Act, 1886, Section 9, the powers of the Privy Council of making Orders under Section 34 of the Act of 1878 were transferred to the Local Government Board.

By Article 4 of the Order of 1886 the Local Authority is the Metropolitan Board of Works.

By the Local Government Act, 1888, Section 40 (8) the powers and duties, etc., of the Metropolitan Board of Works were transferred to the London County Council and the Metropolitan Board of Works ceased to exist.

By the Public Health Act, 1891, Section 28, the Local Government Board may make orders for the registration with County Council of Dairymen.

By the Public Health Act, Section 142 (7) is provided: Where in any Order made by the Local Government Board, in force at the time of the passing of the Public Health Act, any Act or provisions of an Act, are mentioned which relate to London and are repealed by the Public Health Act, such order shall be read as if the Public Health Act or the corresponding provisions of the Public Health Act were therein mentioned or referred to instead of such repealed provisions.

Section 34 of the Contagious Diseases (Animals) Act, 1878, and Section 9 of the Contagious Diseases (Animals) Act, 1886, are repealed by the 4th Schedule of the Public Health Act, 1891. Therefore Orders shall be read as if corresponding provisions of the Public Health Act were therein mentioned instead of the repealed provisions.

By the London Government Act, 1899, the powers of the London County Council under Section 28 of the Public Health Act of registering dairymen were by Section 5 (1) and Part 1 of the 2nd Schedule transferred to Borough Councils.

By Section 6 (4) of the London Government Act, 1899, it shall be the duty of each Borough Council to enforce

bye-laws and regulations with respect to dairies and milk.

Section 5 of the London County Council General Powers Act, 1908, recognises the right of the Local Authority under the Order of 1885 to remove persons from the register.

By Section 3 of the London County Council General Powers Act, 1908, the Sanitary Authority is the Council of any Borough.

A TUBERCULOUS PROBLEM.

Under the auspices of the National Association of Local Government Officers an interesting lecture on "Public Health" was delivered by Captain Warburg, O.B.E., M.A., a member of the Paddington Borough Council, at the County Hall, Spring Gardens, S.W., on December 8th. Mr. Jefferson Hogg, Mayor of Chelsea, occupied the chair, and amongst those present were Dr. W. H. Hamer and Dr. R. Dudfield. The address dealt largely with the treatment of tuberculosis and administrative measures in relation thereto, the speaker referring at some length to the question of the man adjudged fit to return to work but, by reason of his condition, unable to work at sufficient pressure to earn a reasonable wage. In the view of the lecturer there was a danger that if such a man did not receive assistance the progress made as a result of skilled treatment might be lost and the man cease to be a self-supporting unit. The problem before the public, therefore, was whether or not in view of these circumstances it would be advisable for the State to supplement the diminished income so as to raise it to that earned by the normal worker.

WEST OF ENGLAND.

SOME RECENT CHANGES.

Two Urban District Councils in Somerset have just lost their medical officers of health—Highbridge, by the resignation after many years' service of Dr. R. Wade, and Frome, by the tragic death, following an accident, of Dr. A. Seddon.

It is with great regret, too, that we have to record the death, after a very short illness, of Dr. Evelyn Cohen. Dr. Cohen was attached to the Maternity and Child Welfare Department of the Somerset County Council as a whole-time Assistant Medical Officer.

Dr. A. B. Cardew has been appointed to succeed Dr. H. M. Meyrick-Jones as M.O.H. of Charlton Kings Urban District in Gloucestershire.

Dr. V. F. Soothill, Assistant M.O.H. to the Dorset County Council, has been appointed to a similar post under the Ilford Urban District Council.

THE NEXT MEETING.

The Schick Reaction in diphtheria is attracting a good deal of attention just now, partly as a result of the recent report of the Ministry of Health (No. 10) and of the work at Bristol on which this is based. It is hoped to be able to arrange a Branch Meeting at Bristol towards the end of February, when this question will be discussed from various points of view. The reaction seems full of possibilities, but comparatively few people have as yet had as much practical experience of it as Dr. Davies and his colleagues. Full details of the meeting will be sent to Branch members in due course.

HEALTH PROPAGANDA IN SOMERSET.

Dr. Savage, C.M.O., is preparing a series of articles which, if the first is a sample of those to follow, is likely to be both interesting and effective. The articles are to be published from time to time in the local papers, and are intended to explain in simple language something of the objects of public health activities and what is being done in the county to realise them. The first one, about half a column in length, gives a preliminary survey of the ground to be covered and insists, among other things, that "Health is really the one key industry of the country." The second is to deal with the medical inspection of school children.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

ORDINARY MEETING.

An ordinary meeting was held at the house of the Society on Friday, January 20th, 1922. The President (Dr. W. J. Howarth) took the chair, and there was a good attendance.

The minutes of the last meeting having been approved and signed, apologies for absence were read from Lt.-Col. F. E. Fremantle, M.P., Prof. H. R. Kenwood and Dr. Meredith Young.

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

As Members:

Benham, Alice Marian, M.D., B.S.Lond.; Betenson, Wm. Francis Whitaker, M.B., Ch.B.Aberd., D.P.H.; Cairney, Maud Christine, M.B., Ch.B.Glasg.; Colman (Mrs.), Dorothea, M.D.Lond.; Evans, Harry, M.D. Edin., D.P.H.; Fyfe, Leander Lowrie, M.B., Ch.B.Glasg., D.P.H.; Gregory (Mrs.), Hazel Howard Chodak, M.D., B.S.Lond., M.R.C.P.; Hamilton, Allan George, M.D.Ed., F.R.C.S.Ed.; Harry (Mrs.), Lucy Beatrice, M.B.Lond.; Hodge (Mrs.), Agnes Jane, M.B., C.M.Glasg., D.P.H.; Hudson, Rose, M.B., Ch.B.Glasg., D.P.H.; Hughes, Alfred Morgan, M.C., M.R.C.S., L.R.C.P., L.D.S.;

Knox, Alice Vance, M.B., B.Ch., N.U.I.; Moffatt, Christopher Wm. Paget, M.B., B.C.Cantab., M.R.C.S., L.R.C.P., D.P.H., M.A.Lond.; Pooler, Harry William, M.B., Ch.B.Birm., M.R.C.S., L.R.C.P., L.S.A.; Soames, Ralph Martin, M.B., B.Ch.Cantab., M.R.C.S., L.R.C.P.; Swatman, Helen, M.B.Lond.; Turner, Rosa, L.R.C.P. and S.Ed., L.R.F.P.S.; Waller, Harold Kirk, M.B., B.C.Cantab., M.R.C.S., L.R.C.P.; Westlake (Mrs.), Louisa, M.B., B.S.Lond.

As Associates:

Cairns, Arthur, L.D.S.Eng.; Hallett, Leonard Richard Joseph, L.D.S.Eng.; Koike, Ken, L.D.S.Tokyo; Wilson, Thos. Alex. Moffatt, L.D.S.Eng., D.M.D.Harvard.

A list of nominations for election at the next ordinary meeting was read by the Executive Secretary.

Prof. Benjamin Moore, F.R.S., then gave an address on "Occupation and Tuberculosis," which was heard with great interest. An excellent discussion followed, those taking part including the President, Drs. T. M. Legge, C.B.E., G. F. Buchan, E. H. T. Nash, McMaster, Sorley, Gibbins, and Oates. A vote of thanks to Prof. Moore was proposed by Dr. Herbert Jones, seconded by Sir Percy Bassett-Smith, and carried by acclamation.

The meeting then adjourned.

COUNCIL MEETING.

A meeting of the Council was held at the house of the Society on January 20th, 1922. The President (Dr. W. J. Howarth), was in the chair, and there were present: Lt.-Cols. F. E. Fremantle, M.P., Herbert Jones, and Caldwell Smith, Drs. Sanders, Charles Porter, Veitch Clark, Kirkhope, Duncan Forbes, J. T. C. Nash, Wheatley, Clements, McMaster, Stocks, Gibbons Ward, Ewart, and G. F. Buchan.

Apologies for absence were received from Drs. Eustace Hill, Peyton, Barlow, Pearce, Kerr, Blackett, Snell, Evans, Lyster, J. J. Buchan, Joseph, and Auden.

The minutes of the last meeting were approved and signed.

The Manchester Appointment.—The Chairman of the Salaries Committee asked permission to report emergency action in regard to the proposal of the Corporation of Manchester to appoint a Medical Officer of Health at a salary of £1,500 per annum. The Committee considered such salary quite inadequate, and intended at once to issue a circular advising members of the Society not to apply for the post. The Committee had been assured of the full support of the B.M.A. in resisting the appointment, and the advertisement had been declined by the professional journals.

The Council unanimously approved the action of the Committee, and authorised them to take such further steps as they considered advisable and to report to the next meeting.

- *Correspondence.*—(1) From the Ministry of Health, in regard to the interpretation to be placed on Section 125 of the Factories and Workshops Act, 1901—(See proceedings of Council, *Public Health*, January, 1922, p. 105)—The letter, dated January 6th, 1922, was as follows:—

In reply to your letter of the 10th ultimo, I am directed by the Minister of Health to state that it would appear that Section 125 of the Factories and Workshops Act, 1901, does not in itself confer upon the officers of a local authority powers of entry for purposes of periodical inspections in the case of bakehouses which are factories within the meaning of that Act.

It is hoped, however, that it may be found possible for officers of local authorities in the discretionary use of existing powers under this Act and Section 102 of the Public Health Act, 1875, to carry out the recommendations made in Circular 235 as regards all bakehouses.

The Minister will be glad to be informed of any case in which entry has been refused or difficulty experienced in this connection.

As the above letter does not completely dispose of difficulties reported by members of the Society, it was decided to mention the matter on the occasion of the conference with Sir George Newman, fixed for February 10th next.

(2) From the Central Midwives' Board, pointing out that the appointment of Dr. R. A. Lyster, as the representative of the Society on the Central Midwives' Board will, by virtue of the Central Midwives' Board (Term of Office) Order, 1921 (which provides that each of the members of the Board appointed for a term of three years shall be appointed annually instead of for a term of three years), expire on March 31st next. It was agreed to ask Dr. Lyster to report to the next meeting of the Council on the work of the C.M.B. during his period of membership as representative of the Society.

(3) From a medical inspector of the Irish Local Government Board, asking the Society to support himself and his colleagues in their claims for salary adjustments before they pass into the service of the Irish Free State. It was agreed that strong representations on this matter should be addressed at once to the Chief Secretary for Ireland, and the Chancellor of the Exchequer, and that copies of the correspondence should be forwarded to the B.M.A. Public Health Committee.

(4) From the National Clean Milk Society, inviting the Society to send a representative to confer with other bodies interested in a pure milk supply, regarding the organisation of a Milk

Conference to be held in London during the present year. It was agreed that Dr. J. Wheatley, or a deputy to be appointed by him, should attend on behalf of the Society.

(5) From the Medical Officer of Health for the borough of Poole, in reference to the attendance of bonâ-fide midwives on women in child-birth, otherwise than under the direction of a qualified medical practitioner. The Executive Secretary was directed to reply dealing with the special circumstances set out in the letter.

(6) From the West Herts and Watford Medical Society in reference to the period of isolation for scarlet fever patients, and school closure for chicken pox. The Executive Secretary was directed to ask for the observations of the County Medical Officer of Health for Herts regarding any local circumstances that should be considered in the reply to this letter.

Vote of Condolence.—On the proposal of Dr. D. C. Kirkhope, it was agreed to send a message of sincere sympathy to Dr. S. C. Lawrence, for many years a valued member of the Council, on the death of his wife.

The Sanitary Inspectors' Examination Board.—On the nomination of the Metropolitan Branch, Dr. F. J. Allan was elected a representative of the Society on this Board, in place of Dr. Reginald Dudfield, resigned.

The B.M.A. and Municipal Medical Schemes.—In reply to a representation from the Society that it was not in the interests of professional unity that Divisions of the B.M.A. should discuss the work of medical officials with non-professional bodies (see Council proceedings; *Public Health*, November, 1921, p. 48), a letter was read from Dr. Cox stating that the Council of the B.M.A. had given the matter anxious consideration and had unanimously passed the following resolution:—

That the Council sees no objection to any unit of the Association taking action, either nationally or locally, in support of the policy of the Association, even though such action may include criticism of a central or local authority which employs medical officers. Such action must, however, in the opinion of the Council, be based upon that of the central or local authority in question and not on the action of its medical officers, who are the advisers and agents of the responsible body.

The Retirement of Dr. James Niven.—In view of the approaching retirement of Dr. Niven from his appointment as medical officer of health for the City of Manchester, it was proposed by Dr. Wheatley, seconded by the President, and carried by acclamation: "That this Council desires to place on record its appreciation of the invaluable

services rendered by Dr. James Niven for the advancement of Preventive Medicine and Health Administration, and for his pioneer work in connection with tuberculosis." The Executive Secretary was directed to forward this resolution to Dr. Niven and to express the hope of the Society that he would enjoy many years of good health in his well-earned retirement.

Elections to the Fellowship.—The following Members were elected to the Fellowship of the Society:—

On the nomination of the N.W. Branch: Lt.-Col. W. P. MacArthur, D.S.O., O.B.E., Lt.-Col. N. Dunbar Walker, O.B.E.

On the nomination of the West of England Branch: Surg.-Cdr. J. G. Wallis, R.N.

The Board of Education and School Medical Work.—Dr. Cox wrote on behalf of the Medico-Political Committee of the B.M.A., asking the Society to nominate representatives to join a deputation which will submit to the Minister of Health the opinions already agreed between the B.M.A. and the Society of Medical Officers of Health in regard to the transfer of school medical powers and duties from the Board of Education to the Ministry of Health. (See Council proceedings: *Public Health*, January, 1922, p. 105). The President, with Drs. G. A. Auden, J. J. Buchan, and T. W. Naylor Barlow, were nominated to join the deputation as representatives of the Society.

The Training of Health Visitors.—The report agreed by a joint Committee of the Royal Sanitary Institute and the Society, on the qualifications and training of health visitors, was formally approved by the Council, before submission to the Board of Education and the Ministry of Health.

Reports of Representatives of the Society.—On the proposal of the President, it was agreed that members elected to represent the Society on other bodies should report to the Council from time to time any matter of interest to the Society, and that they should also render a report at the close of each session, dealing with the work of the bodies to which they are accredited.

The Royal Commission on the Local Government of London.—Members of the Council attached to the Metropolitan and Home Counties Branches were appointed as a committee to advise the Council on any action advisable in connection with the proceedings of the above Royal Commission.

Conference with Sir George Newman.—The following were appointed to represent the Society

at an informal conference with Sir George Newman on February 10th, at 2.30 p.m., when various matters referred by the Council will come up for discussion: The President, Drs. G. F. Buchan, Blackmore, Herbert Jones, Clements, Ewart, Veitch Clark and Sanders.

Financial Position of the Society.—In connection with the proposal that Branches should have an increased capitation grant based on their membership, the Hon. Treasurer submitted estimates showing that the income of the Society during the current session will barely balance the expenditure. The Hon. Treasurer suggested that it might be advisable later in the session to appoint a small committee to examine the financial position of the Society in regard to future developments. The lease of the Society's house would expire in 1925, and the equipment of new premises would be an expensive matter. Many members were anxious that the Society should have an official weekly journal, and other departures involving extra expenditure had been advocated. He mentioned these matters in order that members of the Council might consider on what lines the activities of the Society should be developed.

The Hon. Treasurer, having been thanked for his report, the Council adjourned.

METROPOLITAN BRANCH.

A well attended meeting of this Branch was held at the Society's house in London, on Friday, 2nd December, 1921, the President (Dr. W. H. Hamer) occupying the chair.

Dr. F. J. Allan was nominated for the appointment of a representative of the Society on the Sanitary Inspectors' Examination Board, in succession to Dr. R. Dudfield, resigned.

The Branch considered it probable that evidence of importance might be given before the Royal Commission on the Local Government of Greater London, and it was left till the first meeting of the Branch in 1922 to decide as to the points to be raised and the witnesses to appear before the Commission.

Reports of conferences with the Metropolitan Asylums Board, as to hospital accommodation for infectious disease cases, and with the London County Council, as to new procedure in connection with tuberculosis, were received. Arising out of the former it was decided to arrange for the reading of a paper, probably at the February meeting, on the subject of hospital isolation in relation to the prevention of scarlet fever.

Consideration was given to a proposal to group together in the London County Council (General

Powers) Bill, 1922, all the provisions as to venereal conditions. A full discussion took place on the draft Bill, and the President promised to bring forward in the appropriate quarter the views of the Branch thereon.

The Branch considered the Ministry of Health Report on Diphtheria, and in connection therewith suggested that as the subject of bacteriological cases of diphtheria and of swabbing of individuals suffering from diphtheria before discharge from isolation was one of interest and importance, arrangements might be made for the reading of a paper at an early meeting.

The Branch received very favourably a suggestion to form a Metropolitan Sub-Group of the Maternity and Child Welfare Group within the Society, and it was resolved to communicate with the group through Dr. H. C. Cameron and Dr. Helen Robertson.

NORTHERN BRANCH.

Meeting held at Newcastle-upon-Tyne, 16th December, 1921. Present:—Dr. J. A. Hislop (in the Chair) and 26 members.

The minutes of the last meeting (28th October, 1921) having appeared in the December issue of *Public Health*, were taken as read, and signed by the Chairman.

The following resolution had been received from the Yorkshire Branch:—"That the Yorkshire Branch strongly disapproves the use of its journal, *Public Health*, for propaganda purposes on behalf of a policy, unless approved by the Council of the Society."

The Chairman informed the members present that this matter had already been dealt with by the Council of the Society. Dr. Dickinson moved that the resolution from the Yorkshire Branch be supported. This was duly seconded, and carried.

The Honorary Secretary reported that the Executive Secretary had forwarded a copy of a printed booklet issued by the West of England Branch. The booklet contains the names and addresses of all medical officers of Local Authorities, etc., in the area of the West of England Branch.

Dr. Kerr said it was an excellent idea, but at the present time the funds of the Northern Branch would not permit a similar list to be printed for their area.

The Honorary Secretary strongly urged the members present to use their influence in obtaining new members for the Society, and thereby increase the strength of the Public Health Service.

Four new members were elected.

Dr. Taylor asked what capitation fee per member was received from the Society, and if it was not possible for the fee to be received by the respective Branches after members had paid their annual subscriptions, even if they were in arrears.

The Honorary Secretary replied that the fee paid by the Society to the Branches was 2s. 6d. on each paid-up subscription. Regarding the latter part of Dr. Taylor's inquiry, the Honorary Secretary promised to communicate with the Executive Secretary of the Society.

The Chairman referred to the Honorary Secretary (Dr. H. Kerr) having received the degree of M.A. at a Convocation of the Durham University which was held on the 13th December, 1921.

Dr. Hislop offered Dr. Kerr the hearty congratulations of the Branch upon the honour conferred upon him.

A discussion took place on the following resolution from the Midland Branch:—

"That representations be made in appropriate quarters, that there shall be transferred to the Ministry of Health all the powers and duties of the Board of Education with respect to Medical Inspection and Treatment of children and young persons in accordance with the wish expressed by Parliament in the passing of the Ministry of Health Act."

This was opened by Dr. W. Campbell Lyons, Medical Officer of Health, South Shields.

After an interesting and animated debate in which many members took part, the resolution was put to the meeting and carried *unanimously*.

Annual Dinner.—At the conclusion of the meeting the members adjourned to the dining hall of the Institute where the annual dinner was held, after which the smoke room, card room, and billiard room were occupied for the remainder of the evening.

The function was a most pleasant and sociable one, and was participated in by thirty members.

TUBERCULOSIS GROUP.

A meeting of the Committee of the Tuberculosis Group was held at 1, Upper Montague Street, Russell Square, W.C., on Friday, 18th November, at 8 p.m.

1. Present: Dr. Peyton (in the Chair), Drs. G. T. Hebert, G. Macdonald, J. Sorley, H. Wilson, and F. G. Caley.

2. The minutes of the meeting held on 22nd October were approved.

3. The Hon. Secretary reported as follows on the progress made in the formation of Sub-Groups:—

(1) *West of England, Midland and Metropolitan Branches.*—A Sub-Group has already been formed in each of these Branches as reported at the last meeting.

(2) *Home Counties Branch.*—A letter was read from Dr. Ewart, Secretary of the Branch, stating that the Branch had discussed the matter and wished to give every encouragement to the formation of a Sub-Group. He was arranging to bring the matter up for discussion at the next meeting of the Branch on 2nd December.

(3) *Eastern Branch.*—When writing to Dr. Nash, Secretary of the Branch, it was suggested that as there were only two members of the Tuberculosis Group in this Branch, both of whom live in Norwich, it might be advisable for them to combine with the Home Counties Branch to form a Sub-Group. Dr. Nash had replied agreeing to this and accordingly the two names were given to Dr. Ewart for inclusion in the Home Counties Sub-Group.

(4) *Southern Branch.*—A letter was received from Dr. Hart, Secretary of the Branch, stating that, at a recent meeting, the Branch decided that there would be no advantage in having a Sub-Group in that area as the large majority of members were engaged in general Public Health Work, as well as tuberculosis, and that ordinary meetings were sufficient for the discussion of tuberculosis matters. The Secretary was instructed to ask Dr. Hart to have the matter reconsidered and to point out that no Sub-Group meant no representative on the Committee of the Group. Further, that in the absence of a Sub-Group there would be no opportunity for the Committee of the Group to obtain an opinion from tuberculosis men in the area on any matter which might be referred to Sub-Groups before action was taken on it.

(5) *North Western Branch.*—Dr. Joseph, Secretary of the Branch, wrote, saying that the Branch was approaching the North Western Tuberculosis Society, asking them to become the nucleus of the Sub-Group, and that the two bodies were meeting at an early date to discuss the matter.

(6) *Yorkshire Branch.*—A letter was read from Dr. W. B. Hill, Secretary, saying that he had discussed the matter with the President of the Branch, and they thought that, as there were only 10 Tuberculosis Officers in the Branch, it was

impossible to form a Sub-Group, without combining with say, the North Western Branch. He was, however, going further into the matter.

(7) *Welsh, Northern, and Scottish Branches.*—No replies had yet been received from the Secretaries of these Branches.

4. Discussion on two resolutions referred to the Committee by the West of England Sub-Group was postponed pending the receipt of the report of the Sub-Group Meeting to be held on 30th November.

5. *Constitution of the Committee of the Group for the Current Session.*—The present Committee was elected last July on the nomination of the outgoing Committee in accordance with the old regulations which made no provision for the election of representatives from Sub-Groups. As some of the latter were now in existence, and others are likely to materialise shortly, it was resolved to inform Sub-Groups, as they were formed, of the position and to ask them to elect representatives on to the Committee for the current session up to the number allowed by the amended regulations, pointing out that they could elect either the same members or fresh ones, as they saw fit.

6. "In a letter from the Chairman of the Salaries Committee of the Society, attention was drawn to a paragraph which appeared in the *Municipal Journal* of November 4th, and in which it was stated that the Ministry of Health had refused to sanction the proposal of the Southwark Borough Council to increase the basic salary of their Tuberculosis Officer from £500 to £650 per annum, rising by annual increments of £25 to a maximum of £800 per annum. The Ministry were not prepared to approve so high a maximum as £800 per annum exclusive of war bonus, though prepared to sanction a maximum salary of £750.

In the discussion which took place, it was thought that an important principle was involved, since this would appear to be a statement of policy on the part of the Ministry in so far as it indicated that the Ministry consider a maximum salary of £750 per annum adequate remuneration for the services of the type of skilled physician required for the appointment of Tuberculosis Officer in this borough.

Resolved: That the Council of the Society be requested to approach the Ministry in order to ascertain how far their action in regard to Southwark may be taken as an indication of their views upon remuneration of Tuberculosis Officers generally."

7. Some discussion took place on the action of the London County Council in suggesting to the Ministry of Health that the salary of the Tuberculosis Officer, Battersea, should contain provision for a sliding scale to conform with the figure for the cost of living, especially as this figure was falling. The matter was referred to the Metropolitan Sub-Group.

8. Remuneration of Medical Officers of Local Authorities.—The Memorandum on this subject approved by the Council of the Society in September, 1920, was discussed, and it was resolved to ask the Council to reconsider it, and the Secretary was instructed to write the Executive Secretary to this effect.

METROPOLITAN TUBERCULOSIS SUB-GROUP.

The fourth meeting of the Metropolitan Tuberculosis sub-group was held at the house of the Society on January 13th, Dr. H. Wilson in the chair. The meeting was chiefly occupied in discussing the provision of extra nourishment for tuberculous persons. Dr. G. T. Hebert's report on the "case sheets" used in London dispensaries was postponed to the next meeting.

CORRESPONDENCE.

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

PREVENTION OF VENEREAL DISEASES.

From Dr. W. A. BOND.

Dear Sir,—Although I much esteem Lord Astor, and know how his attempted impartiality was impaired and imposed upon, a reply is required to his letter in the lay press, especially as *prevention* is not only more moral, but also enormously better and enormously cheaper than *cure*.

Lord Astor's astonishing assertion (and associated with him are the Ministry of Health and the National Council for Combating Venereal Diseases) is that self-disinfection has failed among the *civilian* population because intercourse does not take place under hygienic conditions, but often among ignorant and careless people who are either congenitally mentally deficient or imbecile or have so rendered themselves either permanently or temporarily by their own follies! Surely, the unhygienic conditions, ignorance and carelessness, urgently call for

simple teaching respecting self-disinfection; and in the worst of the careless and vicious classes it is not a failure of self-disinfection, but a failure of its employment.

Moreover, Lord Astor's assertion would apply also to the same classes among the *military*, and under the opportunist policy of the Ministry of Health would, with still further failure, apply to both the civilian and military population. *Additional* measures are, therefore, essential for their more effective prevention.

The Society for the *Prevention* of Venereal Diseases realizes that nature's most powerful and imperious impulse of sex is not confined to the classes mentioned by Lord Astor, and that the terrible ravages caused by these diseases, so disastrous to the welfare of mankind, are not to be combatted by prudery and prejudice, ignorance, hypocrisy and cant, which still attempt to hide knowledge of their prevention.

The dissemination of this knowledge is, moreover, very inexpensive. The Holborn Borough Council last year provided 50,000 leaflets, "What Every Man Should Know," for less than one penny for ten. Any fairly intelligent youth or man can easily carry out the simple directions. Human machinery, however, like most other machinery, is not fool-proof. Directions for *delayed* self-disinfection, and respecting the special clinics for suspected or actual disease are, therefore, also given.

Additional aesthetic and other reasons in favour of prevention and against illogical, impractical, political policy of the Ministry of Health and the "Combatting" Council were given by me in the *Lancet* of February 12th, the July number of *Public Health*, and my evidence in the Report of the Special Venereal Disease Committee of the National Birth Rate Commission. Also, as correct teaching respecting continuance of the celibate, and moderation of the married, is most important, I submitted to the Special V.D. Committee a brief thesis thereon.

W. A. BOND,

M.A., M.D., D.P.H. (Camb.).

The Lord Mayor of London has invited the President of the Society of Medical Officers of Health and his colleagues on the Council of the Society to a luncheon at the Mansion House on Friday, February 17th: The business meeting of the Council on that date will therefore commence at 11 a.m., and will be adjourned at 12.30 until 4 p.m.

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Editorial.

WILLESDEN HEALTH SERVICES.

MUCH ink has been used over the controversy aroused by the attack on the Health Services of the Willesden Urban District Council by the Willesden Division of the British Medical Association. To those of us who are interested in the advancement of the science of medicine the spectacle has not been edifying. It may be said at once, that every Medical Officer of Health in

the country sympathises with every private medical practitioner when there is any encroachment on his established sphere of activity, and the British Medical Association may rely upon the Society of Medical Officers of Health to do all in their power to secure from Local Authorities the just consideration of private medical practitioners' claims.

We confess at once that the extension of the Health Services of the Willesden Urban District Council may very fairly at first sight be viewed with alarm by the private medical practitioner, for the services are good, are based on the sound practice of medicine, are popular with the public and are moderate in cost, but we doubt whether the establishment of these clinics has injured or is likely to injure any private practice in the neighbourhood. They will undoubtedly cater largely for conditions which have hitherto been neglected.

Willesden may be taken as being among the advance guard of preventive medicine in respect of the health services dealing with maternity and child welfare and school medical work, and its methods may certainly be regarded as representing one method of putting into practice the principles contained in the report of Lord Dawson, which states that preventive and curative medicine cannot be separated on any sound principle. The Willesden Health Services have been established on this basis, and it is mainly because treatment has been allied with preventive medicine that the local medical practitioners claim that the services are detrimental to the interests of the public and the medical profession.

The Willesden Council has issued a considered reply to the criticisms of the Willesden Division of the British Medical Association. We also learn from further correspondence that has passed between the principals that the Medical Officer of Health of Willesden prepared some year or so ago for the Willesden Division of the British Medical Association, at their request, two schemes for their consideration in respect of the staffing of the Willesden municipal clinics by part-time private general practitioners and that these schemes were not acceptable to the

Willesden Division. The Willesden Council has now specifically asked the Willesden Division in what respects the health policy of the Council is opposed to the interests of the public and what is the alternative health policy of the Association. The second Memorandum of the Willesden Division of the British Medical Association evades those important issues and demands a Local Medical Advisory Council. The Society of Medical Officers of Health cannot see that a Local Medical Advisory Council will serve any useful purpose. In its Memorandum on the Interim Report of the Consultative Council on Medical and Allied Services the Society stated as their considered opinion that the existence of an advisory medical committee would only lead to friction and confusion of counsels and would not be to the public advantage. We cannot believe that such a fantastic proposal will be accepted by public bodies anywhere.

Perhaps the most interesting point that has emerged from this controversy up to the present is the fact that the British Medical Association has at long last admitted the great popularity of a public medical service, and is now willing to admit that the general public have no great partiality for the "family practitioner," and no desire for "free choice of doctor."

We shall watch the position at Willesden with great interest. We are of opinion that the controversy which has arisen there may settle to some extent future health policy in this country. The Society of Medical Officers of Health are in no way opposed to the interests of private medical practitioners, to whom we appeal to take a long view of the situation. Especially would we ask that there be no personalities introduced into what is altogether an impersonal and political discussion and that the various questions raised be considered on broad principles. We rely upon the Central Council of the British Medical Association to act in this way, but we feel that there have been references to the Medical Staff of the Willesden Urban District Council, notably the letter of the Local Secretary which appeared in the *British Medical Journal* of December 3rd, 1921, page 213 of the Supplement, which are not in accordance with the best traditions of the medical profession. We would further appeal to the medical profession to take steps to interest themselves in and to practise preventive medicine. It is without any doubt the medicine of the future and presents an unbounded field for research and study and philosophic thought. The leaders of the Society of Medical Officers of Health, being

fully aware of the enormous importance of the problems concerned with the prevention of disease and the great public interest that is taken in them, would welcome the whole-hearted co-operation of the other leaders of the profession in general and consultant practice so that all may play their proper parts in an organised campaign for the maintenance and improvement of national health.

UNIFICATION IN PUBLIC HEALTH.

The process of securing unification of control in public health made a distinct advance on February 17th, when a deputation from the British Medical Association and the Society of Medical Officers of Health was received by the Minister of Health. The deputation was a most representative one, and there is every reason to believe that the forcible presentation of the case, with its irresistible arguments about wasteful overlapping combined with meddlesome lay interference, made an impression on the Minister.

The deputation was strengthened by the presence of two medical Members of Parliament, Dr. Farquharson and Colonel Fremantle, the former dealing with the political aspect of the case in a most impressive fashion. Dr. Farquharson contended quite rightly that Parliament had already settled the matter so far as central affairs were concerned when it brushed aside the claims of the Board of Education during the Committee stage of the Ministry of Health Act, and decided definitely that only as a temporary measure would it permit the Board to continue to have anything to do with medical affairs. We hope and believe that Dr. Farquharson will make it his business to remind Parliament that its very clearly expressed wishes are being defied by the Board of Education, which has had the effrontery to attempt to perpetuate in the Education Act, 1921, the temporary arrangements sanctioned by Parliament in the Ministry of Health Act.

It is no exaggeration to describe the arguments in favour of unification as irresistible. By transferring all medical work in connection with school children from education departments, central and local, to health departments an enormous increase in efficiency, resulting in greater benefits for the child and the public, together with considerable economies, would be produced. Centrally the duplication of services is grotesquely unsatisfactory, and as the result of unification it would be possible to choose between providing the same amount of services at a reduced cost and, as an alternative, the creation of considerably improved

services at a cost not exceeding the present expenditure. Similarly with regard to local affairs the entire transference of medical work from local education authorities to the corresponding health departments could be made the cause either of economy with at least equal efficiency or a greatly improved service without any additional cost. The present system causes an unnecessary duplication of officers (doctors, nurses and clerks) and buildings, and only needs to be properly exposed in order to be abolished.

The school medical service is thoroughly discontented with its position and is demanding to be made an integral part of the public health service of the country, both centrally and locally. For a long time this discontent has been growing, but things have been brought to a head by the memorandum recently issued by the Association of Directors and Secretaries of Education, which has made every member of the public health service realise how grave a scandal has been created and how impossible the conditions must be under which many of our colleagues attempt to do work of the greatest national importance. This amazing document is, in itself, an entirely sufficient argument for the immediate transference of all medical work from education departments to health departments, both central and local. It is the duty of every member of the service to join vigorously in this fight against lay official control and in favour of unification of all health services. In most of our campaigns in the past we have overlooked the political side, but it is now realised that we are not likely to achieve any of our aims in any other way.

Centrally unification could be accomplished by a stroke of the Minister's pen. Locally a similar state of affairs could be brought about by a small amendment to Section 4 of the Education Act, 1921, by which all matters, including the medical inspection and treatment of school children, stand referred to the local education committee. If all medical matters were excepted from this reference the position would be entirely satisfactory legally and it would be left to each local authority to decide about its own medical work. In the great majority of cases we believe that unification of health services would immediately follow.

THE MANCHESTER APPOINTMENT.

At the time of going to press there is no definite information available concerning the result of our campaign in Manchester, but whatever the ultimate result may be, there is no doubt at all that the struggle must be regarded as a most success-

ful one. It has proved definitely and conclusively that the Society of Medical Officers of Health can be developed as an effective fighting machine in the protection of the public interest and also on behalf of the public health service, upon whose welfare and efficiency the public interest depends so greatly.

With its usual efficiency the British Medical Association has been able to conduct negotiations at Manchester and to effect exclusion of advertisements from professional papers, and we recognise fully and frankly the great advantage of having that great body entirely on our side in this struggle. We desire nothing more earnestly than a continued alliance, defensive and offensive, between the Society of Medical Officers of Health and the British Medical Association, but we are not prepared to regard such an alliance as being any more beneficial to the Society of Medical Officers of Health than it is to the British Medical Association. Each needs the support of the other, and each will achieve success much more rapidly if combination between the two is continuous, but the British Medical Association must understand clearly that the Society of Medical Officers of Health has now commenced a struggle which can only be ended by the universal adoption of the Society's scale of salaries. We hope that the full support of the B.M.A. will be accorded to us in this endeavour, but it must be realised that we are prepared, if necessary, to act independently.

The Manchester campaign has illustrated the obvious advantages resulting from the organisation of the M.O.H. Society as a fighting machine. In this, our first serious effort, it has been possible to prevent the number of applications reaching any considerable figure (probably less than seven), but our strength is revealed much more satisfactorily by the fact that we know beyond any doubt that no application has been made by any candidate who may be considered really eligible. In other words, the Manchester Corporation have only received a few applications, and these are from men whose names would not receive a moment's consideration for such an appointment in ordinary circumstances. All obviously eligible candidates have decided to support the action of the Society in this matter.

We have no yearning for conflict. We merely believe that it is of national importance that the public health service should be so remunerated as to attract to it the best brains and abilities of the medical profession. All we desire to say to the Corporation of Manchester is that we hope and believe that on further consideration they will

decide that the man who is given charge of the health of the inhabitants of Manchester should be at least as well remunerated as the officials who look after the legal responsibilities of their local government or who control their engineering undertakings, and that his salary should, moreover, be comparable with the income of the leading medical practitioners and consultants of Manchester.

THE HEREFORDSHIRE APPOINTMENT.

Considerable dissatisfaction is being voiced from all quarters about the lack of organised opposition on the part of the B.M.A. and the M.O.H. Society to the appointment of Medical Officer of Health to the Herefordshire County Council. It is best to be quite frank about the matter and to admit that owing to late information the matter was muddled, but members must realise that it is not to be expected that our organisation can be made perfect at once. There is no doubt that in future all such appointments will be contested just as stubbornly and effectively as the one at Manchester.

Any man who applies for the Herefordshire vacancy deserves all the ill-treatment that he will almost certainly get from his Council if he is appointed, and he must not expect any sympathy or support from the Society. The conduct of this county council is notorious both as regards the inadequate salary paid to its medical officers and its attempts to sweat its teachers. If any member of the Society has made application in ignorance of the reputation of this County Council, we advise him to consider seriously whether it would not be wiser to withdraw.

PREVENTION OF TYPHUS.

The humble louse, whose annoying activities have been directly responsible for millions of cases of typhus and thousands of deaths in post-war Europe, is the subject of an interesting report just issued by American Red Cross headquarters. The report describes the anti-typhus work done by the Red Cross during a very severe epidemic of typhus at Cattaro, Dalmatia, resulting in nearly 40 per cent. of deaths among Russian refugee patients there. The Red Cross sent a special corps of typhus specialists to the scene, under Dr. C. C. Yount, of Pittsburgh, and Dr. J. R. Ransom, of Cleburne, Texas, and the epidemic was finally stamped out.

An interesting part of Dr. Ransom's report is devoted to describing the precautions taken to

protect doctors and nurses engaged in the anti-typhus work.

"Protection of the personnel in the hospitals depends mainly on the efficiency of the disinfecting squad," writes Dr. Ransom. "Typhus is not directly infectious—it can only be carried by the medium of the louse. Therefore, if patients are properly disinfected, there is absolutely no danger to the hospital personnel. In this respect typhus is similar to malaria. There is no danger from a patient with malaria, nor is there any danger from a patient with typhus.

"At our stations in Milina, on Cattaro Bay, every refugee was put through a delouser. All the hair was clipped close, and the patient was scrubbed thoroughly with soap and hot running water. The body was anointed with kerosene or coal-oil. Clean pyjamas were placed on the patient and he was wrapped in a clean blanket and transferred to his bed in the hospital. His clothes were put through a pressure steam sterilizer, and furs were put through a sulphur bath. In this way only louse free patients arrived at the hospital.

"Any person finding a louse on a patient or on the clothing of the personnel was required to report this immediately to the physician in charge of the hospital or to the chief nurse, at which time special steps were taken to discover from what source the louse came.

"It is seldom necessary for physicians or nurses to expose themselves by handling louse infected patients and articles of clothing, as there are always present persons who have had typhus, who can handle typhus patients and their clothing. The work of the physician and the nurse should be directing and not handling patients or articles of clothing. Too many over-enthusiastic persons think they must demonstrate the fact that they are not afraid of typhus or of work. These people are penny wise and pound foolish. They are sure to be infected sooner or later, and then their work must be done by someone else.

"In the field, where physicians and nurses are required to come in close contact with infected cases, it is important that they be provided with a combination undersuit of closely woven white cotton, with stockings, long sleeves and a high collar. This garment should be worn just over the underclothing. Rubber boots or high-laced boots must be worn to prevent the louse from crawling up from the floor.

"We have never insisted on the wearing of rubber gloves, as they are very bad for the skin if worn continuously, are clumsy if of the heavy

loose type, and are easily torn if made of thin material. I know of only one case in which an infection was produced by a bite on the hand.

"Woollens should be avoided, as the louse clings to such garments. Cotton and silk are best. I prefer a trench-coat as an outer garment. The material is of such texture that the louse cannot cling to it and is easily shaken off.

"At the completion of the day's work the outer garment should be taken off, shaken and hung up where it will not come in contact with other articles of clothing. A bath should be taken every night and all the clothing changed. To finish the bath the body should be sponged with a soapy water made of germicidal soap, which should not be washed off. I have been using this soap ever since I began to work in typhus areas; and as I have caught several lice on my body and have never been bitten by one, I am convinced that the louse will not bite the skin recently washed with such a soap.

"One thing that must be remembered is that typhus is not as frequently conveyed by the bite of the louse as it is from the crushing of the louse and smearing of the body contents over the abraded skin. The natural instinct when one feels a bite is to scratch or rub the area through the clothes. This is just what must not be done, because this crushes the louse and smears its body contents. In Milina we carried a bottle of chloroform, and when we suspected the presence of a louse on the body or we felt a nibble, we simply covered the spot with the open mouth of the bottle and inverted it so as to saturate the clothes over the area with chloroform. In this way the louse, if present, was killed and we avoided the danger involved in crushing by scratching or rubbing. Not only does the chloroform kill the louse, but it neutralizes the virus in the bite."

NOTES FROM BRANCHES AND GROUPS.

This issue contains a welcome extension of the usual "Notes from Branches" and also a beginning of a new feature in the shape of "Notes from Groups." We hope that our next issue will contain notes from every Branch and every Group. All members who fail to find any notes from their particular branch or group should at once investigate the reason why.

Members are also reminded that our columns are open to them all for the ventilation of their views and for the discussion of subjects which they may feel are not receiving adequate consideration either by the Journal or by the Society.

NOTABLE RETIREMENTS.

1. DR. JOHN MCVAIL.

Dr. John McVail has retired from his official position on the Scottish Board of Health, after a distinguished and lengthy career in the public health service. For 21 years he was Medical Officer of Health for the counties of Stirling and Dumbarton, a position which he relinquished in 1911, in order to become Deputy-Chairman of the Scottish Health Insurance Commission.

Dr. McVail's investigations during 1907, into the administration of Poor Laws and the Relief of Distress in England and Wales, are well known, and his report, which was issued in 1909 as appendix of the report of the Royal Commission, is a model one and a mine of useful information. Dr. McVail's writings on the subject of small-pox are still regarded as classics on that subject. In 1901, Dr. McVail was President of the Society of Medical Officers of Health.

2. DR. GEORGE REID.

At the last meeting of the Staffordshire County Council, Dr. George Reid, County Medical Officer, resigned his position, and was appointed Consulting Medical Officer of Health at a salary of £500 per annum. Soon after its creation by the Local Government Act, 1898, the County Council of Staffordshire appointed Dr. George Reid as County Medical Officer. At that time Dr. Reid was a part-time Medical Officer of Health for the Rural District of Staffordshire, and was also in private practice.

Dr. Reid is a well-known writer on public health subjects, and is the author of a particularly sound text-book on "Sanitation." He was President of the Society of Medical Officers of Health in 1907, and upon the reorganisation of the Association of County Medical Officers in 1912 he was its first President, and after an interval of several years resumed it again in 1921.

Dr. Reid's name has for many years been known as that of one of the obvious leaders of the public health service, and it must come as a shock to the whole of that service to realise that a man of his distinction and brilliant achievements in the public health world, should have been receiving a paltry salary of £1,250 as County Medical Officer in Staffordshire, and that after 33 years' service as County Medical Officer and after suffering a breakdown in health which has compelled his resignation, he has been granted a consulting appointment at the inadequate salary of £500 per annum. Even this may be stopped at any time, and there is no pension. It is true, we understand, that Dr. Reid's services were in

considerable demand as a Consultant on various public health matters, but the fact remains nevertheless that a County Council which is capable of such mean treatment of a brilliantly efficient Officer, must be very carefully watched by the Society of Medical Officers of Health with regard to future appointments. We understand that the Director of Education in Staffordshire is receiving a salary of £2,000 and that the Clerk of the County Council receives considerably more. The salary for such a position as that of County Medical Officer for Staffordshire, should, according to the scale approved by the Society of Medical Officers of Health, be £2,000, together with the prevailing war bonus.

OBITUARY.

DR. EDWARD SERGEANT.

Through the death of Dr. Edward Sergeant, which occurred on Saturday, February 4th, the public health service has lost another of its pioneers and an ex-President of the Society. We are indebted to Dr. Alfred Greenwood, C.M.O., Kent, for the following appreciation:—

Having enjoyed the close friendship of the late Dr. Sergeant for nearly a quarter of a century, I should like to pay my tribute to his work and personality.

Sergeant was a native of Preston, and was educated at the Preston Grammar School. He received his medical education at St. Thomas' Hospital, London, where he obtained the "Cheselden Medal," at that time the highest distinction at the college for surgery and surgical anatomy. He qualified in 1871, and was appointed house-surgeon at St. Thomas', and also resident accoucheur. During the Franco-German War Dr. Sergeant was assistant surgeon to the encampment at Bingen on the Rhine, and visited, with special reference to hygiene, the hospitals at Saarbruck, Metz, Strasburg, and other towns.

For two years he was senior house-surgeon at the Bolton Infirmary, and in 1874 was appointed Medical Officer of Health and Public Analyst to the Borough of Bolton, a joint office he held for 16 years, and where he pioneered the compulsory notification of infectious disease. In 1890, the Lancashire County Council appointed him as their first medical officer of health, a position he held until 1917, when he resigned his office owing to ill health, although he was retained in the capacity of consultant.

Sergeant was a Past-President of the Society of Medical Officers of Health, and also of the North-Western Branch of that society, and I

know that to the end he regarded the former presidency as the highest honour which could fall to his lot.

For a few years he held the rank of major in the R.A.M.C. (Territorials), and was mobilised on the outbreak of war in 1914, but owing to his official duties he had to resign his commission when the regiment was ordered out East.

Personally Sergeant was one of the most genial of men, and all his private and official life was characterised by an unusually large amount of tact and common sense. He was an excellent raconteur, and often his ordinary conversation was marked by bright wit. His home life was happy in every respect, and his collection of old books and antiques is as interesting as it is valuable. The world is the poorer for his loss.

PROFESSOR G. SIMS WOODHEAD.

Professor Sims Woodhead's well-known enthusiasm and interest in public health has caused him for a long time to be regarded almost as a member of the Public Health Service. His official appointment was that of Professor of Pathology at Cambridge University, which he held since 1899, but many of his special spheres of activity have been very closely associated with public health. He was prominent during the war as Inspector of Laboratories in Medical Hospitals, and was twice mentioned for special war services. As is well known, he perfected the process of sterilization of water by means of bleaching powder and laid down rules whereby the process was made as nearly fool-proof as possible. For some time he was Editor of the *Journal of Pathology and Bacteriology*.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

ANNUAL SUBSCRIPTION, SESSION 1921-22.

Fellows, Members or Associates are reminded that subscriptions for the current session became due on October 1st last. The Hon. Treasurer will be greatly obliged if those who have not yet paid will remit at once and avoid the necessity for any further notice. The subscription rates are as follows:

FELLOWS AND MEMBERS.

Whole-time Medical Officers	...	£1 11 6
Part-time do.	...	£1 1 0

ASSOCIATES	...	£1 1 0
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(A few Associates, elected before 1908, pay only half-a-guinea.)

Cheques should be made payable to the Society and crossed " & Co."

THE DISPOSAL OF LATRINE CONTENTS, WITH SPECIAL REFERENCE TO IMMEDIATE INCINERATION.*

BY

MAJOR-GENERAL SIR W. G. MACPHERSON,
K.C.M.G., C.B., LL.D.

When one speaks of latrine contents one means generally the waste products of food that has been consumed, and, as we all know, nature had provided for converting these waste products through the agency of micro-organisms in the upper layers of the soil into what becomes a food supply for man and beast. There is thus established a wonderful economical system by which nature avoids waste; but when this natural method of disposing of waste products is overworked, either on account of over-population or because of the limited area of soil available, nature revolts and attempts to restore economical balance by reducing the population through disease. It is against this that methods of disposing of latrine contents have been invented.

I selected this as the subject of the paper, which I have been kindly permitted to read before the Naval, Military and Royal Air Force Group of the Society of Medical Officers of Health, for two reasons, first, because the war experience of disposal of latrine contents has a special interest in civil life in connection with the numerous holiday and other camps which are now found all over the United Kingdom during the summer, and secondly, because the system of immediate or individual incineration, to which I will refer, is little understood and sometimes looked at askance by those who have never used it, although, as I hope to show, it is the cleanliest, most sanitary and economical of the systems under certain conditions.

I do not propose, of course, to deal with the recognised water carriage systems of disposal of latrine contents, nor with the various municipal sewage or engineering works. These are quite outside the scope of our war experience, nor do I propose to enter into detailed descriptions of the various kinds of camp latrines and incinerators, but only to review them briefly before passing to my main purpose, which is to discuss the special differences, from a sanitary point of view, between direct or immediate incineration and indirect methods of disposal.

*Paper read at a meeting of the Navy, Army, and Air Force Hygiene Group of the Society of Medical Officers of Health on 30th September, 1915.

The shallow trench system of disposal was that required by Field Service Regulations and the Manual of Military Hygiene, at least before the war. Its chief merit was that it was based on the natural method of disposing of excreta and worked well when it followed natural laws, that is to say, when there was ample area for trenching in proportion to the population and when the soil was suitable. Under these conditions we had a ready means of disposing of human excreta scientifically and without eventually creating conditions dangerous to health, but this method fell into disrepute early in the war. The number of troops in the trenches, billets, bivouacs and camps, and the prolonged occupation of limited areas by them led to the necessity of providing more ground than was readily available for a shallow trench system, and there was thus serious risk of disaster if the system had to be continued. It was also found that with troops only partially trained in hygienic methods the regulations for the use of shallow trenches were neglected, and they became the breeding place of flies, which, in themselves, were the most dangerous transmitters of camp diseases.

An ideal shallow trench system of disposal of latrine contents for large populations is, of course, that of a well-conducted sewage farm, and such a system has long been in use in Indian cantonments, but there the latrine contents had to be carried long distances to the trenching ground, with the inevitable consequence that filth buckets and filth carts with their multitudinous dangers came into the picture. The difference between the shallow trench in war and the trenching of latrine contents in peace was that in the sewage farm the method of disposal was indirect, but very large areas could be set aside and crops grown on them, while, in the field, the method of disposal was direct but large areas were unobtainable, and there could be no systematic arrangements for cultivation. Although both the sewage farm and the shallow trench systems were theoretically sound, each had thus manifest defects. Consequently the sewage farm of Indian cantonments is gradually being replaced by the more immediate methods of disposal by incineration, while the shallow trench system, in war, very soon gave place to the deep trench system in localities where the alternative method of incineration could not be adopted.

The deep trench system came to stay in war areas chiefly because it could be made fly-proof

by means of fly-proof covers and seats, and also because it occupied much less ground than the shallow trench, and was in itself a method of immediate disposal of latrine contents. Many of these deep trenches, too, when suitably constructed and in suitable soil, became in practice open septic tanks and their contents became absorbed in the soil, so that they continued to be used for a long time before they were filled up. They required very careful supervision. A neglected deep trench was an abominably insanitary sight. I do not know if any of you remember the French evacuation hospital which had been constructed south of the Somme near Cerisy. It had been wonderfully well organised both as regards ward huts, administration, operating rooms, railway siding and platform for ambulance trains, electric light and heating, and for other requirements, but its system of latrines was a deep trench system, and the pits had been dug just outside the ward huts. When we took over the French area south of the Somme at the beginning of 1917, we also took over this evacuation hospital and put two casualty clearing stations and eventually a stationary hospital into it. I was present when it was being handed over, and I have no words adequate to describe the sight of these deep latrine trenches, they were crammed full to the top with every kind of filth and faecal matter close up against the ward huts. Needless to say, our own men had to clean them out and fill them in. But this experience impressed me very much with what might happen unless deep trenches were carefully watched and supervised.

As the war went on, therefore, it became more and more evident that wherever possible the most satisfactory method of disposing of latrine contents was by incineration, and wherever it was possible to employ this method the trench system was abandoned, and various forms of incineration took its place.

I do not propose to enter into the details of the construction of the various forms of incinerators, but to distinguish between two distinct methods of disposing of latrine contents in them, namely, the method by which latrine contents have to be conveyed to incinerators at a distance from the latrines, and the method by which the latrine contents may be disposed of by immediate incineration, that is to say, by an incinerator so near to the latrines that the contents can be disposed of immediately after defaecation and by the man himself. By incinerator at a distance from

a latrine I mean the use of latrine buckets or other receptacles which, when full, have to be carried to the incinerator either by hand or by other means, or emptied into filth carts plying between the latrines and the incinerators.

Incinerators at a distance invariably mean the use of bucket latrines. While bucket latrines may be made sanitary in a sense, that is to say, they may be made fly-proof by fixing the buckets in a box and providing the seats with fly-proof covers, I ought also to say fool-proof covers, in my opinion buckets in themselves are very apt to be insanitary. They become full of faecal matter before they are removed to the incinerator, they probably have to remain uncovered and exposed to flies for a greater or less time before the contents are placed in the incinerator, and they have to be cleaned each time after they have been emptied. All this means that special arrangements have to be made for washing the buckets and disposing of the washings in a sanitary manner. They also require a considerable staff for labour. Men are required to remove the buckets and wash them, and men are also required to work the incinerators. Possibly one point in their favour is that the urine which is passed with the faecal matter into the buckets is not so excessive as to prevent the whole of the bucket contents being disposed of in incinerators of good construction, provided the incinerators are kept going with sufficient fuel; in other words, separation methods, by which urine does not mix with the faecal matter, are not so necessary.

It is obvious, therefore, that if a system of incineration could be adopted by which the disadvantages of having to use buckets and remove them to a distance could be obviated, a material advance would be made in the disposal of latrine contents from a hygienic point of view. In this connection it is of interest to note that methods of direct incineration have been attempted and used in army life many years ago. As long ago as 1894, the Germans, in constructing new military barracks in Potsdam, planned latrines on what they called a fire latrine principle. This was a large brick building in which latrine seats similar to the latrine seats in railway carriages were placed over hoppers which led direct on to iron plates and pans inside a furnace. The furnace was only lighted, however, twice a week. The fuel used was coal, which was burnt with a powerful draught, the chimney of the furnace being

some sixty to seventy feet high. The faecal matter and the urine, which was received in separate pans, not only from the latrines but also from the urinals, were consumed by the flames which played over the plates and pans. This fire latrine, however, was not a success, for in 1902, or about that time, it had to be abandoned, the official reason given being on account of the smell, but I am inclined to believe that a filthy condition of the hoppers and the plates, the droppings on which were consumed by incineration only twice weekly, was more likely to have been the cause of abandoning this fire latrine. I asked permission to see it when I was in Berlin in 1902, but was refused, although I gathered from the army medical authorities that the latrine was then being abandoned.

The United States army also used a fire latrine which probably most of you know under the name of the McCall incinerator. I have no doubt that the American authorities were induced to adopt some form of direct incineration because of the disastrous experience they had of trench latrines and fly transmission of enteric fever in their camps in Florida during their war with Spain. I had an opportunity of seeing the McCall incinerator in use in a camp in Cuba in 1908. It consisted of an iron latrine box with four seats on the top, the excreta and urine were dropped on to metal plates below the seats, and, at some convenient time during the day, incinerated by a fire lighted under them. Apparently this form of direct incineration was giving great satisfaction, but the chief difficulty was getting metal plates thin enough and at the same time durable enough to withstand the heat of the fires. The thin plates were the best for rapid and complete incineration, but they wore away quickly. I remember at the time suggesting to my American friends that they might get over the difficulty by using pasteboard or cardboard plates instead of metal plates, and burning the plates up at the same time as the latrine contents, putting new plates of pasteboard in their place. This, of course, would have meant a supply of pasteboard material cut in sizes suitable for the latrines, probably an expensive matter, but not more so than the constant destruction of the thin iron plates. The suggestion, however, may be of interest, as it was a forethought of what I put in practice in France in 1915. I do not know how far the United States army continues the McCall method of direct incin-

eration, but I imagine it has had to be abandoned on account of the cost. The cost at the camp of Guanajay, where I saw it in use was very great, £6 worth of wood fuel being required daily to incinerate the excreta of one hundred men. Still it is interesting to note that both in Germany and the United States the military authorities many years ago were endeavouring to solve the difficulty of disposal of latrine contents by direct or immediate incineration instead of by indirect methods, and, I believe, for the same reason, namely, to eliminate all possibility of disease transmission through the agency of flies. They are, however, only of interest in showing how the idea of direct incineration was exercising the minds of military sanitarians before the war and had in fact very little reference to war itself except in so far as the McCall incinerator in Cuba resulted from the necessity of establishing military camps in the island after the war between the United States and Spain.

During military operations themselves we have, however, one experience at least before the great war, in which direct incineration methods were practised. In one of the expeditions on the north-west frontier of India, the latrines, as had been the custom, were on ground outside the perimeter camp, for it was impossible to arrange shallow or deep trench latrines in the confined space of the camp itself. In one of these perimeter camps the men were being constantly sniped in going outside the camp to the latrines, and it became necessary to provide some method for the disposal of the latrine contents within the camp itself. The problem was solved by placing a layer of bhoosa or other dry material on the ground and making the men defaecate on this and then setting fire to it. This method of disposing of latrine contents proved extraordinarily successful, all the excreta disappeared absolutely, leaving scarcely any ash behind. I was so impressed on reading this interesting incident in military history, that, shortly afterwards, when manœuvre camps were being organised on Salisbury Plain, so far as I remember just before or during the South African War, when I was in charge of the sanitary branch at the War Office, and the question of latrine arrangements was under consideration, I suggested that a trial of direct incineration methods of disposal of latrine contents might be tested in order to avoid the unsatisfactory and expensive system of using bucket latrines, and removal by con-

tractors. Experimental latrines were consequently installed with layers of straw or brushwood placed on the ground for the men to defæcate on, the whole being set on fire after the men had visited the latrine in the morning. The results fully confirmed the experience of the north-west frontier camp. Fæcal matter was completely destroyed and nothing left on the ground except a very small amount of ash. It was found that green brushwood was even more effective than the drier material, as it burnt slower, but I am not at all sure in the light of further experience that the fæcal matter itself was not as effective a fuel as anything else. Unfortunately nothing more was heard of these experiments, and I do not think that any of the military sanitarians of the time followed them up, but later on when I was A.D.M.S. of the Quetta Division for the three years previous to the war, I made use of this method of direct incineration during manœuvres which took place in the summer months amongst the mountains of Baluchistan. The whole of the country is covered with camel grass, as dry and inflammable as the heather in our own country, and I found it the simplest thing in the world to pull a bunch of grass and defæcate on it, setting fire to it afterwards with a match. The officers in the same small camp as myself were induced to adopt this method, and we were thus saved the trouble of carrying about with us latrine buckets and sweepers which we would otherwise have had to do, as the ground was rocky and neither deep nor shallow trenches could be dug. It was my first experiment in what I may call individual incineration and was very efficient. I do not pretend to say that it is applicable everywhere, but the experience was of immense value both in a sanitary and economical sense, and, when early in 1915, we were faced with the difficulty of disposing of excreta by the shallow trench system then in general use in the field, and, when, indeed, Sir Douglas Haig, who commanded the 1st Army of which I was the D.M.S., drew my attention to the serious effect of the areas available for bivouacs, billets and camps being gradually covered with trench latrines, it occurred to me that some overground system of individual incineration might be adopted to take the place of that underground method of individual disposal of excreta. I was anxious to avoid the expensive provision of latrine buckets with its clumsy removal system, and so diminish as far as possible the

danger of transmission of disease by flies. The system which I designed is shown in a model, which is at the Royal Army Medical College, but was sent a few days ago to the exhibition at Amsterdam. A full description of the way in which it is worked was published in the R.A.M.C. Journal in 1915. I selected the West Riding Casualty Clearing Station which was in camp at Lillers for the experiment in the first instance. The late Lieut.-Colonel Demetriadi and his officers, especially his Quartermaster, Lieut. Matthews, took up the idea enthusiastically and far better than I ever anticipated. I need not trouble you with details, but will only say that both officers and men of the unit were so pleased with the simplicity, cleanliness and effectiveness of this method of disposal of latrine contents that they never used any other during the war, although I had long ceased to be the D.M.S. of the Army to which they belonged. The method was so unexpectedly simple and satisfactory that practically all the medical units which had to depend on camp methods for the disposal of latrine contents adopted it in the 1st Army, at least during 1915. When I went to Salonika towards the end of that year the same difficulty of disposing of latrine contents had to be faced, and the medical units at once adopted this method of direct and individual incineration, modifying it to suit their own ideas, but always retaining the essential principles, namely, that the urine was disposed of by the men themselves emptying the separate receptacles into which the urine was passed into an urine absorption pit at the latrines, or by the urine being conducted to the pit by a channel into which the urine was passed direct; and by the man himself placing his excreta after the act of defæcation into the incinerator, the incinerator being either open or closed, but always in the latrine and only a few yards away from the latrine pan.

Several objections to this system of individual incineration have been expressed, although it is, to my mind, the most direct method that can be employed for getting rid of latrine contents by burning. In an official pamphlet published in India in 1919, "Field Service Sanitary Notes," it is stated that the system worked very well at times, but had been condemned by many as being impracticable and insanitary; that the difficulties were that the incinerator must be kept burning, that paper was often scarce and blew about, that

supervision was essential, and that fæces were frequently of liquid consistency. In another official publication, "Memorandum on some Medical Diseases in the Mediterranean War Area," first published in 1916, the system is referred to and is noted as economical and well adapted for small units, but required careful and constant supervision. I scarcely think that these objections to the system can have been written by officers who had practical experience in their own units of a latrine such as that used by Lt.-Colonel Demetriadi's Casualty Clearing Station. First of all, the fuel cost nothing, as no fuel was wanted after the fire was started with some wood or hot ashes from the cook-house, or even some dry turf. The excreta placed in it became in itself an excellent fuel and burnt well and clear, so much so that each pan full of fæcal matter put into the incinerator almost immediately burnt into a red-hot mass ready for the next pan full. The ash was insignificant and was a fine impalpable powder without smell. The latrine itself cost practically nothing, as it consisted of waste material, such as empty biscuit tins, cresol or paraffin drums. Newspapers were always abundant, at any rate in France; but, if paper failed, dry grass, straw, or other dry combustible material was an equally useful though not so elegant a substitute. With regard to the supervision of a latrine of this kind, I may say that fewer men were required to supervise it than are required for the bucket system. On this point the experience of the 80th Field Ambulance of the 26th Division in Salonika is of value. This field ambulance was camped on ground where buckets were not available and deep pits could not be dug. Shallow trenches led to speedy using up of the available ground. After digging eighteen inches deep, solid rock was struck, and matters were rapidly becoming serious. I happen to have notes that were given to me by the sergeant-major of the unit. They are of considerable interest. He states "that with over 300 of our own personnel and a floating population in hospital, the ground available for latrines was being rapidly used up, there was more available, but at a great distance from the personnel and hospital lines, especially at night." He found that the greater the distance to the latrine, the greater the fouling of the ground at night. "On receipt of the plans and description of the individual incineration method," he goes on to say, "comments were varied and not always compli-

mentary. The commanding officer doubted if men could be trained or made to use the system properly, the quartermaster was doubtful of getting material, and the sergeant-major did not relish the idea of another constructional work involving personnel who were engaged on duties largely outside his unit and the prospect of having to find material that very probably the usual sources could not supply." But, and this is the important point, he says: "All these doubts were purely local and found to be groundless. An experimental latrine was constructed according to specifications, and it was seen to have possibilities, although the absence of cement in the construction of the incinerator was rather a drawback. The personnel and patients were interested, and incineration seemed to offer a safe and hygienic means of overcoming a problem that was causing not only sleepless nights, but also the fear of the day when lack of latrine ground would cause either a shifting of the camp or an outbreak of preventable disease. An incinerator capable of drying diarrhoea stools when mixed with cresol solution was thought out and built from three sheets of corrugated iron, mud and stones. This proved most efficient, and was large enough to deal with excreta of a camp of from 300 to 400 men. Men preferred to use this type of latrine, thus disposing of the fears of the commanding officer. Picks were not broken or blunted, and this pleased the quartermaster; only one man was required as attendant, and this gave the sergeant-major at least two or three more men for other duties, and ensured a cleaner camp with no need of keeping up to date a map of the camp showing ground soiled and out of use. Doubting medical officers and pioneer sergeants were invited to inspect, and went away converts to the system, and soon it was in general use throughout the brigade. The only deep pit required was one for the disposal of urine. This was blown out with some home-made explosive assisted by some acquired fuse. The front edge of the urine tin was perforated with holes, and rested in a tin-lined trench or channel which drained into the pit, and thus there was no necessity for the man to handle anything except the paper containing his own fæces. When paper was not available for the fæces tin, dried grass was used and the man lifted the whole tin." "For the time my field ambulance remained at this camp, practically six months, this type of latrine was most satisfactory and was in con-

stant use. To my mind the chief advantages were:

- (a) Cleanliness, freedom from flies, and comparatively little odour.
- (b) Definite area only involved and practically no soiling of the ground.
- (c) Only one sanitary attendant required.
- (d) Could be placed at a convenient distance from the men's living quarters without fear or offence.
- (e) Can be constructed with the materials usually available in any camp.
- (f) No special qualifications necessary to enable it to be constructed, any intelligent N.C.O. was capable of erecting it within three or four days of arrival at the permanent camping site.

"From my observations in the field I would undertake to dispose of refuse of any sort by incineration of all combustible parts."

It will be gathered from these notes by an unbiassed observer who had experience of the system that the objections in the memoranda, to which I have alluded, were met. Only one sanitary orderly was required, and he had, in fact, very little to do when the men understood the system. Where clear instructions were posted up in front of them there was never any difficulty. The men themselves liked this method of disposal of excreta and played up to it. They had not the feeling which to so many is objectionable of sitting over a latrine bucket or pit full of other men's faecal matter. The incinerator seldom went out, but if it did another was started with some hot ashes and a little coal from the cookhouse. The orderly had to see that there was a sufficient quantity of paper cut to the required size and also toilet paper. The sheets of newspapers and toilet paper used in each pan gave in themselves valuable aids to incineration.

The belief that it is only suitable for small units can scarcely be maintained, for the more the number of men using a direct individual incineration latrine, the more is incineration continuous and efficient, for the simple reason that the incinerator is being constantly supplied with excreta fuel and is thus kept continuously at a white heat. During the battle of Loos, as many as 2,000 sick and wounded passed through Lt.-Colonel Demetriadi's casualty clearing station in a period of twenty-four hours, and I personally saw the latrine immediately after they had used it. It was as if it had never been used at all. There was no ves-

tige of excreta matter either in the latrine or incinerator except what was at a white heat and burning brightly. In another field ambulance, the 81st Field Ambulance of the 27th Division, in Macedonia, the sanitary orderly was so proud of his biscuit tin and individual incineration latrine that I was specially invited to visit it. The field ambulance at the time was in an out-of-the-way part of Macedonia between Lake Langhaza and Lake Beshik. I found the biscuit tins as bright and clean as if they had never been used for anything but biscuits, and yet the men of the unit had used the latrine within a minute or two of my visit.

You have here then a system of direct incineration of latrine contents which according to Lt.-Colonel Demetriadi never once failed, although hundreds of men were using it daily, and burning their excreta immediately after defaecation. It was a system that was continued for at least two or three years constantly in his particular unit. It is difficult therefore to explain how the statements have come to be published that it is insanitary and only suitable for small units. In my opinion it is just the kind of inexpensive and effective method of disposing of latrine contents which might well be adopted in many of the summer camps of the Church Lads' Brigade and Boys' Brigade in England. I am told that the Church Lads' Brigade send some 20,000 at one time or another to camps during the summer, the number in each camp being from 400 to 3,000, and that the Boys' Brigade use still larger camps. Consequently it seems to me that this method of disposing of latrine contents by direct and individual incineration might well be studied by medical officers of health and sanitary inspectors. In civil camps, therefore, under certain conditions, at any rate, it is well worth trying and being made more generally known. Camp authorities, especially those who control the camps for boys and young lads, might be encouraged to try it, if for no other reason than that it will cost practically nothing, and if properly used will eliminate all danger of disease being transmitted by faecal matter.

A word in conclusion about the disposal of the urine. The method of disposing of urine by passing it into absorption pits was in use in India before the war, especially in the Jubbulpore cantonment. We introduced it into Quetta. When I left Quetta at the end of 1913, urine was disposed of in many of the barracks by this method only. We found that

if the absorption pit was properly constructed, that is to say, of proper depth and with proper layers of stones, the smaller below and the larger above, absorption went on practically in any kind of soil. We have also the experience of the 80th Field Ambulance in Salonika, where apparently urine absorption pits could be formed by blasting solid rock. It was therefore a very simple matter to arrange for the disposal of urine in this manner practically everywhere in the various theatres of war, and there was no difficulty in arranging, where necessary, latrine receptacles by which the urine was separated from the faecal matter so as to allow of incineration of the faecal matter being carried out immediately and directly.

THE PLACE OF THE COUNTRY PRACTITIONER IN PREVENTIVE MEDICINE.*

BY

A. G. WILKINS, M.B., Ch.B., J.P., Sen. Med.
Insp. Schools, Staffs. C.C.

When I found it no longer possible to evade the Mandamus of your Secretary to read a short paper before this Society, I was sorely tempted either to give an account of my motor tour around the special schools of the Midlands and the South of England, or to compose a scissors and paste article of the latest American tests of Intelligence.

Then I considered that no man's contribution can be entirely valueless, if he dares to be himself and speaks only from experience.

I have, therefore, and at the risk of seeming provocative, out of date and egotistical, ventured to put the ideas of the village doctor into the common stock.

I do so with the more confidence, as I have not yet met another public health official, who has been a dozen years in bleak fellside practice. Perhaps they conceal the shameful fact!

Not unnaturally I feel a profound distrust of medical politicians when they approach the problems of the Pennines (to which I confine my observations), and inclined to describe our budding Smith Whitakers too caustically, as elderly gentlemen of great ability with a taste for voluminous platitude and profound distaste for doctoring, I need hardly remind you that the last decade has been an era of medical schemes and

dreams and ideals, many of which were bred by war illusion out of artificial prosperity, and have already been buried as still births. We must not make dreams our master.

The panel system was praised as a vast preventive scheme. I am not aware what disorders it has prevented except the curse of celibacy for ex-R.A.M.C. officers, and in this case prevention may not be the best of all possible policies.

Fortunately, gentlemen, the more country practice changes the more it remains the same thing. The dales doctor still stands upright and downright, immovable as his own hills, a sturdy individualist, with a profound contempt for the semi-State-club system thrust upon him. Long may he remain so!

Our armchair theorists are about to launch another scheme, Lord Dawson's advice to advance upon the slippery slope of rate aid, and enjoy public funds without the annoyance of rigid public control; Sir G. Newman's Annual Reports, the Repres. Meeting of the British Medical Association, all show the natural current of medical evolution towards an obvious end. That end may be briefly defined as an attempt to rope all medical practitioners into one vast preventive and curative service for the whole country.

The village practitioner is in the strange jargon of officialist to become "co-ordinated, correlated and ancillary to" the M.O.H., to add to the official's administrative difficulties, increase his estimates and compile "kindergarten statistics," which in the School Medical Service at least are already too often misleading owing to want of standardisation.

Speaking as an elderly C.P. thoroughly familiar with the realities of practice along the backbone of England from the Weaver hills to the Cheviots, I feel that progress in any branch of science can only be obtained by specialisation after broad preliminary experience. Schemes in favour of the private practitioner in infant welfare centres, school clinics and other communal services in moorland villages can only be described as an attempt to reverse this law of scientific progress.

I am, of course, aware that in the heated discussion which will, I hope, follow these few obiter dicta, I shall be pulverised, triturated and reduced in vacuo by some learned colleague who is acquainted with the brilliant work done by part-time M.O.H.'s in certain areas of Derbyshire and Staffordshire and other sylvan retreats such as Bilston. But in these exceptional instances, I take it, public health is the doctor's hobby. Most of us prefer golf in our scanty leisure.

* Paper read at the December Meeting, 1921, of the
Midland Branch.

All generalisations are, of course, untrue in special instances, but national schemes must be for the average individual, and I submit, Gentlemen, that the country practitioner has now tried his hand sufficiently at these communal services to show that the proposed fusion of functions in one individual is neither to the interest of the individual or the community. What is true in theory should be true also in practice. In practice the C.P. can occupy his time fully with more lucrative work than public health activities, and requires to be paid at about twice the rate of pay of school medical officers to cover his heavy indirect expenses.

In order to earn a living wage I reckon the type of doctor of whom I am speaking must work at least 12 hours a day 7 days a week, and have not more than one week's holiday a year.

By a living wage, I mean the sum which enables a man to live without attracting attention and to give to two children the advantages he has himself received.

I must now, I fear, in order to avoid unnecessary offence, plunge even deeper into autobiography.

I will give you examples of the impossibility of doing one's duty in part-time service as a Certifying Factory Surgeon in the country, in such matters as Silicosis and Lead Poisoning. (For obvious reasons many of these examples cannot be published, but consisted of a series of stories of rural life.)

I did not spend my leisure condemning the squire's property or even investigating the beginnings of disease, on the lines foreshadowed by Sir Jas. Mackenzie for the country practitioner. A forty mile round over moor and mountain and then 4 ft. on the fender was eno' for me.

On one occasion only did I allow zeal to overcome discretion. I was moved beyond my wont on the subject of Silicosis, and gave evidence on that and allied topics before the Poor Law Commission. Alas! The only disease I prevented was gout, for many excellent cellars of port were closed to me for ever. Otherwise I escaped lightly, but was distinctly annoyed that a lady wrote a novel about my practice which is still found circulating in Boot's Library.

I speak in sorrow, not in anger, for a rural feudal system is more to my taste than an industrial democracy.

But however much the doctor of the future is trained in the principles, let him avoid the practice of preventive medicine in a fellside community, unless he regards the village doctor as nothing but a peri patetic charity. Experte Credo!

I do not desire to set before you an unnecessarily low ideal. I have met country practitioners the latchet of whose shoes I was not worthy to unloose. There are other martyrs to delirium tremens, incapable of unlacing their boots after 12 noon. I do not claim to be up to the best standard of village doctor in preventive medicine, but I doubt whether I am less altruistic or less interested in public health than many. Let us, therefore, protect only existing interests of part-time M.O.H.'s, and clear our minds of cant. When we do country practice, we do not do it as the lordliest life on earth, the purest of all human pleasures. All motives are mixed, but incredible though this may seem to those who believe that our chief interest is the scientific investigation of the early stages of disease, our dominant motives are to make money, to get married young, which is not a crime, and to escape from twentieth-century industrialism. "This strange disease of modern life with its sick hurry and divided aims."

When, therefore, I am economised back into private practice, which seems highly probable, I am only willing to help those public health activities which do not interfere with my honourable business as a monger of medicine. I must be wise even as also a serpent is wise, and give the public not only what it needs, but what it wants. What it needs is hygienic advice, what it wants is a bottle. Mist Ammon. Carbazote, the Sweet and Purple Mixture will serve as well as most. I will distribute hygienic leaflets for the Public Health Authority, but I shall leave questions of sex, venereal disease and birth control to the spinsters. Their knowledge is too wonderful for me.

I shall certainly not advise my patients to take their babies to a Welfare Centre under the patronage of my rival. Neither shall I be exactly gushing on his reports as part-time S.M.O. Nor shall I want these ill-paid jobs myself, unless to keep the opposition out.

If, on the other hand, these communal services are administered by a whole-time official (paid not more than half of my gross income), who understands the difficulties of private practice, who uses his inspections as a means of smoothing away unreasonable grievances of querulous mothers against myself, I shall not complain if he takes a 1s. out of my pocket for every £1 he puts in, only he must understand that when I have been up at night the courtesy may be all on his side, "For sufferance is the badge of all his tribe."

In fact, Gentlemen, the place of the C.P. in preventive medicine is arm in arm with the official. Co-operation should be his motto, not fusion, in things essential unity, in non-essential liberty, in all things charity. For surely it is heaven upon earth to have a man's mind move in charity, rest in Providence, and turn upon the poles of truth.

PROLONGED INFECTION IN SCARLET FEVER.

BY

W. BRUCE YOUNG, M.D., M.B., CH.B., D.P.H.,
Medical Officer of Health, County of Winchester.

It will be generally agreed that one of the most difficult problems presented to those engaged in the practice of preventive medicine is that of tracing the source of infection in infectious diseases. The task is especially baffling in the case of scarlet fever, about the aetiology of which so little is known of practical value and in which the method of the spread of infection is by no means satisfactorily cleared up.

These remarks are especially true at the present time when so many cases in the aggregate are found all over the country, and amongst which there is such a large proportion of mild and therefore "missed" cases. But not only now, but in non-epidemic periods, some of us are by no means content to assume that the "missed case" or inanimate objects are responsible for the disease being almost endemic and many of us, no doubt, are on the look-out for good clinical proof that there are chronic carriers in scarlet fever just as we know there are in diphtheria, enteric fever, &c.

Good clinical proof is notoriously difficult to obtain in medicine in relation to cause and effect, but in view of our ignorance of the causal organism in scarlet fever, we are driven back to this method of proof which is probably, after all, more easily obtainable in infectious disease than in other types of illness.

Anything which tends towards the solution of these various problems is probably worthy of communication, and this is my reason for publishing the following notes which seem to show that occasional personal infection in scarlet fever may continue for a long period and may account for a great part of the difficulty we have in dealing with that complaint.

I will give the details of the events in full in

the order which they occurred, for in this way only can a full appreciation be made of the points worthy of attention.

On June 20th last, B.N., aged 7, was notified to have scarlet fever, and was removed to the Isolation Hospital the same day. The boy had begun to feel unwell on June 18th; he felt worse on the 19th and was sick on that day. A well-marked rash developed the following day—June 20th.

In hospital, I found a typically mild case such as we so frequently see now-a-days; temperature 99—very slight sore throat—and a good rash. The boy said he was very well and he appeared to be so. The temperature came down within twenty-four hours, the boy said he felt to have nothing the matter with him, and the rash was fading rapidly. Throughout the remainder of his stay in hospital he remained a mild type of scarlet fever, quite dry and clean throughout, having no discharge or complication. He was treated on open air principles.

In accordance with my usual procedure in these clean cases I had intended discharging him on the 28th day after admission, but for convenience in connection with his disinfection, he was not discharged until July 23rd, that is on the 33rd day of his stay in hospital, and the 35th of the disease. There was very little peeling, and on leaving he had still a little on one great toe. Subsequently he remained well in every respect. The usual enquiries made by the inspector on the day of the boy's admission to hospital elicited the information that a brother, D.N., who had been at the time in residence at a boarding school in a neighbouring county had been there admitted to a fever hospital on March 21st, suffering from scarlet fever.

This boy had evidently had a sharp attack, of a septic type. He was discharged on June 2nd, after having been isolated for 10 weeks and 3 days. He came home on June 3rd. A day or two after his arrival, he developed what was described as a severe tonsillitis. He was removed to a nursing home, and on June 10th underwent an operation of enucleation of his tonsils and removal of his adenoids. He returned home on June 16th. He had had appropriate treatment after the operation, and on his return home on the 16th the practitioner in charge pronounced him to be quite healthy and free from all discharge of any kind.

The two brothers came into contact on June 16th and B. N. commenced to be ill on the 18th, as I have already mentioned. I naturally concluded that B. was infected by D. on the latter's

* Paper read at a meeting of the Southern Branch in December, 1921.

return home after his operation, although all accounts agree in stating that the latter's naso-pharynx appeared very well; it apparently remained so. D. remained at home until B. was discharged on July 23rd, and then both of them were taken to the seaside on July 28th.

Another brother, O. N., returned home from boarding school on July 27th (the night before B. and D. left), but did not meet his brothers then. He travelled down to the sea on the following day, July 29th, with the "F." family—one lady and two boys. The two families—parents and children, subsequently all lived together in an isolated furnished house near the seashore.

On August 9th, eleven days after their first contact with B. and D., and 16 days after B.'s discharge from the isolation hospital, O. N. and Q. F. both developed mild scarlet fever. In reporting this occurrence to me by letter the father, perhaps naturally, was very emphatic in expressing the opinion of himself and the doctor in charge that B. had been allowed to leave the hospital whilst he was still infectious and that O. N. and Q. F. had been infected by him—as they had excluded any source of infection either locally or during the journey.

As a result of careful enquiries and calculations bearing upon the dates and the periods of incubation, etc., and also after strictly investigating and eliminating all questions in connection with the disinfection of B.'s and D.'s clothing and of B. at the time of his discharge, I came to the conclusion that although I could not deny the possibility of the contention being correct, it was to my mind unlikely in the extreme that these secondary cases had been infected by B. On the other hand I suggested that although D.'s nose and throat had been perfectly healthy since his operation he was probably the source of infection. This view was strongly combated by everyone connected with the cases, but I was not convinced. Afterwards, one other by N. F. and D. N.'s mother developed scarlet fever whilst away.

On or about August 27th Mr. N. returned, and was shortly afterwards joined by D., after disinfection of both. On September 17th D. N. and his father journeyed to London together to stay with relations. At this time D. had a very slight cold in his head.

Mr. N. returned home on September 19th feeling somewhat seedy. He was under treatment for a few days and was also kept under observation subsequently by his doctor, who had suspected scarlet fever. He was, however, soon quite well and no rash was detected. On the

afternoon of September 20th Mr. N. received a telegram from London stating that D. was returning home as one of two children living in the house where he was staying in London had got scarlet fever. D. appeared to be the only source of infection. On the boy's arrival he was removed direct to the Fever Hospital as being still infectious. I saw D. the following day and he was in good health except that he had a very slight, barely perceptible nasal catarrh of a thin mucoid character, but he also had a slight nasal obstruction due, in my opinion, to enlargement of his inferior turbinates.

Subsequent developments were interesting and significant. On October 3rd the father of D. N. noticed that there was desquamation on his hands. He had probably been infected by his son whilst staying in London, the slight illness he had following the visit supporting this view.

The next occurrence seemed to confirm this. On October 3rd Mrs. M., living in another quarter of the town, was notified to be suffering from scarlet fever. She had a well-marked sharp attack followed by exceptionally profuse desquamation. I ascertained that this woman was living as a lodger of Mrs. A. and had until a few days previously helped Mrs. A. to nurse the latter's child through what was described by the mother and the doctor (with whom I discussed the case) as an unusually severe attack of German measles. This attack of "German measles" was accompanied and followed by a profuse nasal discharge, which was still present on October 3rd when I saw the child. In addition this child also had slight peeling on both feet.

Before her marriage Mrs. A. had been a maid-servant with Mrs. N., the mother of D. N., and Mrs. N. had kept in touch with her old maid afterwards. I found that D. N. had called at the home of Mrs. A. on or about September 10th, and had spent the afternoon playing with Mrs. A.'s baby. Two or three days afterwards the baby developed so-called German measles.

At this time D. N. had no discharges of any description. Apart from this train of events I could not discover any other source of infection in the case of Mrs. N. nor could the existence of any measles or German measles be discovered to account for the supposed attack in the case of Mrs. A.'s baby.

F. or D. N., in hospital, simple nasal irrigation was carried out for a short time only and general treatment on open-air principles was adopted. Subsequently his inferior turbinates were cauterized and he was then sent to one of our leading epidemiologists for reference as to his fitness to

return to school. This gentleman wrote as follows on October 23rd:—"The case is a most unusual one in view of its protracted infectivity, but the train of circumstantial evidence is pretty convincing!" On his advice the boy received two doses of anti-catarrh vaccine, had two weeks' holiday in the country, and was then sent to school presumably free from infection on November 15th. No subsequent cases have been traceable to him at school or elsewhere, so that our hope that he was no longer infectious was apparently justified.

The points demanding attention are:—

1. That there is every probability amounting almost to a certainty that D. N. infected his brother, the party at the seaside, the child in London, his father, and Mrs. A.'s baby, and through her Mrs. M.;
2. That a virulent infection continued in this boy's naso-pharynx for a period of at least twenty-six weeks, i.e., that he was a chronic carrier of scarlet fever.
3. That during this time, with the exception of when his first operation was performed, he only had a nasal discharge on one occasion, that is, during his visit to London; and that apart from this his nose and throat were apparently perfectly healthy;
4. That the strictest possible personal investigation into the question of contagion by means of fomites revealed no evidence whatever, and that disinfection was performed throughout in a complete and perfectly satisfactory manner in all cases.

Although one cannot build too much upon the evidence afforded by one case, that particular case is so striking that it is difficult to avoid drawing some very suggestive deductions. When we consider the complicated character of the naso-pharynx with its numerous tortuosities and accessory sinuses it is not difficult to understand how it may be possible for microbic infections to remain in them for extended periods. In the case of D. N. I am disposed to think the infection, originally severe and probably widespread, may possibly have been retained or at least aggravated by the slight nasal obstruction present, with the result that the mucous membrane of his nasal fossæ and accessory sinuses took on an indolent, somewhat hypertrophic character.

The possibility of the continuance of infectivity for such a long period also strongly suggests that such occurrences may be in great part at least, if not entirely, responsible for the almost

endemic character of scarlet fever in our midst—that is to say that the disease is very largely passed on by chronic carriers, as is well known to be the case in diphtheria and enteric fevers.

NOTES FROM BRANCHES.

THE METROPOLITAN BRANCH.

HIGH BUILDINGS IN LONDON.

It will be remembered that towards the close of last session a conference on the subject of higher buildings in relation to health took place between the Building Act Committee of the Royal Institute of British Architects and members of the Branch. It was pointed out by the former that the root of the matter was the absolute necessity for increasing the amount of accommodation for business purposes in Central London, and at the meeting it was agreed by the representatives of the Branch that, subject to certain safeguards as to lighting, ventilation, and sanitary accommodation, the proposals of the Building Act Committee were reasonable. After having considered the report of the Committee referred to, the Council of the Royal Institute of British Architects have now arrived at the following conclusions, which were communicated to the Branch at their recent meeting:—

That any general increase in the height of buildings would be detrimental to the amenities of London.

That the powers possessed by the County Council of permitting an increase of height in particular cases are adequate and are exercised in a reasonable way.

That the open spaces and wide streets of London are of great value in securing the free circulation of air, and that their usefulness in this respect should not be impaired by permitting the erection of high buildings adjoining them.

That the principle of increasing housing accommodation by means of high buildings is a reactionary one and undesirable from the point of view of family life.

That in the case of buildings which, in order to secure unity of design, are required to be of the height allowed by the Building Act the restriction of the height of the top floor to 60-ft. in those of large cubical contents is no longer necessary or desirable in view of the methods of construction and fire attack now available.

BORIC ACID IN SPONGE CAKES.

In Report No. 245 for the seven weeks ended 31st December, 1921, Dr. W. J. Howarth, Medical Officer of Health, City of London, observes that the list of articles known to contain boric acid is on the increase, and that an amount of preservative which might be harmless to a healthy adult might have a serious effect on infants or invalids, an observation to be borne in

mind when considering the question of boric acid in sponge cakes and sponge fingers. During November, 1921, 22 samples of these products were obtained in the City and submitted to analysis, and the results show that in 7 instances boric acid in amounts varying from 0.20 per cent. to 0.42 per cent. was discovered. The preserved eggs used in the manufacture of the cakes are doubtless the source of the preservative, comments Dr. Howarth, who recommends that his report on the matter be forwarded to the Ministry of Health in the hope that reiteration may result in some regulation being formed which will either restrict the sale of boricised food products or clearly set out the limitation of amounts which may be used. In his opinion, one or other decision is necessary, and doubtless this will depend upon the view which is taken as to the harmful results which accrue from the continual dosing of the human system with boric acid.

DIPHTHERIA.

Dr. G. E. Oates, Medical Officer of Health, Bethnal Green, has promised to open a discussion on "Diphtheria Carriers and their Connection with Clinical Diphtheria," at the meeting of the Branch to be held towards the end of March.

NORTH-WESTERN BRANCH.

CENSUS OF ALL MEDICAL OFFICERS.

An effort has been made to obtain a complete list of all Medical Officers employed (either wholly or part-time) by Local Authorities in public health work in the area of the North-Western Branch irrespective of whether they were members of the Society of Medical Officers of Health or not, as a preliminary to important propaganda work. In this connection 47 circular letters were forwarded to 47 Medical Officers of county boroughs and counties asking for a return on a special form supplied. This was sent out early in January, and up to date only 25 replies have been received, although a further notice has been sent. Will the Medical Officers concerned please forward the particulars as soon as convenient to the Hon. Secretary of the Branch?

TUBERCULOSIS SUB-GROUP.

A meeting was held in Manchester on January 26th to endeavour to inaugurate the formation of a Tuberculosis Sub-Group in the area. The following resolution was passed and submitted to the Committee of the N.W. Branch:—

"That before the Tubercle Sup-Group of the Branch is formed will this Branch of the Society of Medical Officers of Health give assurances that the subscription to the Society will cover reasonable facilities for meetings and for the carrying out of the necessary business of the proposed Sub-Group."

This has been considered by the Committee, who decided to invite representatives of the N.W. Tuberculosis Society to meet Drs. Talent, Hitchon and Joseph to consider what arrangements could be made for financing the Sub-Group, as members were anxious to offer every facility possible.

FUNERAL OF DR. SERGEANT.

An impressive ceremony took place at Wrea Green, on Thursday, February 9th, when the late Dr. Edward Sergeant, for 27 years Medical Officer of Lancashire, was interred at St. Nicholas' Churchyard. Dr. Sergeant was a past-President of the Society of Medical Officers of Health and also of the North-Western Branch, and amongst members who attended the funeral were Drs. J. J. Butterworth, Lancashire County Council; Lissant Cox, Lancashire County Council; T. W. N. Barlow, Wallasey; Rees Jones, Blackpool; F. A. Sharpe, Preston; and others.

STOCKPORT M.O.H.

Dr. H. E. Jenner, formerly Deputy Medical Officer, has now been appointed Medical Officer of Health, Stockport.

FROM THE MIDLAND BRANCH.

SALARIES.

At present many Authorities in the Midland area are engaged in re-considering the salaries of their officials, and already one or two have made reductions. For example, in Walsall the salaries of the chief officials have been reduced by 10 per cent., including the Medical Officer of Health and the Tuberculosis Officer. In Coventry reductions on a somewhat similar scale have been agreed to between the officials and the Council. In Nuneaton all increases of salary due have been temporarily suspended, but no actual reductions have been made.

ECONOMY AT THE EXPENSE OF HEALTH.

The Staffordshire Education Committee have been considering how to reduce the expenditure on school medical inspection, and, amongst other things, it is recommended that one of the age groups of routine medical inspection should be dropped, thus decreasing the number of medical officers required, and the amount of clerical work.

Another suggestion is that the amount of dental work be limited.

M.O.H. FOR STAFFORD.

The post of Medical Officer of Health for Stafford Borough still remains vacant. Difference of opinion appears to have arisen between the Borough and the County Authorities on the question of salary, and unless the two authorities can come to an agreement it seems likely that the appointment may become again a part-time one.

STAFFORDSHIRE COUNTY M.O.H.

Dr. Carruthers has taken up his duties as Acting County Medical Officer of Health for Staffordshire. It is not likely that a permanent appointment will be made for a few months.

WEST OF ENGLAND BRANCH.

A WATER FINDER AT WORK.

One of the large towns in the West of England has been hard hit during the last few months by shortage of water. It was evidently desirable, if possible, to find fresh sources of supply, and a more than local interest has been aroused by the action of the Authority in employing for the purpose a "water-finder"—the kind that appears to depend rather on the movements of a twig than on geological investigation. Be the explanation what it may, it seems to be established that, solely as a result of the guidance and instruction of the water-finder, hitherto unsuspected springs in the neighbourhood have been discovered which will yield daily a number of gallons running well into six figures. How is it done? Learned arguments attempting to disprove the genuineness of the powers which are alleged to have been exercised would probably be at a discount in this particular district.

SIXPENNY DINNERS FOR MOTHERS.

The intention of the Minister of Health to reduce expenditure on the distribution of milk in connection with Infant Welfare schemes has been known for some time, and from that point of view Circular 267 is not unexpected. The methods suggested, however, are causing a good deal of misgiving amongst, and some protest from, the authorities concerned. To limit milk to children under one is probably to cut off nearly two-thirds of the help that is now given, and appears to be a retrograde policy. In large industrial districts the supply of meals to expectant and nursing mothers may be a great help. It is very doubtful, however, whether in areas such as nearly the whole of the West of England mothers can be induced to attend regularly at

given centres to receive a sixpenny dinner. It does not seem likely, therefore, that there will be any considerable response to the offer of a subsidy for this purpose. Perhaps the Ministry will be neither very surprised nor very disappointed if this proves to be the case.

FROM THE NORTHERN BRANCH.

INFLUENZA.

The Influenza wave has passed with startling suddenness, both in onset and in decline, the whole epidemic, so far as it affected the North-East, taking about four weeks from start to finish. The characteristics have been much the same as in other parts of the country, viz., low fatality, except among infants and young children under school age, among whom more than half the total deaths occurred, and prolonged weakness after recovery from the acute stage. Pneumonia and other complications were notably absent in patients who took to bed on the appearance of the first symptoms of illness, but among the others, who endeavoured to resist or ignore the attack, there were many deaths from pulmonary disease. This was strikingly confirmed by the experience of doctors in the various residential districts. Not much use has been made of vaccine prophylaxis this time, though one or two practitioners claim to have obtained excellent results from the use of the St. Mary's combination vaccine in treatment.

FOOT AND MOUTH DISEASE.

Popular interest was quickly transferred from Influenza to foot and mouth disease, and the numerous slaughterings of stock. Milk herds in the North have been little involved, and as there is actually a considerable superfluity of milk on the market at present there is no anxiety as yet concerning the public supply. It is understood that of the actually infected animals destroyed, more than half were in the earliest (pre-febrile) stage of the disease, and their carcasses were therefore salvaged for food, after destruction of head, feet, and offal.

COMBINATION OF AREAS.

A subject that is likely to cause much local controversy in the near future is the suggestion for amalgamation of the whole of the townships on either side of the Tyne estuary into one great comprehensive whole, and a conference between representatives is now being arranged. This project will altogether dwarf the recent extensions at South Shields and the pending inquiry upon the proposed absorption of Hebburn by Jarrow. The total population concerned is up-

wards of a million, and it is argued that as this is already practically one great aggregation, municipal combination would lead to substantial mutual administrative advantage and public economy. So big a project will take much time and labour to draft, and many tides will ebb and flow beneath the high level bridge ere all the members of this mixed menagerie are persuaded to lie down together within one fold.

HYGIENE OF AMUSEMENT PLACES.

Much attention has been given in recent years to improvement of the sanitary condition of places of amusement, the first radical steps being taken during the great influenza epidemic of 1918-19. The recent circular of the Ministry has caused some fluttering in managerial circles, but has resulted in a still further advance, under pain of non-renewal of licence, in the directions aimed at. Cleanliness, efficient ventilation, and "sufficient" sanitary arrangements for the public, together with decent accommodation for artistes, are the requirements upon which special stress is laid, and the effort has been well repaid by results. It is rather amusing to note that on the report of the Health Department the Newcastle magistrates have refused to renew the licence for the concert hall in the Town Hall; this will expedite, it is hoped, the conversion of that great area of comfortless space into very acutely needed additional office accommodation for corporation staff.

THE HOUSING PROBLEM.

A problem that is causing certain Sanitary Authorities much anxiety in the existing appalling shortage of houses is the applicability of Section 28 of the H. & T.P. Act, 1919, where owners refuse to make good remediable dilapidations of property, and desire nothing better than the issue of a closing order by the Authority to enable them to get rid of the unfortunate tenants. Only too often these can find no alternative accommodation, and the purpose of the owners is usually the conversion of the property into more profitable business premises. The prospect of doing, and paying for, the necessary repairs now, and spreading the often doubtful recovery of costs over thirty years, is not an attractive one to the members of the Local Authority. But what else can be done under the circumstances?

THE "SACK" DISINFECTOR.

At its last meeting the Northern Branch of the Society witnessed a most interesting demonstration of the "Sack" disinfectors devised by Col. Lelean for use in the Eastern Campaign, and tested and applied to home public health purposes

by Dr. Wynne at Wigan. All present were greatly impressed by the potentialities of this simple apparatus for use in scattered communities, such as rural areas, schools, on board ship, and in all sorts of circumstances where the standard plant is not available, or even in place of it. It is a curious fact that the principle of displacement of the contained air downwards by introduction of steam at the top of the apparatus should never have occurred to anyone before, and adoption of this method would make much more certain the avoidance of airlock, the chief cause of inefficiency in steam disinfection.

NOTES FROM THE GROUPS.

FROM THE TUBERCULOSIS GROUP.

PROLOGUE.

The Group was established in order to safeguard the interests of members of the medical profession specially concerned in the prevention and control of tuberculosis, to promote study and research concerning the many aspects of the problem upon which true knowledge is so conspicuously lacking, and to secure closer co-operation with other branches of preventive medicine.

Since it was the first of the Groups formed under Article 8 of the revised Articles of Association of the parent Society, the business of drafting an appropriate constitution proved a difficult task, necessitating subsequent revision in order to substitute a constitution more in accord with modern democratic ideals and aspirations. It was realised that the objects for which the Group had been formed could only be effectually carried out by a committee elected by, and directly representative of all the constituent members of the Group, and that subject to the control of the Council of the parent Society, the management and direction of policy and general business of the Group should be vested in such Committee. At a Special General Meeting held on the 22nd of October last, the recommendations of the Committee were approved and carried into effect.

Under the new constitution discussion of the business of the Group and attainment of its objectives will in the main be decentralised to Sub-Groups which may be formed by the Committee on the request of any number of members within branches or combinations of branches of the Society. Such Sub-Groups will have entire control of their own affairs and meetings, but would be required to send to the central Com-

mittee resolutions upon matters relating to the policy, control or discipline of the Society or Group and calling for consideration and necessary action by the Committee representing the whole Group. It is further provided that the Committee of the Group shall in future be constituted by election of representatives by the Sub-Groups proportional to their numerical strength. Evolution of a constitutional form of government for the Group on the lines made possible under the revised regulations should secure the confidence of all those interested in tuberculosis work throughout the country generally, and it is anticipated that Tuberculosis Officers and others will take advantage of the opportunities afforded them within the organisation for taking their full share in influencing development and expansion of the Tuberculosis Service to its proper maturity.

FORMATION OF SUB-GROUPS.

Satisfactory progress has on the whole been made with the formation of Sub-Groups in the Branches of the Society during the short period which has elapsed since revision of the regulations made it possible to sanction their inauguration. It is regrettable that certain of the branches appear to have decided that as only small proportions of their present members are specially concerned in tuberculosis work it is not worth while to provide an incentive to all Tuberculosis Officers in the branch areas to join by forming Sub-Groups for the advancement of their interests. One branch goes further and expresses the opinion that formation of Groups or Sub-Groups is subversive of the interests of the public health service as a whole, and that tuberculosis and other special subjects can be equally well discussed at ordinary meetings of the Branch. It should, however, be borne in mind that failure to form Sub-Groups necessarily implies that Tuberculosis Officers holding appointments in the branch area concerned cannot obtain representation on the Central Committee of the Group, even though they may be members of the Society.

Until Sub-Groups have been formed in each Branch of the Society and have elected their representatives to serve on the Central Committee the Group cannot profess to speak with authority for the Tuberculosis Service, and only then provided the large majority of those specially engaged upon tuberculosis work become members of the Society and of the Group.

At present only a minority of the 341 Tuberculosis Officers holding appointments under local authorities throughout England and Wales belong to the Society.

THE POSITION OF THE GROUP WITHIN THE SOCIETY.

Tuberculosis Officers are deterred from joining the Society and according their support and recognition to the Group pending determination of such important questions as relative voting powers of Fellows and Members, eligibility for office, and, above all, the share to be taken in the constitutional government of the Society and proportion of representation on its Council obtainable by those qualified for membership by reason of holding specialist or clinical appointments in connection with branches of the Public Health Service.

These and kindred questions are at present receiving careful consideration by a special Committee appointed by the Council, and it may be assumed with confidence that satisfactory solutions will be found to enable all medical members of the public health service to unite within the ranks of the Society for the promotion of the common weal.

The Tuberculosis Group is cognisant that in consequence of the persistently forceful or almost militant attitude which its members have been reluctantly compelled to adopt, it may well have earned a reputation from other members of the Society for possessing many of the objectionable attributes of "the slender yet strongly pugnacious bacillus" to which it owes its existence. Some might perhaps be disposed to fix and cook the whole concern with hot carbol fuchsin and methylene blue."

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

COUNCIL MEETING.

A meeting of the Council was held at the house of the Society on Friday, February 17th, 1922, Dr. W. J. Howarth (President) in the chair. There were also present: Prof. H. R. Kenwood, Lieut.-Cols. Herbert Jones and P. Caldwell Smith, Drs. G. F. Buchan, Kirkhope, Evans, Duncan Forbes, Pearce, Charles Porter, Kerr, Snell, Eustace Hill, Blackett, Wheatley, Stocks, Joseph, Barlow, McMaster, Sanders, Peyton, Wilshaw, Veitch Clark, Gibbons Ward, Clements, Ewart, Lyster, Talent, J. J. Buchan, and Auden.

The minutes of the last meeting having been approved and signed, messages of apology for absence were received from Dr. J. T. C. Nash and Mr. R. Denison Pedley.

Vote of Condolence.—On the proposal of the President, the Council, upstanding, passed a resolution recording their sorrow at the death of

Dr. Edward Sergeant, President of the Society, 1908-1909. The Executive Secretary was directed to communicate this resolution to Mrs. Sergeant.

Correspondence.—(1) From the British Dairy Farmers' Association inviting the Society to co-operate in appointing a joint committee to draft Model Regulations governing the Sale of Milk, which may be recommended for adoption by the Ministry of Health. The Council decided to refer it to the Committee on Food Problems, with power to act, the Committee to co-opt additional members if they see fit.

(2) From the Association of County Medical Officers of Health, inviting the Society to send two representatives to join a deputation to Sir George Newman on February 27th to discuss reductions of salaries. Dr. R. A. Lyster and Prof. H. R. Kenwood were nominated to attend with the deputation, but the Executive Secretary was directed to ask the Association to consider the advisability of becoming a Group of the Society. In the opinion of the Council it is essential that a single representative body should be entrusted with the interests of the whole Public Health Service, and that the existence of sectional societies detracts from the influence of the Society.

(3) From the British Medical Association inviting the Society to nominate three representatives to confer with the Insurance Acts and Public Health Committees of the Association in regard to suggested amendments of the Regulations under the National Health Insurance Acts governing the treatment of insured persons suffering from tuberculosis. The Council nominated Dr. Charles Porter, Dr. Duncan Forbes, and Dr. Peyton to serve on this committee.

(4) From the College of Nursing asking the assistance of the Society in securing a minimum salary of £200 per annum for trained women employed as Health Visitors, School Nurses, etc. The Executive Secretary was directed to assure the College of the sympathy of the Society for their efforts in this connection.

(5) From the Dental Officers' Group communicating the following resolution:—

That the Council of the Society be asked to form a Committee consisting of three members approved by the Dental Group, three by the Child Welfare Group, three by the School Medical Group, and three by the Council, for the purpose of drawing up a leaflet of directions for the prevention of dental caries, for public use.

The Council was informed that the representatives of the Dental Group would be Mr. W. Fisk (President), Mr. Grantley Smith (Hon. Sec.), and Mr. George Thomson. The M. and C. W. Group had appointed Drs. Scurfield, H. K. Waller and

Flora Shepherd. The following were appointed to represent the Council: Drs. Wheatley, McMaster and Stocks.

(6) From the Bread and Food Reform League, enclosing suggestions for the extension of the Food Adulteration Acts. The letter was referred to the Committee on Food Problems.

(7) From the Metropolitan Branch of the Society, drawing attention to the increasing sale of gas heaters for use where there can be no proper provision for dealing with by-products of combustion. It was agreed to ask the Royal Sanitary Institute to appoint a committee to confer on this matter with the following representatives of this Society, viz.: Prof. Kenwood, Drs. Kay Menzies, Kirkhope and Snell.

Public Health Policy of the British Medical Association.—The special committee appointed to report on the policy of the Society of Medical Officers of Health in relation to the policy of the B.M.A. in regard to public health medical services submitted their report, which after minor amendments was adopted by the Council. It was decided that a copy should be forwarded to the Association with an intimation that the Council of the Society will be glad to confer in respect of any matters that may call for further consideration.

Special Committee on the Remuneration of Medical Officers.—This Committee reported that they had been forced to the conclusion that it would be necessary to adopt more aggressive methods to secure the consideration of Local Authorities for the scale of salaries adopted by the Society. It was proposed at once to issue a manifesto to the Universities and Medical Schools, drawing attention to the inadequate salaries attached to public health medical appointments, and advising young graduates not to enter the P.H.S. as a career. The terms of this manifesto are to be notified to the Ministry of Health, and to the associations representing County Councils, Municipal Corporations and District Councils. The medical journals, the B.M.A., and the Medical Women's Federation are also to be asked to consider the terms of the manifesto. Meanwhile the Committee advise that the Council should veto applications by members of the Society for conspicuously underpaid appointments, systematically chosen in various parts of the country, with a view to securing a maximum amount of publicity for the case for fair salaries. In the case of Local Authorities whose existing medical staff is underpaid, it is proposed to veto applications for vacancies until the other salaries have been adjusted.

These measures are to be suspended at any time that the associations representing County, Municipal and District Councils express their willingness to negotiate regarding the salaries of medical officials. During the progress of this campaign the Society will continue negotiations with the B.M.A., N.A.L.G.O., and other bodies for the enforcement of an agreed scale of salaries, or for the establishment of a Whitley Council or other tribunal to accept such scale on behalf of Local Authorities. The Council approved the recommendations of the Committee subject to a further report on certain details of their proposals.

Central Midwives Board.—Dr. R. A. Lyster reported on the working of this Board, and was re-elected to serve on it for a further period of one year from April 1st, 1922, as the direct representative of the Society.

Sir Shirley Murphy, K.B.E.—With the approval of the Council, the President gave notice that at the next meeting he would propose the election of Sir Shirley Murphy as an Hon. Fellow of the Society.

The Council then adjourned.

ORDINARY MEETING.

An ordinary meeting was held at the house of the Society on Friday, February 17th, 1922. The President took the chair, and there was a large attendance. The minutes of the last meeting having been approved and signed, a letter of apology for absence was read from Dr. W. N. W. Kennedy.

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

As Members:

Anderson, Laurence Alfrey Pelham, Major, I.M.S., M.A., B.Ch., Cantab., D.T.M. and H.; Henderson, Patrick Hagart, D.S.O., Lt.-Col. R.A.M.C., M.B., Ch.B., Edin.; Jamieson, Alex. Brown, M.B., Ch.B., Edin.; Livingstone, Donald McFarlane, M.D., B.Sc. (P.H.), Glasg.; Macaulay, Hugh Montagu Cameron, M.D., B.S., B.Sc., Lond., M.R.C.S., L.R.C.P., D.P.H.; Morton, Jessie Jean Martin, M.B., B.S., Durh., D.P.H.; Mulholland, Henry Cunningham, M.B., B.Ch., N.U.I., D.P.H.; Shore, George William, O.B.E., M.D., B.S. Lond., M.R.C.S., L.R.C.P.; Sylvester-Bradley, Charles Reginald, Lieut.-Col. R.A.M.C., M.R.C.S., L.R.C.P.

As Associates:

Soutter, Mansfield John Knox, L.D.S. Eng.

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

Prof. Sir F. W. Andrewes, F.R.S., then read a paper: "A Review of the Present Position of Laboratory Diagnosis in Diphtheria." Amongst those who took part in the discussion were: the President, Dr. R. J. Ewart, Dr. Nankivell, Sir P. Bassett-Smith, Dr. F. Thomson, Dr. Eagleton,

Dr. O'Kell, Dr. Clark Trotter, and Dr. Forbes. The proceedings closed with a cordial vote of thanks to Prof. Andrewes for his paper.

METROPOLITAN BRANCH.

A meeting of this Branch was held at the Society's house in London, on Friday, 27th January, 1922, the President (Dr. W. H. Hamer) occupying the Chair; 18 other members were present.

Great regret was expressed at the death, in France, of Dr. H. W. Roberts, an old member of the Branch and for many years one of its officers.

The President raised the question as to approaching the Metropolitan Asylums Board with a request that in the event of an increase in the number of cases of measles and whooping-cough some additional accommodation should be provided at the Board's hospitals. It was decided to communicate with the Clerk to the Board on the subject.

On the question of membership, the Hon. Secretary drew attention to the desirability of inducing all medical practitioners holding the D.P.H. to join the Society, and stated that it was the hope of the officers of the Society that all members would do their best to encourage practitioners so qualified to apply for membership.

A resolution passed by the Metropolitan Sub-Group of the Tuberculosis Group in regard to the salaries of tuberculosis officers in London was referred back to the Group for further consideration.

The question of giving evidence before the Royal Commission on the Local Government of Greater London was referred to the Council of the Branch.

NORTH-WESTERN BRANCH.

Meeting held in Manchester on Friday, 13th January, 1922. Present:—Dr. J. W. Talent (President) in the Chair, and 24 members.

An interesting paper was read by Dr. George Jessel on "Delayed Notification in Tuberculosis."

After pointing out the importance of prompt notification of the disease and referring to certain statistics in typical areas he detailed the causes of non-notification. He suggested the following measures to overcome the difficulty:—

(1) Education of the public in the early symptoms, the facilities offered for treatment, and the curability of the disease.

(2) Better financial provision for patients and their dependants.

(3) Education of the General Practitioner in the importance of early examination, of co-operation with the Local Tuberculosis Officer and of the facilities for diagnosis and treatment.

(4) The necessity of a Tuberculosis Service with Medical Officers with salaries and status of consultants.

(5) The amendment of Article V. of the Tuberculosis Regulations.

In proposing a vote of thanks to Dr. Jessel for his excellent paper, Dr. Peyton considered that misunderstanding of the Regulations was not a big factor in the non-notification of cases, and observed that there was a good deal to be said for the objections of the Practitioner in some instances. He emphasised the importance of careful and tactful visitors making inquiries, and mentioned that School Medical Officers and Medical Officers of Sanatoria and other Institutions were responsible for a large proportion of cases.

Dr. Charnock (Lancashire County Council), in seconding, laid special stress on the relationship between the Tuberculosis Officer and the General Practitioner.

Dr. Peck (Chesterfield) favoured prosecution of delinquents.

Delay on the patient's part in seeking medical advice was considered by Dr. Spence (Eccles) as the most important factor. He pointed out with reference to notifications by School Medical Officers the difficulty of definitely diagnosing Tuberculosis in children, and observed that they were not encouraged to notify owing to the great lack of facilities for treating such cases.

Dr. Daley (Blackburn) explained how, in his area, he had endeavoured to overcome the difficulty of the non-notification of cases referred to the Dispensary, and also to co-operate with Practitioners in cases in which they did not desire the usual visits of the Tuberculosis Nurse.

Dr. Beggs and Dr. Blease also joined in the discussion, and Dr. Jessel replied.

Meeting held in Manchester, Friday, February 10th, 1922. Present:—Dr. J. W. Talent (President) in the chair, and 18 members.

The President referred to the death of Dr. Edward Sergeant (late M.O.H. Lancashire County Council) one of the original members of the Branch, and for more than 40 years connected with the Public Health Service. It was reported that the Hon. Secretary had forwarded a letter of sympathy on behalf of the Branch to the widow and family, and that amongst others the Branch was represented at the funeral by Drs. Butter-

worth, Sharpe, Rees Jones, and Lissant Cox. A resolution was passed placing on record an appreciation of the valuable services rendered by the late Dr. Sergeant to the Branch and the sincere regret of the members at the loss of an old friend.

The Hon. Secretary reported that Dr. J. E. Spence (Eccles) had promised to assist in furnishing matter for the "Notes from Branches" column of *Public Health*, and would be glad to receive regularly items of interest from members of the N.W. Branch.

Reference was made to the terms of appointment of the M.O.H., Herefordshire County, and a resolution proposed by Dr. Gilmour and seconded by Dr. F. T. H. Wood was passed, and the Hon. Secretary instructed to forward it to the Council: "That the N.W. Branch regrets that no action has been taken by the Society to draw attention to the inadequacy of the salary offered for the appointment of Medical Officer to the Herefordshire County Council."

An interesting demonstration was furnished by a representative from Messrs. Meldrums, Ltd., of Timperley, of the "Sack" Portable Steam Disinfector, a light and simple apparatus for destroying infection and vermin in clothing and bedding.

SCOTTISH BRANCH.

A meeting of the Scottish Branch was held in the City Chambers, Glasgow, on Saturday, January 14th. Present: Professor Matthew Hay (in the chair) and Drs. Paton, McGregor, Banks, Findlay, Stevens, Macdonald (Ayr), Campbell Munro, Hunter, McMichael, Whiteford, Buchanan, Richardson, Yule, Robb, Chalmers, and Adam.

The meeting discussed the question of the treatment of Venereal Diseases in Rural Areas. It was the general view that general practitioners have so far taken little advantage of the offer of free drugs and the free examination of bacteriological specimens, even when the Local Authority have offered a fee to the medical practitioner taking the specimen. It was further agreed that there is no outstanding difficulty attending the administration of salvarsan or its substitutes, and it was resolved to represent to the Scottish Board of Health that all medical practitioners should be eligible, on request, to receive free supplies of drugs.

After discussion it was resolved to make a representation to the Scottish Board of Health and to the Scottish Nursing Council to the effect that (1) Fever Nurses who have served for three years in a recognised Fever Hospital should be

regarded as qualified for a place on the General Register for Nurses on passing the necessary examinations, after serving for one year on the surgical side of a general hospital; and (2) similarly, that nurses who have served for three years in a general hospital should be regarded as qualified for a place on the Supplementary Register for Fever Nurses after serving for a year in a recognised Fever Hospital.

After a general discussion it was resolved to remit to the Council, having taken note of the contents of the Ministry of Health's relative Memorandum of December 26th, 1921, to consider and report to the next meeting of the Branch as to the limitation of Annual Reports.

It was resolved to suggest to the Board of Health that in any Model Regulations which the Board may issue in introducing the Milk and Dairies Act one should be included establishing a bacteriological standard for milk.

The Secretary submitted a statement as to the replies he had received from the members of the Tuberculosis Group within the bounds of the Branch as to the propriety of establishing a Tuberculosis Sub-Group in connection with the Scottish Branch, and after discussion he was instructed to invite all the members of the Branch to a meeting to be held half an hour before the next meeting of the Branch to consider the matter further and come to a decision.

At the request of the Scottish Council the National Society for Combating Venereal Diseases, delegates were appointed to attend a Conference of Medical Officers of Health and Venereal Diseases Medical Officers, to be held in the City Chambers, Edinburgh, on the 24th January.

After considering a resolution by the Midlands Branch it was resolved that while the conditions in Scotland were different the Branch was prepared heartily to endorse the resolution of the Midlands Branch in favouring the control of the School Medical Service being placed in the hands of the Ministry of Health.

The Report of the Council of the Society on the questions of this relative position and policies of the Society of Medical Officers of Health and the British Medical Association was remitted to the Council of the Branch for consideration and report to the first meeting of the Branch.

NORTHERN BRANCH.

Meeting held in the College of Medicine, Newcastle-upon-Tyne, 27th January, 1922. Present: Dr. J. A. Hislop (chair), and nine members.

The minutes of the last meeting (16th December, 1921) were taken as read, and signed by the Chairman. The Chairman informed the meeting that the President of the Branch was at present recuperating in the South after his recent illness, and he moved that a letter be forwarded wishing him a speedy and complete recovery.—Agreed.

"Sack" Disinfector—*Practical Demonstration*.—Before the above was given by I. B. Meldrum, Esq., of Messrs. Meldrums, Ltd., of Manchester, Dr. H. Kerr gave a *résumé* on the subject of "Disinfection by Steam." Dr. Kerr also read a letter regarding the apparatus that he had received from Colonel P. S. Lelean (the inventor of the "Sack" Disinfector), Professor of Hygiene, R.A.M. College, London.

About a score of local Sanitary Inspectors and a number of Medical Students attended the demonstration.

The Chairman moved a hearty vote of thanks to Dr. Kerr for his paper, and to Mr. Meldrum for the demonstration.—This was carried with acclamation.

YORKSHIRE BRANCH.

The Yorkshire Branch held its Annual Luncheon at Leeds, on Thursday, October 27th. The loyal toast was submitted by the President, Dr. E. Smith; Dr. Kaye then proposed the toast of the chief guest, Dr. Mitchell Wilson, which was most enthusiastically received. Dr. Kaye referred to Dr. Wilson's long connection with the Society and the great interest he had always taken in the work of the Branch; and on behalf of the Branch, wished him a long life to enjoy his well earned leisure.

Dr. Wilson, responding to the toast, gave a *résumé* of the history of the Branch prior to its amalgamation with the other Branches to form the existing Society; and referred to the work of many of the earlier members. Dr. Wilson's speech was listened to with great interest and on resuming his seat, was received with much applause.

The members then adjourned to the Leeds City Education Offices, where the Annual Meeting took place.

The Minutes of the last meeting were read and confirmed.

Dr. Jervis then proposed the following resolution:—"That this Branch strongly disapproves the use of its journal, *Public Health*, for propaganda purposes on behalf of a policy, until approved by the Council of the Society."

Dr. Buchan seconded, the proposition was put to the meeting and carried unanimously.

The Hon. Sec. was then instructed to send a copy of this resolution to all other Branches, with a request that they will support it through their representatives on the Central Council.

The Hon. Sec. then read his Annual Report of the work carried out by the Branch during the past year, and giving a statement of the finances of the Branch. The Secretary announced that as the membership of the Branch had now reached 152, it would be necessary to appoint a second representative on the Central Council; Dr. Buchan then proposed, and Dr. Gibson seconded, that Dr. Pearce be appointed, and this was assented to unanimously.

The retiring President, Dr. E. M. Smith, then delivered his presidential address. At the close of the address, Dr. Smith inducted his successor, Dr. John Buchan, into the Chair.

An ordinary meeting of the above Branch was held at the Education Offices, Calverley Street, Leeds, on Friday, January 27th, 1922, at 2.30 p.m.

Present: Drs. J. J. Buchan (in the chair), Pearce, Francis, Mair, Castle, Laurence, Moffat, Moore, Williams, Jervis, Clapham, McGill-wray, Fernandez, Fraser, Wear, Stockwell.

On the motion of the President, a vote of sympathy in his recent severe accident was unanimously passed with the Hon. Secretary of the Branch, Dr. Hill (Selby) and hearty wishes were expressed for his early recovery.

Apologies for absence were received from Dr. Smith (York), Dr. Gibson (Wakefield), and Dr. Weir (Bradford).

A paper entitled "The School Medical Service" was read by Colonel Wear, C.M.G., M.D. (S.M.O., Leeds), which aroused much interest and stimulated an instructive discussion, the speakers being the President, Drs. Moore, Fraser, Jervis, Castle, Francis, Williams, Pearce and Mair.

A vote of thanks to Colonel Wear for his paper was proposed by Dr. Pearce, seconded by Dr. Mair, and supported by the President (Dr. Buchan), the latter referring in detail to several of the important items covered in Colonel Wear's paper.

Tea was partaken of at the close of a very successful meeting.

HOME COUNTIES BRANCH.

A well-attended meeting of this Branch took place at 1, Montagu Street, on Friday, February

3rd, the President (Dr. Kirkhope) being in the chair.

A paper was read by Dr. W. J. Cox, M.O.H., of Chelmsford, on "Error and Superstition in Midwifery and Infant Care." Examples were given from the writings of Shakespeare, Sterne and Fielding, and mention was made of the heavy infant mortality of former days, reference being made to the revelations of sepulchral monuments of the Elizabethan and Jacobean periods as seen in our old parish churches.

The "teething myth" was dealt with at some length, also the practices of unnecessary circumcision, snipping the frenum of the tongue for "tongue tie," the giving of castor oil to infants on the third day, etc. Emphasis was laid on the importance of breast feeding and the common fallacy that the mother's milk is "too poor" was exposed.

The Chairman introduced the discussion with some personal experiences of his own in midwifery practice, and the discussion was continued by Drs. Greenwood and Sanders. Dr. Veitch Clarke expressed the opinion that many mothers were physically incapable of breast feeding.

Drs. Nash and Dupont also spoke.

DENTAL OFFICERS' GROUP.

The Annual Meeting of the School Dentists' Society was held at the rooms of the Society of Medical Officers of Health on Saturday, January 28th, at 11 o'clock. There was a good attendance, Mr. W. Fisk, the President, being in the chair. The new rules consequent upon the formation of the Group were passed and the election of new officers was postponed until October, this date being fixed for future annual meetings to bring the Group into line with the Parent Society. Meantime, the Treasurer's and the Secretary's Reports were adopted, both being of a satisfactory nature. In the afternoon an ordinary meeting was held, when Dr. Wheatley read an interesting paper, which was followed by a good discussion. In the evening the members dined at Pagani's Restaurant.

METROPOLITAN TUBERCULOSIS SUB-GROUP.

A meeting of the Metropolitan Tuberculosis Sub-Group was held at the house of the Society on February 10th, Dr. N. G. Caley in the chair.

Dr. G. T. Hebert reported on the "case sheets" used in London dispensaries. A discussion followed; much interest was shown in his proposed "model," and it was hoped that copies would be obtainable later, so that members might examine it for themselves in detail.

The question of the standardisation of the salaries of London Tuberculosis Officers was postponed to the next meeting.

CORRESPONDENCE.

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

DENTAL DEFECTS.

From C. DOSWELL WALLIS, L.D.S.

I should like, with your permission, to offer a few brief observations upon your Editorial in the November issue of *Public Health*, Dr. Herd's letter referring to the same, and some of the points raised in Dr. Andrew Laird's recent Paper on "School Dentistry in England."

It is with regret and some hesitation that I venture some comments on these matters, but the views expressed in your Journal are calculated to do so very much harm to a matter of overwhelming importance that I offer you my views.

Everyone interested in preventive medicine and dentistry will welcome the appointment of a Special Committee to investigate the causes of dental defects, but the fact that very much pioneer work has already been done by dentists should not be lost sight of, otherwise much unnecessary duplication will result.

To be of real value any such investigations should be carried out in close co-operation with dentists having a sound knowledge of such questions, and not by doctors alone.

It is unfortunate that members of the medical profession should encroach upon the domain of a speciality like dentistry for children, or preventive dentistry.

I think, sir, that Sir George Newman has a truer insight into these matters than you give him credit for, when he says "the methods, etc., for combatting dental disease have passed out of the experimental stage." A vast amount of painstaking investigation has been carried on by School Dentists and others for many years, witness, for example, the stores of information contained in the transactions of "The School Dentists' Society," and similar publications.

The Chief Medical Officer to the Education Department of the L.C.C. said, some years ago, and with much truth, "I doubt if it is quite realised how very ignorant doctors are about dental affairs. It comes out strongly now with our Medical Inspectors, when some of them volunteer for the inspection of teeth. The re-

sults of their inspections I have simply suppressed. As far as statistics or any scientific knowledge of the teeth are concerned, I regard the doctors' reports as of no value at all."

Unfortunately many similar investigations have not shared a like fate. This is the more to be deplored, as it is self-evident that the medical officers undertaking such investigations are keenly interested in the matter, and must devote a great amount of time and trouble to the work. The results of their labours, however, unhappily, tend to do far more harm than good to the cause of mouth hygiene, and the best good of the school children and public generally. Doubtless medical officers are advancing in the understanding of matters dental from year to year, but to judge from some of the reports one sees, it is but a further illustration of the danger of a little knowledge.

To take, for example, one question mentioned in your Editorial, in the subsequent correspondence on the point, and in various School Medical Officers' Reports, *viz.*:—the relation between dental defects in children and their physical condition.

The general medical opinion seems to be that there is no appreciable difference between the vitality and general health of the average child and one with sound teeth; though some investigators find that there is a slight *advantage on the side of children with bad teeth*. Now from want of sufficient special knowledge all these results are discounted by certain fallacies.

First, the children with sound dentures are usually taken to be those with less than four decayed teeth. This is far from a standard of perfection, as to be perfect and free from harmful effects upon general health, the mouth must be free from sepsis, and every tooth, without exception, perfectly sound and normal. As every doctor should well know any septic focus, however small, may have very far-reaching and grave effect upon the general health and nutrition.

Again, the physical well-being of the children seems to be judged by comparison of heights and weights, and there is no note of their general vigour, susceptibility to contagious diseases and suchlike. As regards heights and weights, it is well known to dentists that one of the chief causes of dental decay is the injurious influence of certain kinds of food. Heavy, well-nourished children have been fed, as a rule, upon an abundance of carbohydrate food, and this, though making them fat and heavy, could hardly be worse for their teeth. Whereas children of

poor parents, who are not able to give them sufficient diet, and what they have is frequently coarse, common types of food, and vegetables; though deficient in weight, are wiry and vigorous, and notorious for the splendid condition of their teeth.

Again, one of the most successful methods of preventing dental defects, at any rate in their grosser forms, is not mentioned at all in your Editorial, namely, attention to mouth hygiene combined with the systematic treatment of minor defects as they arise. The success of such methods is clearly demonstrated by the splendid condition of the mouths of children attending Poor Law Schools, where such attention is possible, though the material to be worked on is, in many cases, far from ideal.

Now, sir, to take up one or two of the points raised by Dr. Andrew Laird in his article on "School Dentistry in England." Many of the conclusions he arrives at in his most instructive review of this subject are excellent, though one or two are open to criticism. I will refer to one only, as it is quite a common fallacy, viz.: the failure to realise the vast importance of the temporary dentition. It has been most clearly demonstrated that if the primary teeth are kept in functional condition there is every chance that the permanent teeth will be good, and require little or no attention. To prevent defects occurring in these second teeth is far better and more economical than to concentrate on their treatment. For example he says:—"Too much time is expended on attending to the filling of temporary teeth at the expense of the permanent dentitions." Now, this is quite impossible, as the filling of deciduous teeth, where such is advisable and suitable, is the very surest way by which the permanent teeth may be preserved.

This is well exemplified in the county (West Sussex) where I have been attending the dental needs of the school children for many years. Of those children who have attended regularly for treatment, throughout their school life, from the age of 5-6 years, some 80 per cent. have left school with complete sets of sound second teeth, and the percentage of fillings and extractions that have been required of permanent teeth is consistently small. These results, that approximate very nearly to perfection, are due to careful attention to the first set of teeth and to mouth hygiene.

The wonderfully good results obtained by children's dentists in Elementary Schools, Poor Law Schools, and similar Institutions, clearly

indicate the lines upon which dental defects may be successfully combatted and prevented without the need for a further special investigation into similar matters, extending over a period of many years, as suggested in the last paragraph of your Editorial.

C. DOSWELL WALLIS,

L.D.S. R.C.S., Eng., M.I.H.,

Senior School Dentist to the West Sussex and
Chichester Education Committee.

SCHOOL MEDICAL INSPECTION AND THE LAW.

An important decision was made by the King's Bench Divisional Court on the 25th January by Justices Avory, Salter, and Roche. The case establishes definitely that Section 122 of the Children Act, 1908, imposes an obligation on each child to submit to medical examination. The case briefly was as follows:—In April, 1921, the child on instruction by her father declined to submit to medical examination. Thereupon an attendance order was obtained against the appellant after exclusion from school. In June, 1921, the child again refused to be medically examined. In September a further medical examination was held, and when the doctor put his hand on the child's shoulder she moved away, which was taken to indicate the intention to offer physical resistance. The medical examination was not proceeded with, and the child was reported for persistent insubordination to the Local Education Authority, and was expelled from the school. She continued to be sent by her father to the school and was refused admission. A summons for non-compliance with the attendance order followed, and the Magistrates convicted.

Mr. Justice Avory, in dismissing the appeal, said that Section 122 of the Children Act, 1908, did import an obligation on the child to submit to examination; if the child refuses under her father's direction the fault of her insubordination was his, and he was responsible for her non-attendance when she was excluded. Mr. Justice Salter, in agreeing, said that Section 122 imposes a duty on children to submit, and on their parents to co-operate. The child, therefore, had repeatedly resisted a lawful order.—(Fox v. Burgess).

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SOCIETY OF MEDICAL OFFICERS OF HEALTH.

LATE NOTICE.

The following notice arrived too late for publication in the monthly agenda paper:

MATERNITY AND CHILD WELFARE GROUP.

A meeting of the above Group will be held at the house of the Society on Thursday, April 20th, at 8 p.m., when Dr. R. C. Jewesbury (Physician, Children's Department, St. Thomas's Hospital) will read a paper on "Breast Feeding."

Town Hall,
West Bromwich.

R. WOOLSEY STOCKS,
Hon. Sec.

Editorial.

A SCHOOL OF STATE MEDICINE.

ONE of the most concise and business-like reports that have ever been presented to Parliament was produced by the Committee appointed in 1921 to consider the provision necessary for postgraduate medical education in London. It will be remembered that this Committee, of which Lord Athlone was chairman and which had an ideal composition as regards its membership, recommended that public health postgraduate work should be concentrated in an institute of State medicine directly connected with the University of London and under its administration. The institute would provide instruction in public health, forensic medicine, toxicology and industrial diseases, and the idea was that it would rapidly acquire the position of a world centre in these subjects.

Since the publication of that report events have moved rapidly, and the latest development is the announcement that the Rockefeller Foundation have offered to provide a sum of about £450,000 to the cost of building and equipment on the understanding that the British Government accept the responsibility of providing for staffing and maintenance. Presumably the new school will be made part of the University of London.

A new committee has now been appointed by the Minister of Health to advise on the preliminary steps to be taken with regard to the site and planning of the school, and the names of the members of that committee constitute a guarantee that the work will be done well. In fact, the prospects of rapid progress are distinctly favourable. We venture, with the greatest respect, however, to make one suggestion to the new committee, which is that they should consider the desirability of advising the Ministry to proceed as soon as possible with the appointment of the Administrative Head of the School. The post will be one of great responsibility and unlimited

opportunities, and, although we have no doubt that the officer appointed will possess very wide administrative, teaching and public health experience, yet his association with the deliberations of the committee from the earliest stages would undoubtedly increase his personal responsibilities and add also to the chances of complete success.

It is only reasonable to hope that such a school will form the natural headquarters of the Society of Medical Officers of Health, and that that Society will be actively associated with the school from its commencement, and it may be that the establishment of such an institution will represent the commencement of a new era in public health. The prevention of disease is a wide and comparatively unexplored field which has received little organised attention, although the boon of health has from remote ages been placed first among the blessings of mankind, and the provision of such a splendid centre makes possible not only a standard of teaching which has been previously unattainable, but also serves as an organising focus for all kinds of investigations and postgraduate studies.

If the fulfilment of the scheme outlined by Lord Athlone's Committee, providing for a vastly higher standard of training for careers in State Medicine, can be made to coincide with a similar increase in the monetary rewards obtainable during such careers, thereby attracting the best men to the public health service, then the prospects may be regarded as extremely hopeful not only from the point of view of professional but also of public interest. The public interest will only be served adequately when the service attracts and receives and pays for the best brains in the profession.

SALARIES AND THE MINISTRY.

Without ever being numbered among those optimists who believed that officials and politicians of Government Departments would be willing to assist in the campaign for reasonable remuneration for the Public Health service, we felt that, at all events, such efforts would have their good wishes and would suffer no opposition at their hands. It is, however, a most deplorable fact that there is increasing evidence that the Ministry of Health must be numbered amongst our opponents. We have no doubt that this attitude has been forced upon the Ministry by the Treasury, and we do not believe for one moment that the present policy is approved by the medical

staff of the Ministry, but the unfortunate fact remains that the influence of the Ministry is at present being used against us.

A few weeks ago we recorded and commented upon the fact that the Ministry had advised the Southwark Borough Council that £800 a year was too high as a maximum salary to be reached by their tuberculosis officer after some years' service, with the result that the Council reduced the salary to £750. There are now added two further extraordinary instances of the views that obtain at the Ministry about the salaries of health officers. The approval of the Ministry has been given to the appointment of a Medical Officer of Health for the town of Stafford at a salary of £600 (we refer elsewhere to this instance of sweating), and the Borough Council of Camberwell have been informed by the Ministry that the salary of £1,200 which they proposed to pay their Medical Officer of Health is "rather high" for a town of more than a quarter of a million inhabitants, with the result that the salary has been cut down to £1,100. This extraordinary decision is made worse by the fact that the reason given for it is the low salary paid in other boroughs.

In any campaign it is a great advantage to know one's enemies as well as one's friends, and the above instances seem to show pretty clearly that the Ministry must be reckoned as being hostile to our demands about remuneration. This, if true, will be bitterly disappointing to all of us, but will merely serve to make us all the more determined to win through.

SECURITY OF TENURE.

For many years the county medical officer has been regarded as fortunate and secure on account of the position established by the Housing and Town Planning Act, 1909, and that form of security has been taken as a model to be copied when a similar position was given to all medical officers of health. It was thought, rightly or wrongly, that the Ministry of Health might be relied upon to see that the medical officer of health was treated fairly. The whole position as regards security of tenure depends upon the way in which the Ministry interpret their responsibility in this matter.

Section 68 of the Housing and Town Planning Act, 1909, provides that no county medical officer may be removed by the local authority without the consent of the Local Government Board. This section was provided, undoubtedly, with the intention of giving county medical officers security

of tenure, and it has always been understood that its effect was to prevent notice terminating the appointment being given unless consent to such notice had previously been obtained from the Local Government Board, the security lying in the assumption that the Local Government Board would only consent to such notice being given in cases where incapacity or culpability was obvious and proved.

The present difficulty has arisen owing to the fact that in some areas attempts are being made to reduce the salaries of county medical officers.—shire is one of these areas, and in this case the County Council has admitted that in order to effect such a reduction, it is necessary to give six months' notice terminating the appointment, and this has been done, presumably without the consent of the Ministry of Health being sought or obtained.

If such steps as the above do not constitute a breach of the Housing and Town Planning Act, then it is obvious that the alleged security of tenure conferred by the Housing and Town Planning Act was purely fictitious, as the process could be continued until the salary became nominal.

Any reduction of salary having legally to be preceded by notice of termination of the appointment, it is the contention of the Society of Medical Officers of Health that any such notice constitutes "removal," and requires the consent of the Ministry of Health. The Society contends also that such consent should not be forthcoming except on the grounds of incapacity or misconduct.

In view of the urgency and the overwhelming importance of the subject to every medical officer of health, it is hoped that the Ministry will, at the earliest possible moment, obtain such legal information as will enable it to decide whether the above interpretation of Section 68 of the Housing and Town Planning Act, 1909, is one that is accepted by the Ministry.

The above facts have been communicated by the Society to the Ministry, from whom the following reply has been received:—

"I am to inform the Society of Medical Officers of Health that the Minister's consent is required to the determination of the appointment of a County Medical Officer of Health, and that, from the 1st proximo, his consent will be required to the determination of the appointment of all Medical Officers of Health to whom the Public Health (Officers) Act, 1921, applies. At the same time I am to state that in deciding whether he should consent to the determination of an appointment, the Minister would take into consideration all relevant circumstances affecting the case.

"I am to add that the Minister has not received any application from the County Council of . . . shire for sanction to the determination of the appointment of Dr. . . . , and that it is not competent to the County Council to determine the appointment without the Minister's consent."

THE STAFFORD APPOINTMENT.

An attempt is to be made to secure a medical officer of health for Stafford at a salary of £600, and the gross inadequacy of such a stipend is supposed to be explained by the magnanimous permission that it is proposed to grant to the new officer to supplement his official income by undertaking any other work *except that of general practitioner*. The value of this permission is worth exactly nothing even if the officer had any spare time. Any man who conscientiously carries out the duties of medical officer of health in a town like Stafford must be paid an adequate salary and must be saved from the necessity of touting for odds and ends of professional work in the neighbourhood. The advertisement will be refused by the professional journals and we hope that there will be no applicants. An application for such an appointment constitutes a betrayal of the whole public health service.

The present time is probably the most critical stage in the whole history of the public health service, and everything depends upon the developments of the next one or two years. Partly owing to an entire lack of organisation in the past, and partly on account of a pathetic, child-like faith that a government department would see justice done, the service has degenerated to an inferior position, and the monetary rewards obtainable bear no reasonable comparison either with professional incomes in the other branches of medicine and surgery or with the salaries of medical men employed by the Admiralty, the India Office, and the War Office.

If all our members are loyal to each other and to the Society, we can without difficulty teach the local authorities, the Ministry of Health, and the Treasury that sweated services for public health are no longer obtainable and that such services are against the public interest. Everything depends upon the loyalty of our members.

SUPERANNUATION.

The second reading of the Local Government and other Officers' Superannuation Bill, introduced in the House of Commons on 10th February, is down for 7th April. We hope that

every member of the Society will consider it to be his duty to write to every M.P. whom he can reasonably approach and to urge upon them the desirability of such amendment of the second clause of the Bill as will make the adoption of the measure compulsory upon all authorities. As drafted it is adoptive, and would remain inoperative in just those areas where the officers of the local authority are being worst treated. Every M.P. should also be urged to support the measure when so amended. It should not be difficult for medical officers of health to advance irresistible arguments in favour of a measure for which we have been striving for so many years.

THE DIRECTORS' MEMORANDUM.

THE Association of County Medical Officers has now considered the Memorandum drawn up recently by the Association of Directors and Secretaries for Education, and has issued a report which is printed in this issue. The proposals contained in the Memorandum are so fantastic, and so evidently biased by hostility not only to the school medical officer but to his work also, that they might be passed over as being not worthy of comment were it not for the fact that they obviously express a considered policy definitely determined upon by the body responsible for its production. The Association of County Medical Officers has learned without surprise that the County Councils Association has not considered this Memorandum worthy of any comment, but in view of the fact that many directors and secretaries of education have done their utmost to introduce into their areas the principles contained in the Memorandum, and that others may be encouraged by its publication to attempt similar measures in the future, it was considered desirable to issue a formal statement on the subject. It may now be possible to summarise the views of the Society of Medical Officers of Health and the British Medical Association, somewhat on the following lines:—

I. The continued inclusion of preventive health work centrally in the Board of Education and locally in the Education Departments of local authorities is against the public interest.

II. All the work connected with the Medical Inspection and treatment of school children should be transferred centrally to the Ministry of Health and locally to the public health department of the local authority. Such a rearrange-

ment would lead to considerable economies as well as increased efficiency.

III. Under existing arrangements the school medical service offers no prospects to medical practitioners and is underpaid. In some areas the school medical service is discredited and rendered ineffective by being subordinated to education officers, and in these areas the work is least efficient.

IV. Arising directly out of the Memorandum of the Directors of Education it may be stated as a settled policy of the M.O.H. Society and the B.M.A. that

1. The school medical officer is the administrative head of all the medical work of the local authority while the Director of Education is the administrative head of all the work of an educational character. The two officers are independent, and both are directly responsible to the local authority.

2. All reports of the school medical officer shall be presented by him direct to the local authority and not through the Director or Secretary. In no circumstances whatever should reports be presented to a Committee through another officer.

3. The staff of the school medical officer is entirely under his jurisdiction, and no other officer of the local authority has any right to communicate with any member of the staff concerning his or her duties.

4. All communication between the school medical officer and the schools and teachers should be made direct.

5. Approval only by the Committee is necessary in the case of circulars and forms issued by the medical officer.

TRAINING FOR THE D.P.H.

For many years the opinions have been expressed by teachers and examiners on public health that the existing regulations for the Diploma in Public Health are out of date and need revision, and the General Medical Council has recently circulated among the medical schools, a report by its Public Health Committee containing draft regulations and rules for diplomas or degrees on sanitary science, public health, or State medicine which foreshadow somewhat drastic changes in the courses of instruction which must be provided for candidates for such diplomas or degrees. The following table indicates the proposed alteration:—

Draft Regulations.	Present Regulations
Minimum time after qualification before admission to final examination for diploma—Two years	Nine months
Minimum length of curriculum—One year	Nine months
Bacteriology and Parasitology 180 hrs. Chemistry and Physics 90 hrs. —Five months	Four months 240 hours
Lecture Courses—100 hrs.	Not compulsory, but a course of instruction in Sanitary Law and Administration reduces outdoor work by one-half
Public Health and Sanitation 30	Three months
Epidemiology 20	
Sanitary Law and Administration 20	
Sanitary Construction 12	
Vital Statistics 10	
Meteorology and Climatology 8	
Infectious Diseases Hospital—Three months	
With 30 attendances	
Outdoor Sanitary Work—Six months	Six months, consisting of 60 attendances reduced to three months, 30 attendances, if lectures are taken
With 60 attendances	

No considered opinion has yet been reached upon this subject by the Society of Medical Officers of Health, but the following notes may be of interest.

In favour of these drastic changes it may be admitted at once that if and when the new regulations come into force the public health service will at once be placed thereby in a vastly superior position than that which it occupies to-day, and from that point of view we wish the scheme success. Admission to the service would be only by means of a course of preparation of a most severe character, resulting in an inevitable improvement in the standing of all health officers.

On the other hand, although it is recognised that a need has arisen for the raising of the standard and scope of examination for the D.P.H., and while everyone will be in sympathy with any effort to make the D.P.H. course deal as adequately as possible with the preventive aspects of medicine, yet it is doubtful whether the real interests of either the public or the profession will be served by merely increasing the technical difficulties that have to be surmounted before a candidate is permitted to enter for the examination. The modern tendency is, in fact, in the opposite direction, and the essential formalities prior to the examination for many of the higher postgraduate diplomas and degrees are extremely moderate. If these draft regulations come into

force, it will be far easier for a man to make himself eligible for admission to the examination for, say, the F.R.C.S. than the D.P.H.

Moreover, most medical schools would find it difficult to provide a full course such as that which would be required under the draft regulations, and the facilities available would be reduced considerably. It is doubtful whether the proper courses would be provided outside London, and even in London it is doubtful whether such courses could be conducted successfully anywhere outside the new Rockefeller Institute, which has yet to be planned and built.

The present difficulty could be overcome by methods more in accord with modern ideas by issuing a wide examination syllabus of subjects, and by doubling or trebling the time occupied by the examinations. The draft regulations suggests a minimum period of two days for Part I., and a similar minimum for Part II. If each of these were doubled it would be possible to make the examination much more fair to the candidates and at the same time more uniform, but of a high standard. All these examinations now require a high standard of knowledge, but the time occupied is far too short for the test to be a fair one, with the result that luck plays an unnecessarily large part in the result.

Another fact worthy of consideration is that the regulations proposed would be very discouraging to the man in practice who, in a few years after qualification, decides to take up public health work. These men have formed a large proportion of D.P.H. candidates in the past. It would be necessary for such men in future to give whole time for one year, or half time for two years, which would constitute an insuperable obstacle to a large majority.

The foregoing remarks apply to the proposals as a whole. So far as the details are concerned, the following criticisms may be offered:—

(1) The course of study outlined in the draft regulations can be covered in one year with a reasonable amount of time to spare for revision. It is not clear, therefore, what object is attained by holding up a man for another year before he is allowed to complete the examination. Such a candidate would have had to devote his whole time to the work, and it seems reasonable to suggest that he should be allowed to enter the examination as soon as the required instruction is complete.

(2) Meteorology and Climatology should be included in the instruction in Physics in relation to Public Health. The only necessary parts of these

subjects are such elements of meteorology as bear on climatology.

(3) Experience has proved in the past that Applied Physics Vital Statistics and Meteorology can be satisfactorily dealt with in about 12 hours' instruction in the form of lectures supplemented by about six hours' practical work. The usual course in Physics consists of the Principles of Physics as applied to ventilation, heating, flow of water in pipes, humidity. The draft regulations would make it appear that something like 50 hours must be given to these subjects, which, after all, are but ancillary to the main subjects. The sense of proportion would appear to have been lost by those who drafted the proposed rules.

(4) It is open to doubt whether, by merely increasing the length of time to be spent at practical bacteriology and parasitology, the candidate will gain more than some small improvement in technique. The shortcomings of the present course are due to faults in the syllabus, which contains too little about modes of spread of infection, production of immunity, and methods of prophylaxis.

(5) It should not be difficult to draw up a syllabus more in touch with modern development without overloading the student with a mass of detail. The issue of such a syllabus, revised from time to time, combined with the raising of the standard and comprehensiveness of the examination, would do far more to achieve the object in view than would a mere increase in the length of time to be spent in lectures or at the laboratory bench.

THE CENTRAL MIDWIVES BOARD.

A year ago the Society of Medical Officers of Health appointed a representative on the re-constituted Central Midwives Board. The appointment was for a period of three years in accordance with the Central Midwives Board (Constitution) Order, 1920, but during the first year the Board, for some mysterious reason, appealed to the Ministry of Health for all the appointments to be made annually, and this was granted. As at present constituted, there are two representative medical officers of health on the Board, the M.O.H. for the County of Hampshire and the M.O.H. for the County Borough of Leeds. The former, as direct representative of the Society, has reported that during the year 1921 the following important points were dealt with at the various meetings of the Board:—

1. INSPECTION.

In connection with Rule E. 25, the Board decided that this rule compels the Local Supervising

Authority to secure a proper inspection of the register, etc., of every midwife, but leaves the inspection of the residence and the mode of practice to the discretion of the Local Supervising Authority. The Board added to this decision a comment to the effect that unnecessary inspection should be avoided as likely to annoy the patient and to cast a doubt on the efficiency of the midwife, and generally to interfere with the working of the Act. As a matter of fact it is very doubtful whether any real supervision of the practice of the midwives, such as it obviously contemplated by the Midwives Act, 1902, is being exercised in any area in the country.

2. DRUGS.

The B.M.A. and other medical bodies have taken strong exception to the administration of opium and pituitrin by midwives except under the direction of a medical man. The Board have declined to take any action on this representation, and have made the statement that in its experience in 19 years it has never had a case before it in which a midwife has been found to administer a drug improperly. This is probably due to the fact that no Local Supervising Authority really has any intimate knowledge of the actual practice of the midwives; the C.M.B. would only hear of such cases by an unlikely accident.

3. MIDWIVES ACTING AS MONTHLY NURSES.

The most unsatisfactory position at the present time is the one due to the fact that a valid defence in any charge of breach of the rules on the part of a midwife is to bring proof that she was acting as a monthly nurse in connection with the case. All kinds of misdemeanours and breaches of the rules can be carried out when it can be proved that a doctor had been booked and that the midwife was booked only as a monthly nurse, although in many such cases she actually acts as the midwife. In this connection the C.M.B. has resolved that in the opinion of the Board the Midwives Acts confer no jurisdiction upon either the C.M.B. or the Local Supervisory Authorities to investigate charges of malpractice, negligence, or professional misconduct, preferred against the midwife when acting as monthly nurse, unless her conduct constitutes a violation of Rule E. 6.

It appears desirable that the M.O.H. Society should at an early date consider the working of the Midwives Acts and should instruct its representative on the above and other matters.

DR. J. P. WALKER (2, Siviars Mansions, Pier Street, Ryde, Isle of Wight) has copies of "Public Health" from 1909 onwards, which he will be glad to send to any colleague who is willing to defray the bare cost of packing and carriage.

THE PROGRESS OF HYGIENE, PATHOLOGY, AND BACTERIOLOGY, IN THE NAVAL MEDICAL SERVICE.*

BY

SIR P. BASSETT-SMITH, K.C.B., C.M.G., R.N.

My first words are to thank the Council and Fellows of the Services Group of the Society of Medical Officers of Health for electing me to act as President for the year. I greatly appreciate the honour you have thus conferred upon me, especially as my Fellowship is of such recent date and that my duties are not really those of a Medical Officer of Health.

The position is the more difficult as my predecessor, Colonel Kenwood, C.M.G., is so distinguished and so universally looked up to as an ideal President, in touch with you all in a way I never can be. After very much thought and consideration it appeared to me it would be better not to take any special subject for my address, but that it would probably interest you more and be more fitting if I could show the evolution of our present position in the Navy with regard to Hygiene, Pathology, and Bacteriology, with some suggestions for the future.

Picture to yourselves the "good old days" of 1692, when Barber-Surgeons were appointed in the Naval Medical Service, at first as "pressed men," how in 1704 Surgeons in ships were rated with common men ranking with pilots, gunners and carpenters. Even then they were only considered as inferior, and allowed, as a favour, to mess with warrant officers. A century later, 1808, the Senior Medical Officer alone was allowed to have a cabin and mess in the wardroom. He then used to wear, on board, a frock coat and a tall hat—a dress one would think most inappropriate for ship life. Under these circumstances the standard of efficiency was not high and Hygiene was not of much account.

The great pioneers in Hygiene and Preventive Medicine for the Naval Service were Lind and Blane. The former, Dr. Lind, afterwards Sir James Lind, was Senior Physician of Haslar Hospital (Physician ranking much higher than Surgeon in those days), and he received the princely salary of £300 a year. His name will always be famous for the work he did for the prevention of Scurvy, but besides that he inaugurated many important hygienic reforms. In the Naval wars of that time Lind states that scurvy carried off more valuable lives in our fleets than the united efforts of French and Spanish arms,

*Presidential address to the Services Group of the M.O.H. Society.

reminding us of the experience with typhoid in the Boer War. He recommended the use of lemon juice and sour-kraut, which, however, was not officially enforced till forty years after, owing to the inertia of the Central Admiralty Board. Lind's hygiene reforms included distillation of sea water, better ventilation and drying of ships, improved clothing for the men and cleanliness. While emphatic as to the value of fresh air and cleanliness for the prevention of the spreading of infectious diseases, he fully recognised that other means were required to destroy the infecting agents by fumigation with chemicals, such as sulphur and arsenic, thus anticipating modern methods. His wide range of activities are to be gathered from the titles of his two chief books, "On the most effectual methods of Preserving the Health of the Seaman" and "An Essay in Diseases incidental to Europeans in hot climates." He was described by Trotter as the Father of Nautical Medicine.

Next to Lind as a Hygienist reformer in the Navy came Sir Gilbert Blane, by whose tact and wisdom many of Lind's recommendations were carried into effect. He worked hard for reform from 1780, when he was Physician to the Fleet, until the time of his death in 1834. He strongly supported vaccination against small-pox, and Naval Surgeons were directed to inoculate any seamen who were desirous of it, and it should be noted that in 1801 eighty-nine Naval Surgeons presented Jenner with a Gold Medal. Vaccination, however, was not made compulsory in the Royal Navy until 1858. Blane in his time advocated that Naval Surgeons should be allowed to employ their spare time in private practice and thus increase their professional knowledge—a concession again granted to us in 1913. His memory is now chiefly associated with the Gold Medal awarded annually to Naval Medical Officers, and which was originally given for the best Journals kept by Officers afloat, thus encouraging observation and note-taking.

It was in 1827 under the enlightened and advanced views of Sir Wm. Burdett, at that time Medical Director-General, that a true advance was made and the idea of instruction for Medical Officers was promulgated. A Dr. Scott founded the Pathological Museum at Haslar, which received specimens from Malta, Chatham, and Greenwich. He was appointed to give clinical lectures and instruction in the post-mortem room. Dr. Scott's first class consisted of 22 Medical Officers drawn from the Hospital and ships of the harbour. There are some rather amusing directions recorded concerning the behaviour of the

audience. They are called "respectable individuals" and are asked to observe the strictest decorum and not to presume to offer any remarks either aloud or by whispering, this practice being liable to distract the attention of the lecturer and the audience. The title of "Lecturer" disappeared from the Navy List in 1840, and probably lectures and instruction ceased at the same time. It was not until 1871 that the instruction of Naval Surgeons was seriously taken in hand, the newly-joined men being then sent to the Army School at Netley. In 1881 it was considered that the training of the young Medical Officers should be given by those with whom they would afterwards be associated, and who were thoroughly conversant with naval requirements and life on board ship. A School was therefore started at Haslar Hospital, and a small laboratory was equipped there for the practical examination of water, food, and for the study of Meteorology. Lectures were given on general and naval hygiene, examination of food, naval construction, general hospital instruction and ambulance drill, while post-mortem examinations were also made.

In 1897 the importance of instruction in Tropical Medicine for all Medical Officers was pointed out by Sir Patrick Manson, and in 1899 it was decided to revise the educational course of Naval Medical Officers so as to include the study of Tropical Diseases, Bacteriology, and Military Surgery. In 1900 this was done. The course consisted of four months' uninterrupted study and included theoretical and practical Hygiene, Tropical Medicine, Bacteriology, Parasitology, and Pathology. First there was a course for all newly-entered surgeons. A second course for promotion—at that time to Staff-Surgeon of 8-12 years' service, and special encouragement was given by the presentation of medals, and by granting accelerated promotion to those who most distinguished themselves. An increased importance was placed on post-mortem examinations and records. Thus a great step forward was made in the study of Hygiene and Preventive Medicine in the Service. Very soon it was recognised that much could also be done for the Medical Officers in the Fleet by holding voluntary courses in the laboratory for senior men who studied but were not examined on the work done. The last type of class was a great success, so much so that similar courses were directed to be held at the two other great Naval Hospitals at Plymouth and Chatham. Research work was also encouraged by the Admiralty, particularly by Lord Selborne, who was First Lord. He took very great personal interest in the methods for the prevention of

Mediterranean Fever, which was at that time a great source of morbidity in the Fleet. Special promotion was given for research and professional merit and enthusiasm thus stimulated. Also at this time the importance of Pathology was further recognised by the building of a special room for the Museum to display effectually the many specimens, including some from Sir Spencer Wills and Sir Andrew Clark, which were in existence, and to give further accommodation to fresh ones. The specimens of Sir Andrew Clark are a very beautiful series of injected examples of tubercular disease of the lungs which are now in the pathological museum of the Medical School of the Royal Naval College, Greenwich. A Curator's Assistant was added to the staff.

I well remember several Royal visits to the laboratory, and the stool on which King Edward rested was long kept in special veneration, but the Princesses were more impressed by the smells than anything else. An animal room was also fitted up and a licence for experimental work was obtained.

About this time the wants of the Medical Officers in the Fleet away from Hospitals was catered for. A Bacteriological Box with a book of Instructions was supplied and, later, Microscopes were added to the outfit, so that Medical Officers had the opportunity of not only keeping up their knowledge, but of doing original work. Very great advance was made in the more frequent analysis of water and food, and a water analysis box was fitted up for use in ships.

Means were supplied for the detection of Tuberculosis by tuberculin, and the preparation and use of vaccines in various diseases was encouraged; in fact, we attempted to keep in touch with all the great advances which were being made in the sister Service and in civil practice, but perhaps the most important advance was the initiation and carrying out of up-to-date methods for the detection of Syphilis by demonstrating the specific spirochaetes as early as possible, and by the extended use of the Wassermann Test—a work which has yearly increased in importance and usefulness up to the present time, for now we have specialists in the Fleets abroad who are competent to carry out this work, thus saving an enormous loss of time both to the Service and to the men themselves.

In 1912, following out the recommendations of a special Commission under Admiral Sir J. Durnford, K.C.B., the School was moved to the R.N. College, Greenwich, so as to be more directly in touch with other centres in London, and there all

instruction in Hygiene, Bacteriology, and Preventive Medicine is now carried out, the laboratories being well staffed and equipped.

The efficient ventilation of ships and submarines had become a subject of very great importance, and the examination of air samples by means of Haldane's apparatus gives rise to constant work in the Hygiene Laboratory.

A very interesting series of Anthrax cases occurred in the Fleet during the War, in several of which the shaving brushes were probably the carriers of infection. This led to the routine examination of samples taken from different stocks before they were issued for general distribution—a proceeding which, up to the present, is considered quite necessary.

My first practical introduction to Bacteriology in the Navy left a very lasting impression. While attached to a training ship for boys in the West Country in 1898, one of the lads came under my notice as he had a small, angry-looking sore in the middle of the forehead. Suspecting malignant pustule this was cut out, a specimen was stained, and Anthrax bacilli were found. A guinea-pig was commandeered and inoculated; the animal died in 24 hours and its blood was full of anthrax bacilli. The boy recovered. It was found that the boy had, a short time previously, picked up a rabbit, which he carried about for some time. On enquiry, we learnt that a cow which had died, probably from Anthrax (though there was no direct proof), had been buried in the field, that large numbers of rabbits had from time to time been found dead in the field, so we concluded that the spores of anthrax had been brought to the surface by earthworms and infected the rodents. In a neighbouring farm another animal had died, a farm hand had developed a sore and had, himself, died. As a young surgeon this gave me a lesson never to be forgotten.

It is also interesting that most of the cases in the war were suspected to be cerebro-spinal meningitis, and anthrax bacilli were abundant and easily demonstrated in the cerebro-spinal fluid obtained by lumbar puncture.

Among the bacteriological questions which not infrequently have to be faced in the Service is the elucidation and prevention of epidemics of gastro-intestinal disease attributed to food poisoning. These have been most frequent in large training ships for boys and in educational establishments. Here the Naval Health Officer steps in to clear up the epidemiological points and the material is sent to the nearest laboratory for investigation, and in

some cases the exciting cause has been isolated. A very interesting epidemic occurred some time ago in the Royal Naval School, Greenwich, when 127 boys were attacked. The onset was sudden, the symptoms were in some cases very severe with collapse, but there were no deaths. The food was enquired into and certain sausage meat was suspected, though nothing definite was discovered from the sample sent over. *Bacillus suispestifer* (mutton type) was easily isolated from the faeces of three of the boys most severely affected, which organism was typically agglutinated by the serum of the same boys and by that of other boys who had been attacked. There was no doubt that this organism was the cause of the disease and was probably introduced from the suspected food. At Plymouth an epidemic was traced to infected meat and at the R.N. College, Osborne, a curious group of cases was due to the consumption of a small quantity of potatoes which had begun to sprout—solanum poisoning.

Since the war, owing to the work of Chick, Hume and others at the Lister Institute, much experimental work has been carried out at Greenwich to find an efficient substitute for lime juice, which had been proved to be so inefficient in the prevention of scurvy. The method used has been to concentrate fresh lemon juice without heat in vacuo, and this has given good results. The efficacy of tinned tomatoes has also been proved as an anti-scorbutic for guinea pigs. The distribution of laboratories with efficient staffs throughout the country as a public health problem has lately more than once been insisted upon in this room, and each year is more recognised. Abroad this want is most urgent, as the recognition of tropical diseases is very dependent on laboratory investigations, without apparatus and skilled workers an enormous amount of material is lost which would be available for the determination of the etiology of many diseases. I have lately been much impressed in reading two French papers, one from the Yangtse and one from Tonkin, when the parsimony of the authorities in not providing up to date means of diagnosis is deplored.

The importance of practical laboratory work has become more and more fully recognised in the Navy both for hygiene and bacteriology. To ensure the fullest use of these methods, laboratories have not only been provided at the three great naval hospitals and at Greenwich, but also in all foreign hospitals and to a less extent in the smaller sick quarters and infirmaries. These, however, without a trained staff would be very handicapped, and therefore a body of sick-berth

men have been educated for the work. They have a two-months' course at Greenwich and four months at a naval hospital, which is followed by an examination; if successful the candidates are then rated as Laboratory Attendants and given extra pay. These men serve alternately in home hospital laboratories, foreign hospitals, or afloat in hospital ships or flagships. It is very remarkable with what enthusiasm and ability these men often work when properly taught, demonstrating again the fascination that these studies have to all that take them up.

All laboratory work, especially that relating to micro-biology, has an ever-spreading interest as one becomes less ignorant, so that the work becomes a pleasure and time spent on it is never lost. A very real freemasonry, too, is created among the staff from top to bottom.

Another very important factor in the evolution of hygiene and bacteriology in the Service is the much greater appreciation of the possession of higher qualifications and the greater facilities that are given to officers to obtain them by the present Medical Director General and the Medical Department. Enthusiasm is stimulated also by the knowledge that if a man has spent time, money, and brains in obtaining the D.P.H. or D.T.M. this will be taken into account and will give the holder increased chances of being employed in official positions where his special knowledge will be most useful. The former diploma is now registered in the Navy List as an honourable mention. To obtain the appointment of Naval Health Officer at the great ports or professorships at the Medical School at Greenwich the diplomas are a *sine qua non*. The effect of this policy of encouragement is shown by the fact that in recent years 14 Medical Officers have obtained the Diploma in Public Health, three the Diploma in Tropical Medicine and Hygiene, six the Fellowship of the Royal College of Surgeons of the various Licensing Bodies, and three have secured the M.R.C.P., while many have proceeded to the M.D. Degree of their respective Universities.

For examples of specially useful work that has been done I would refer to the intensely interesting researches of Surgeon Commander S. F. Dudley, O.B.E., on Arsenical Poisoning from the fumes in submarines; the Ventilation of Ships, by Surgeon Commander Munday, C.B.; Anti-Venereal Work by Surgeons Commander Kilroy, Parnell, Dudley, Scott, D.S.O., and others, and as very important the introduction of treatment on board ship with arsenical compounds, given intramuscularly or subcutaneously, thus saving a

large number of men from being sent to hospital for such treatment; and also the introduction and ever-increasing use of inoculations against enteric diseases for all in the Fleets serving abroad.

Evolution has been slow but progressive, and in the years to come, unless the Utopian period of universal disarmament, with a lamb and a lion epoch, wipes out the Navy, preventive measures will still further reduce the incidence of disease in the Service. The chief problems in the Navy at the present time are Physical Training, Prevention of Venereal Disease and Tuberculosis. The former under existing conditions of ship and barrack life is of very great importance and is very fully recognised and fairly well met. Very good work was done particularly by Surgeon-Commander Digby Bell, R.N., while with the North Sea Fleet during the trying waiting period when it was based at Scapa. Personally I should like to see more control than is at present the case, in the hands of the Medical Officers who have specialised in this subject, who are, and can be, the only judges of the cardiac efficiency of the men under training.

With regard to tuberculosis, for several years past the great improvement in the ventilation of ships, better control of the food supply has had a tendency to lower the incidence, but there are still far too many cases. This must be put down in many to the re-lighting up of a childhood infection, brought about by over strain or lowered resistance due to epidemic diseases. I have seen several following Mediterranean fever and dysentery due to the intense cachexia produced in these diseases, while the patients were in hospital. The Naval routine is that all cases of infective tuberculosis must be invalidated, therefore, what becomes of them afterwards interests us from a hygienic point of view.

These cases generally are more or less advanced phthisis, spitting up abundant T.B., but cases with incipient phthisis are also invalidated if positive X-Ray and tubercular reactions are present. When invalidated they go to their own homes, are put on full disability pension, which is periodically revised, for there is no Sanatorium for tubercle in the Navy (there is a great opportunity here for some philanthropists to show their gratitude to the Navy for safeguarding our homes), and the further treatment falls on their friends or the county. It was previously the custom when a patient was discharged from a Naval hospital to inform the M.O.H. of the area to which the patient was sent, and he would, after receiving the notification, see that proper

precautions were taken. Now we have to report direct to the Ministry of Health, and they pass it on to the M.O.H. This appears to be a procedure likely to cause delay and to be detrimental for the men and their families when returning to a poor home, generally overcrowded and often badly ventilated; though every man is informed of the danger of disseminating the disease, and what to do.

Even now we all recognise that our first duty is to prevent the men, who are admitted as first-class lives, from becoming ill; our second to relieve this should they unfortunately do so, employing all known chemical and bacteriological methods to come to a diagnosis, and to antagonise the infecting agent or agents.

Though the science of Preventive Medicine has advanced far in the Naval Service I look forward to the time when the work will be put on a still firmer basis by the introduction of a scheme on the lines of that now developed in the Army Medical Service, namely, that the Professors at Greenwich shall both be of the high rank of Surgeon-Captain (which, however, is a very equivocal title to the non-naval person), and be given pay and special allowances, for as the responsibility is great it should be suitably recognised financially, and they should be, respectively, Director of Hygiene and Pathology. Each should have an efficient understudy training to take his place when emergency arises. Each should be responsible to the Medical Director General for the special work at all naval laboratories throughout the country, and they should inspect their efficiency of personnel and apparatus. All returns should be sent in from the laboratories to them so that co-ordination and statistical results would be comparable. Each laboratory of a large hospital should have a trained Pathologist who would be able to give his whole time to the work, and these specialists should be eligible for higher promotion, without prejudice, as a recognition of their skilled work.

The steps which have been taken to provide to our great Naval centres Naval officers qualified in Public Health work have been of very great use in the establishment of that interchange of ideas and co-ordination of work so necessary for the public good between the Services and the civil officers on shore.

Surgeon-Commander R. J. MacKeown, as President of the local branch, has lately given at Portsmouth a very interesting address in which he has shown the wide scope of their duties. These officers will be of the utmost importance in

providing early information on local sanitary matters should we ever have to face another great war, acting in co-operation with officers of the War Office, Territorial Force, Air Force, and Ministry of Health. The experience in this work of Surgeon-Commander Bond, now at Greenwich, must assist materially in those Public Health problems, as adviser to the Admiralty.

I have had the great honour and pleasure of being associated with all the Medical Officers of the Navy in instructional work, first at Haslar, then at Greenwich, since 1900, have watched their progress and noted the zeal and excellence of the work done by many of them, and now when my day is over, I shall continue to watch their further successes and assist still in any way possible.

The association of hygiene and bacteriology in preventive medicine is very close, but as years go by the dependence of the Physician and Hygienist for facts from the bacteriologist on which to base conclusions becomes more and more marked.

The aphorism "The fallacy of finality" should never be forgotten. There is *no finality*. A fact discovered, which may seem final, should only stimulate to further investigations, but we should also bear in mind the wise words of Confucius, the greatest Chinese philosopher, who lived 550 B.C., that "Learning without thought is labour lost: thought without learning is perilous."

COMMON INFECTIONS OF THE GASTRO INTESTINAL TRACT.

BY

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The subject chosen is one which is familiar to you all, and is not put forward with any claim to originality, but with the view of inviting discussion on the preventative, and to a certain extent on the curative, measures which might be adopted in dealing with some of the commoner affections of the alimentary canal.

It is considered advisable to confine attention to zymotic enteritis and enteric fever, whilst omitting such conditions as tuberculosis, dysentery, jaundice and food poisoning. The former diseases have been chosen seeing that they are more prevalent throughout the country, and that we are now approaching the close of the seasonal prevalence of zymotic enteritis; and entering the period in which enteric fever is usually prevalent.

The subject of tuberculosis is too expansive for a paper of this nature, and although dysentery is a rare disease in this country yet some of you must have experienced cases amongst the civil population where the disease has been contracted from men coming back from the army, and still remaining infective. It may be considered that this had some bearing on the high degree of prevalence of zymotic enteritis during the present summer, but the evidence is hardly corroborative, since few cases of true dysentery have occurred in adults, and the enteritis was chiefly confined to children.

With regard to jaundice it may be desirable to mention six cases which have recently come to my notice amongst children, occurring in two families, four in one, and two in the other. The water supply was derived from a well, and all children were simultaneously attacked. On cleansing the well there were no further cases. On the evidence there was every reason to believe the infection was water-borne, but unfortunately no bacteriological examination was conducted, whereby the causative organism might have been demonstrated.

We will now turn to the subject of epidemic enteritis. It is unnecessary to discuss the clinical aspects of zymotic enteritis as they are so well known to you all, and we will confine ourselves to a study of the disease from a hygienic standpoint under the following headings:

- (1) Epidemiology.
- (2) Bacteriology.

With regard to the epidemiology of this disease the following facts which are well recognised, might be briefly mentioned:

- (1) The seasonal incidence is from July to September.
- (2) The prevalence is dependent upon three factors—(a) a suitable earth temperature; (b) favourable conditions of rainfall; (c) the presence of flies.

It was shown by Ballard and other observers that when the four feet earth thermometer registered fifty-six degrees F the mortality wave began to rise and continued to do so in conjunction with the temperature. I think that from your own experiences you will agree that a wet summer or a very hot summer is accompanied by a low incidence of summer diarrhoea, whereas a moderately wet summer with considerable heat is usually productive of a large number of cases. The conditions of tem-

perature and moisture are favourable to the multiplication of the house fly, and there is evidence to show that the mortality rate increases as the flies become more numerous, and although there is no consensus of opinion these conditions of heat and moisture also favour multiplication of the infecting organism.

The disease is more prevalent in congested areas with the privy-midden system of excrement disposal.

The promiscuous defæcation of the children of the lower classes who are able to move about whilst suffering from the disease, and the negligence on the part of the mothers is a very potent factor in the fly-borne nature.

From a study of cases notified in Bedlingtonshire there is usually a few sporadic cases followed by clumps which are in all probability secondary to those already notified. The virulence appears to increase as the season advances, which may be accounted for by the fact that the organism attains a greater virulence in its passage from person to person and this obtains until climatic conditions gradually produce a cessation of the disease.

The probable source of infection is through the agency of milk and other foods, but in one's experience of general practice where flies are too frequently seen around the mouths of infants there is every reason to believe that the infection may be directly transmitted, and this may account for cases occurring in breast fed children.

Although epidemic enteritis is essentially a disease of summer, still one invariably sees cases occurring in winter. This was strikingly brought to my notice during the extensive epidemic of enteric fever in Bedlingtonshire in 1918, when during the winter months cases of enteritis occurred in children previous to, and simultaneously with the occurrence of enteric fever. This was probably due, as the water analysis suggested, to an infection with the bacillus enteritidis sporogenes, seeing that the organism was present in the water supply.

Bacteriology. Up to the present the infective agent of summer diarrhoea has not been identified with certainty. Different organisms have been reported as the causative agent. Examination of the faeces of cases, and experiments on flies would seem to show that morgans No. 1 bacillus is the most common organism present. It is unnecessary to dwell further over this subject.

Enteric Fever.

In dealing with summer diarrhoea in children the practitioner must never forget the possibility of enteric fever, and any case of intractable diarrhoea in a child should arouse suspicion and demand a blood examination for widal reaction, or removal to hospital for observation. Within the past two weeks four cases of enteric have come to my notice, all occurring in close proximity to one another, and after investigation I am led to believe that all four cases are secondary to a case of long continued diarrhoea with recovery in a child, which was possibly unrecognised enteric. The mode of infection in these cases has probably been by the agency of flies, the privy-midden system being in use in that area. Three cases each serologically negative on three examinations have now been proved positive. Examination of faeces showed *B. Typhosus* present.

In Bedlingtonshire during the past forty years, with the exception of an extensive water-borne outbreak in 1918, which was productive of 165 cases and a marked falling off in the succeeding years, there has been an average annual incidence of approximately 16 cases. Many of these were probably water-borne in nature, although a proportion would certainly arise from chronic carriers during the fly season or even be transmitted by inhalation if such does occasionally occur as suggested by some observers. We cannot ignore the fact that the early symptoms of the disease closely resemble those of influenza. The large number of cases of cholelithiasis and cholecystitis in this district bears out the evidence of long-standing enteric fever. With such a large number of chronic carriers which certainly must exist, under favourable climatic conditions of heat and moisture such as has recently been present, one can anticipate a number of sporadic cases even though the water supply has been altered.

Preventative measures. The only efficient means of dealing with these two diseases is the abolition of the privy-midden system and adoption of the water carriage system. With the preponderance of the privy-midden system in many urban and rural districts one can only expect limited success by palliative measures. Regarding enteric fever little can be anticipated in this respect seeing that the isolation and treatment of chronic carriers is almost impossible.

More success may be expected with summer diarrhoea by making the notification of the

disease compulsory in children under two years of age, during the months of July, August and September, with an extension if necessary. By this means the health visitors are enabled to get in touch with every case, and instruct the mother in dietetic and preventative measures, which are so essential.

Furthermore, there is an opportunity afforded of dealing with the early cases, and to a certain degree controlling the spread of the infection.

It is well recognised that elimination and starvation are the essential means in treating the disease, and medicinal treatment takes a secondary position.

This system of home visiting and individual instruction is certainly more efficacious than the distribution of leaflets during the seasonal prevalence, or talks to mothers at the Maternity and Child Welfare Centres.

The full measure of success can only be anticipated if medical practitioners would notify all cases as early as possible instead of notifying those which are serious, and in some cases in a moribund state.

Fortunately a proportion of cases come to the notice of the health visitors during their routine visiting, although it is desirable that all cases, mild or otherwise, should be notified by the medical attendant as early as possible.

Compulsory notifications has been in operation in Bedlingtonshire during the past four years, and has been the means of reducing the mortality rate from zymotic enteritis.

I must again admit that the paper presents nothing scientific or original, but still I hope some discussion may arise therefrom.

Discussion.

Dr. Hislop said that he also had had recently undoubted cases of enteric fever with negative widal reactions. He suggested that with the return of the army from France a new strain of the bacillus typhosus had been introduced into the country, which might account for the absence of the reaction. Until about two years ago the serum used for inoculation had given good results, but it did not seem now to have the same effect.

Dr. Bruce thought that economic conditions had conduced to a smaller consumption of cockles and other shell-fish, and of cooked meats from the porkshop, which would tend to reduce the prevalence of the conditions referred to by the writer of the paper. He had found notification of summer diarrhoea during the season of its prevalence most valuable, as

it enabled the health visitor to visit the cases, and much good certainly resulted. The cost was small. He had found little diarrhoea among children fed on dried milk.

Dr. Dickinson suggested that blood cultures would probably have shown the bacillus typhosus. These could be taken up to the second week.

Dr. Mostyn said he usually found diarrhoea to prevail from August to October, and often into November, and not during what were generally regarded as the summer months.

Dr. Taylor agreed with Dr. Mostyn. There might possibly be a greater case incidence towards November, but the deaths were fewer. He thought there was a relation between the incidence of the disease and small houses and overcrowding. Carriers were probably responsible for the spread of enteric fever in privy-ashpit areas. Inoculation, he thought, scarcely accounted for the great reduction in enteric fever.

Dr. Gibson pointed out that the decline in enteric fever was general prior to the war, and before there was any general inoculation, and it would appear therefore that army inoculation had not a large share in the reduction in its prevalence. It might be that public education as to the fly peril had had some effect in this respect. It was disappointing to find sporadic cases occurring in houses on the water-carriage system.

Dr. Lyons said he had found voluntary notification of diarrhoea useful. In his experience the season of incidence was much longer than the period usually quoted. Babies reared on dried milk suffered little from diarrhoea. He had obtained good results from the acetozone treatment.

Dr. Mabel Brodie found more diarrhoea in October than July. She doubted that the prolonged cases of diarrhoea quoted by Dr. Hudson were enteric fever. More probably they were due to lack of proper treatment on the part of the mothers. In her experience diarrhoea was common enough in babies fed on dried milk. Notification would be of little use unless there was adequate staff to deal with the cases when reported.

Dr. Kerr said it was interesting to see how the big enteric group of organisms was beginning to be divided up, and how the various organisms were shown to be related. Food poisoning had been supposed to be the peculiar ground of the *Salmonella* group, but now there

was also the *Aertrycke*, and in an outbreak of food poisoning in the United States recently, the paratyphoid organism was found. Was this organism not the actual cause of many of the outbreaks of food poisoning, or had it changed its function in passing through various hosts?

Diarrhoea did occur in children reared on dried milk, though relatively seldom. The four-foot thermometer theory was a tradition with some people, but other observers maintained that it was pure coincidence.

The acetozone treatment gave very wonderful results in a hospital, but was not nearly so successful in the out-patient department, or at home, owing probably to the fact that the mother could rarely be persuaded to withhold all food from the patient.

The President (Dr. Hill) said it was an undoubted fact that there had been an extraordinary reduction in the incidence of enteric fever and in the mortality from diarrhoea. All the climatic conditions during the present year seemed to point to an epidemic of diarrhoea, such as occurred in 1911, yet in his own county, in 1921, there had been 1,000 fewer deaths than in 1911. Other theories notwithstanding, he considered that there was some connection between organic pollution of the soil and diarrhoea. Most authorities agreed that at a certain temperature there appeared to be some condition in the soil which caused the organism to become active, and diarrhoea occurred at a period of the year when temperature conditions were most favourable. Hot years showed high diarrhoea attack rates, and cold and wet years the opposite. One of the reasons for the reduction perhaps was the education of the people.

With regard to enteric fever, he rather favoured the idea that a new strain of organism was responsible for the absence of the widal reaction.

Dr. Hudson, replying to the discussion, said that the spread of enteric fever is probably largely due to chronic carriers. He understood that in the third week of the disease the bacillus was more certainly found in the faeces than in the blood. Access of flies to the child's mouth, he thought, was a prolific cause of diarrhoea in infants fed on dried milk, and it was a wise precaution to cover the face of a very young child with muslin. Overcrowding and congestion probably had some connection with both diarrhoea and enteric fever. Hot moist

weather was particularly favourable for diarrhoea, and it might well happen that an epidemic continued into November. He strongly favoured notification.

VARIATIONS IN VITAL STATISTICS OF ADJOINING DISTRICTS.

BY

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Guisborough Combined District

If we are informed that the death-rate in a certain district one year is 13.0 per thousand, and in the next year 14.5, we can assert with some confidence that the conditions as regards health and life were not so favourable in the second year as in the first. If, on the other hand, we are told that the death-rate in one district is 13.0, while in an immediately adjoining district in the same year it is 14.5, we can offer no opinion as to the relative salubrity of the two districts; the rate of death, and therefore presumably the rate of sickness, has been higher in one than in the other, but the populations of the two districts may have differed in their natural susceptibility to disease and death. A high death-rate may be no blot on the sanitary scutcheon of an area, but merely the visible sign of the special composition of its population, containing a large proportion of individuals who, under the conditions subsisting generally to-day, are subject to a high death-rate wherever they are found. Such classes have been distinguished as the very young and the very old, and also males as compared to females, and it has consequently been the practice to apply corrections for the age and sex constitution of the populations before comparing death-rates of different places. But even then the comparison is difficult: can we compare, for example, the corrected or standardized death-rate of Harrogate with that of Bradford? To do so would be to neglect the differences in social composition of the two localities, differences which are vital to the question. If we could compare the death-rates in the artisan populations, or the shop-keeping populations separately of the two places, we would be well on our way to a fair comparison, and it is the purpose of this note to suggest a method by which this may be done.

As a medical officer of health of six adjacent sanitary districts, geographical variation in vital rates, as distinct from historical variation, has frequently thrust itself on my notice. These six small districts in north-east Yorkshire, on the iron-bearing south shore of the mouth of the Tees, have common characters in climate, soil, style of housing, and industry, and yet their vital statistics exhibit steady differences which may be typically seen in the rates given in the accompanying table. Why should Saltburn Urban District have a standardized death-rate of 11.7, while the neighbouring urban district of Skelton and Brotton exhibits one of 13.2, with a still greater divergence in birth-rate, from 18.0 in Saltburn to 31.3 in Skelton and Brotton? One acquainted with the localities would answer that the differences in social composition of the two districts might explain the major part at least of the variation in vital statistics.

To assess the social grade of a district by the occupation of its inhabitants is an arduous task of doubtful utility. But size of house is associated with social class at least as closely as is occupation, and the requisite information as to housing can be readily found in the census returns. In the districts with which I am concerned an obvious division exists between the inhabitants of dwellings containing five or fewer rooms (which elsewhere in this paper I shall designate briefly as "cottages," and those of dwellings with six or more rooms (to be hereafter referred to as "houses"). The cottages contain the artisan population, the houses the shopkeeping and middle-class. Comparing the six districts in the table, the vital statistics are seen to vary along with the percentage of the population living in cottages. It is an easy inference that the vital rates are possibly uniform within the cottage population of the whole area, and again in the house population, and that the differences in rates exhibited by the districts are due merely to the varying proportions of these two groups: on this hypothesis a simple calculation will soon fix these class-rates, and, as there are more than two districts, the agreement of rates calculated from them for the various districts with the actual values will test the hypothesis. How close the agreement is can be seen in the table, rows 6 and 7, 10 and 11, 13

and 14; the rates compared have been calculated to two places of decimals merely to show the degree of correspondence, and not with any claim that this accuracy is warranted by the size of the populations furnishing the rates.

The five years, 1909 to 1913, were chosen for the comparison as presenting figures undisturbed by the war, and as being distributed equally round the last census year for which full returns are yet available. Considering first the birth-rate, which one is accustomed to regard as varying with social status, the mean birth-rate for the five years in each district is given in row 4 of the table, but as row 5 shows that the percentage of married females at child-bearing age varies markedly in the area, a preliminary correction for this factor is advisable before making comparisons. This has been done by calculating the "standardized" birth-rate of row 6, which is the mean birth-rate of the districts if the percentage of married females at child-bearing ages had remained constant throughout at 12 %, approximately the mean of the whole area; that is

$$\text{Standardized birth-rate} = \text{birth-rate} \times \frac{12}{\text{percentage of married females aged 15-45.}} \quad \text{In row 7}$$

is given the rate calculated for each district on the assumption of a birth-rate of 33.7 in the cottage population, and of 14.9 in the house population, and also in the fraction of the population not in private families, which can be naturally assumed to approach the lower value. The rates calculated on this hypothesis are nearly identical with the actual standardized rates in five of the six districts, and the assumption therefore seems a sufficient explanation of the variations. In Redcar alone the calculated value exceeds the actual by some six per cent., pointing to the existence there of some factor affecting the birth-rate which is not found in the other districts. The proportion of married women engaged in occupations was, in Loftus, 2.4 %; in Skelton and Brotton, 3.6 %; in Redcar, 4.7 %; and in Guisborough Urban District, 5.3 %. Female employment therefore cannot be held to explain the whole of the discrepancy.

Turning to the death-rate, the values standardized for age and sex in row 10 have been obtained in the usual manner by multiplying the mean rates by the standardizing factors given in the Registrar-General's report for the year 1911. The calculated death-rates in row 11 are on the assumption of a death-rate of 10.56 in

the house population, and of 13.69 in the cottage population, and also in the small percentage of the inhabitants not in private families. The calculated values fall short of the actual ones by 3.2 % in the case of Loftus, and 7.5 % in Guisborough Urban District; in the other four districts the theoretical and the actual agree very closely.

The calculated infant mortality rates in row 14 are on the basis of a rate of 118 infant deaths per thousand births in the cottage population, and of 41½ deaths per thousand births in the house population, and is given by the formula calc. inf. mort. rate =

$$33.7 \times 118 \times \frac{A}{100} + 14.9 \times 41\frac{1}{2} \times \frac{B+C}{100}$$

$$33.7 \frac{A}{100} + 14.9 \frac{B+C}{100}$$

where A is the percentage of the population inhabiting cottages, B the percentage inhabiting houses, and C the percentage not in private families. The divisor of the formula is, of course, the theoretical birth-rate, and the formula can be simplified by remembering that B + C = 100 - A. The districts in which the general death-rate exceeds the calculated value have an infant mortality rate still more in excess of the theoretical one; in addition, the Guisborough Rural District, where the calculated and actual general death-rates are practically equal, shows a rate of death among infants less than has been calculated for it. In view of the general correspondence it seems reasonable to suppose that these deviations really correspond to differences in the sanitary environment, that babies are, to a slight extent, more healthily brought up in families living in the rural district than in corresponding families situated in the more urban districts, and that there were, in these particular years, circumstances injurious to health operating in the Guisborough Urban and Loftus Urban Districts that were not found in others. As regards one of these districts, there was, in fact, in these years a large influx of industrial population into Loftus with consequent strain on the housing facilities; this is displayed in the average number of persons per house at the 1911 census, and the rise in this figure since the previous census of 1901:

	Guisborough Rural District.	Guisborough Urban District.	Loftus Urban District.	Redcar Urban District.	Salthurn Urban District.	Skelton & Brotton Urban District.
Persons per house	4.55	4.95	5.38	4.49	4.65	5.19
Percentage increase or decrease over the 1901 figure...	-6.0	+6.5	+14.0	-6.7	-2.3	+3.6

This condition was more or less temporary and later years show a much improved death-rate, both general and in infants. In Guisborough Urban District, on the other hand, both earlier and later vital statistics indicate a persisting unfavourable influence; the town of Guisborough, in which the bulk of the people are collected, has existed since mediæval times and contains a larger number of dwellings in unhealthy courts and alleys than the other five districts.

Tested by the general degree of correspondence between the actual and calculated values, the hypothesis of normal rates throughout the area within the two main divisions of the population is in accord with the facts. Extraneous evidence also supports their probability. In the Registrar-General's enquiry into infant mortality rate, as associated with the father's occupation, in the year 1911 (the year with the highest infant mortality of the five years 1909-13) the mean rate in the nine occupations with the lowest infant mortality was 42, and in the seventeen occupations with the highest infant mortality, 171. In Guisborough Urban District, for the year 1920, by ascertaining the size of the house in which each notified birth occurred, I have found the birth-rate (assuming the distribution of the population between the different sizes of house to be as in 1911) to have been 32.6 in the cottage population, and 15.3 in the house population.

One may conclude then that the vital rates in the cottage and in the house population extracted from the rates for the individual districts are reasonably near the facts in this area; that among the inhabitants of cottages the normal death-rate is 13.7, the birth-rate 33.7, and the infant mortality rate 118, while in those living in houses the normal-death-rate is 10.6, the birth-rate 14.9 and the infant mortality rate 41½. One is immediately struck by the fact that the

Table, based on the figures of the 1911 census, and on the births and deaths in the districts in the years 1909-1913.

	Salthurn Urban District.	Redcar Urban District.	Guisbro' Rural District.	Guisbro' Urban District.	Loftus Urban District.	Skelton & Brotton Urban District.
Percentage of population:—						
(1) (a) in private families living in tenements of less than six rooms ...	31.0	56.8	69.3	78.2	80.0	84.3
(2) (b) in private families living in tenements of more than five rooms ...	63.2	41.1	30.0	18.2	18.46	15.1
(3) (c) not in private families ...	5.8	2.1	0.7	3.6	1.54	0.6
(4) Mean Birth-rate ...	18.0	25.2	26.3	29.4	32.8	31.3
(5) Percentage of married females aged 15-45 in general population ...	10.39	12.62	11.30	12.02	12.95	12.20
(6) "Standardized" birth-rate ...	20.75	24.00	27.90	29.38	30.39	30.78
(7) Calculated birth-rate ...	20.73	25.58	27.93	29.60	29.94	30.75
(8) Percentage deficiency or excess of calculated over actual rate ...	-0.10	+6.2	+0.11	+0.74	-1.50	-0.10
(9) Mean Death-rate ...	12.20	12.62	14.03	15.27	13.44	13.41
(10) Standardized Death-rate ...	11.73	12.39	12.73	14.11	13.53	13.24
(11) Calculated Death-rate ...	11.71	12.40	12.75	13.12	13.11	13.22
(12) Percentage deficiency or excess of calculated over actual rate ...	-0.17	+0.08	+0.16	-7.5	-3.9	-0.15
(13) Mean Infant Mortality Rate ...	80	99	101	122½	117	112
(14) Calculated Infant Mortality Rate ...	80	99	105	109½	110½	112
(15) Percentage deficiency or excess of calculated over actual rate ...	+0	+0	+4.0	-10.6	-5.5	+0

natural yearly rate of increase, by excess of births over deaths, while only 4.3 per thousand of the dwellers in houses, is 20.0 per thousand in the cottages; in other words, while the cottage population would double itself in thirty-five years, it would take the house population 165 years to achieve the same result. The apostles of birth-control have their field of activities sharply defined. One must not, however, forget that there is a migration from the cottages to the houses.

As compared with those living in houses the inhabitants of cottages have a death-rate larger by 30 per cent., a birth-rate larger by 126 per cent., and an infant mortality rate greater by 184 per cent. One is perhaps inclined, without sufficient reason, to attribute the higher death-rate in the smaller dwellings entirely to defects in sanitary environment; there is no doubt that this will not explain the much greater difference in birth-rate, almost certainly due to difference in habits and not to variations in real fertility. But if the increased birth-rate is due to what may be called lack of foresight, it is to be expected that this same habit of mind, and others associated, will lead to an increased death-rate, and especially to a larger death-rate among infants. The infant mortality rate throughout the country has diminished from a figure of 154 deaths per thousand births in 1900 to 80 in 1920; has this been due to structural changes in the environment of the people, or has it not rather been due to improvement in the habits and customs of the mothers? Doubtless there is more sickness in the smaller dwellings attributable to germ-infested or stagnant air, but how much of this is due to the smaller rooms and more closely-built houses, and how much due to the custom of the closed window? It must always be worth while to better the structural environment, but improvement in the knowledge and practice of habits of health would lead to even greater results.

I hope that other medical officers of health whose districts afford them the opportunity will test the suggestions I have put forward. It is not to be expected that the rates existing among the cottages and houses in my area will be found unaltered elsewhere under different conditions, but it is possible that, with further knowledge,

a general correction for the effects of social class may be evolved, a correction as easy of application as the official correction for age and sex, whereby, in making comparisons of the vital statistics of different localities, one would be able to exclude the effects, not only of varying age and sex constitution, but also of the differing social make-up of the populations.

NOTES ON BACKWARD CHILDREN.

BY

J. J. BUCHAN, M.D., M.B., Ch.B., D.P.H.,
M.O.H., Bradford.

The teachers in all the schools in Bradford have sent details of the number of children whom they consider two years backward and more than two years backward. The total number of these children is 1,407, of whom 1,040 are estimated to be two years backward and 367 more than two years backward. These children are distributed pretty evenly over the city, but it is to be noted that there is an appreciably larger proportion in the poorer districts in the centre of the city and in the Southern part of the city. From an examination of the returns, it is quite clear that in the causation of this backwardness there are three main factors:—

1. *Illness of the Child.* This is the largest single cause, the children losing long periods of active educational work, throwing them some years behind the standard of children of the same age. Many of them have been at the open-air school and some at the cripple school. These are children of normal mentality whose opportunities for educational training have simply been curtailed by their illness. The advantage of instituting backward classes for these children is not particularly great, as they can with very little special attention rapidly take advantage of the present educational facilities offered. Frequently their recurring illness, however, maintains them in their backward educational state. It may be stated that at least 66 per cent. of the backwardness amongst the school children of Bradford is due to this class.

2. *General Neglect and Bad Home Environment.* This is the second great cause which results in bad attendance of the child at school, thereby increasing its backwardness. The want of a sufficient home incentive makes the child careless and indifferent to its education, and this is particularly so in its later years of school attendance. There is no particular advantage in backward classes to these children who are backward

from the bad home environment. They are normal mentally, and if the root cause of their backwardness were obviated, they could maintain their place easily with little special attention on the part of the teacher. It may be estimated that something under 25 per cent. of the children reported as backward from the schools are backward from this cause. As would be expected, this cause operates chiefly in the poorer districts of the town, and to a large extent gives rise to the apparent increased backwardness in these communities.

3. The last cause may be spoken of as intrinsic or idiopathic backwardness giving rise to slowness, dulness or stupidity in the child, and it would appear to account for something like 10 per cent. of the backwardness reported from the schools. This backwardness arises from either a delay in the mental development of the child or a greater or lesser degree of dulness or mental deficiency. It is this class of child who would be most benefited by the institution of backward classes. They are far from numerous, indeed the smallness of their number is rather remarkable.

"FIVE YEARS' EXPERIENCE OF THE NOTIFICATION OF PREGNANCY."*

BY

S. G. MOORE, M.D., D.P.H., M.O.H.,
Huddersfield.

Milran Lecturer, 1916.

The figures which I will put before you are not sufficiently large to enable conclusive inferences to be made from them. On the other hand, they seem to have some value, and are submitted for what they are worth.

It may be interesting to explain how I approached the subject of the notification of pregnancy. Many years ago it came under my notice that the deaths of women in child bed occurred at the rate of from 3 to 6 per 1,000 births. Such a rate was not likely to materially affect the level of the general death rate, and for that reason I left the thing alone. During the weekly scrutiny of the death returns, from time to time entries excited my interest from their pathetic character. I take it that none can view without feelings of grief and pity the death of a woman at the very period which is the consummation of her womanhood; and when to that is added the knowledge that the calamity to herself and her family could readily have been prevented, these compassionate

feelings become poignant indeed. Eventually I was led to attempt something.

Because in the death returns there occurred regularly entries which showed that human life was sacrificed under an existing system, it seemed to me that a change was called for. It may be regarded as an interference, but if it is an interference it is justified by the situation. The first manifest procedure was to get to know of the existence of paid-poetics at a sufficiently early period. The most direct method of doing this was to provide for their notification to the Sanitary Authority—hence the system. A lettercard as follows was introduced:—

COUNTY BOROUGH OF HUDDERSFIELD.

NOTIFICATION OF PREGNANCY.

Date

To the Medical Officer of Health,
Huddersfield,

After having obtained her consent to do so, I notify that (a)
of (b)

.....
is expecting to be confined on or about
.....192

Signed (c)

This notification should reach me within 7 days of engagement, otherwise fee will not be paid.

(a) Name of expectant mother.

(b) Postal address of expectant mother.

(c) Signature of notifier.

The woman is visited by a medical practitioner. In case of need the woman is advised to consult her family doctor. A copy of the report of the Assistant Medical Officer of Health who visited the case is sent to him, and the case is followed up. Home-helps (housekeepers) and home-assistants (charwomen) are provided where such assistance is clearly required.

It is an essential condition precedent to the notification that the woman concerned should consent. The notification must not be asked for against her will. It lies in the hands of the Sanitary Authority to so conduct matters that the notifications and consequent ministrations are acceptable to the public whom they serve.

It should be observed that the visit from the Public Health Department is paid by a medical practitioner—not by a nurse, midwife or health visitor. I would sustain the objection of midwives and maternity nurses to their cases being visited by any less highly qualified person than a medical practitioner. I would not expect to receive notifications of pregnancy from them under such circumstances. I regard it as essential that the visit should be paid by a "doctor."

* Read at Yorkshire Branch, Society M.O.H., Leeds, November 24th, 1921.

It is equally essential that no treatment be provided by the Officers of the Public Health Service—that is not their function. Wherever necessary cases must be referred to their own doctor.

These three conditions being faithfully followed, no objection to the notification of pregnancy can reasonably be made, and all the direful forebodings and dismal prophecies which heralded the introduction of this system will be falsified in other places as they have been during five years' experience in Huddersfield.

The following table (a) is ample evidence that the system meets with substantial acceptance in the Borough:—

NOTIFICATION OF PREGNANCY.

Percentage of notified pregnancies to total number of pregnancies known.

Period.	Percentage.
First six monthly period, January to June, 1916	7.21
Second " " " " July to December " "	15.48
Third " " " " January to June, 1917	21.77
Fourth " " " " July to December " "	26.81
Fifth " " " " January to June, 1918	41.42
Sixth " " " " July to December " "	28.68
Seventh " " " " January to June, 1919	33.38
Eighth " " " " July to December " "	34.65
Ninth " " " " January to June, 1920	37.21
Tenth " " " " July to December " "	37.74
Eleventh " " " " January to June, 1921	41.5

The following table (b) is a summarised statement of deaths in parturition:—

DEATHS—PARTURITION IN THE COUNTY BOROUGH OF HUDDERSFIELD DURING THE PERIOD JANUARY, 1901, TO DECEMBER, 1920.

No.	Cause of Death	First 5 yearly period. Before notification of Births.	Second 5 yearly period.	Third 5 yearly period.	Fourth 5 yearly period. Following notification of Pregnancy.	Total.
1.	Renal ...	9	19	15	9	52
2.	Septic ...	29	19	12	7	67
3.	From Hæmorrhage ...	12	11	10	10	43
4.	During Labour ...	9	7	3	5	24
5.	Embolism ...	0	3	7	5	15
6.	Ectopic ...	0	0	3	2	5
7.	Other Causes ...	7	7	5	6	25
		66	66	44	44	231

Deaths from the first four cases are regarded as being more or less preventable if the conditions are known and dealt with in time.

They are further summarised in the table at the head of next column.

For what these small figures are worth the outlook seems promising. It is very much to be regretted that data are not available for comparable compilations to be made for the whole country.

DEATHS—PARTURITION IN THE COUNTY BOROUGH OF HUDDERSFIELD DURING THE PERIOD JANUARY, 1901, TO DECEMBER, 1920.

	First 5 yearly period. Before notification of Births.	Second 5 yearly period.	Third 5 yearly period.	Fourth 5 yearly period. Following notification of pregnancy.	Total.
Total preventable Causes	59	56	40	31	186
Total Non-preventable Causes	7	10	15	13	45
	66	66	55	44	231

But one may be impressed by individual cases. I have here a few examples of the sort of benefits which are conferred on the people in Huddersfield as the result of this system of notification of pregnancy. These actual cases appeal to me more forcibly than the figures:—

VOLUNTARY NOTIFICATIONS OF PREGNANCY.

Examples of cases which have received undoubted benefit.

(Extracts from Report Books of A.M.O.O.H.)

Case 1.—Mrs. N. Age 35. Visited. Patient showed signs of active syphilis, there was a history of rash, abscesses, loss of hair; marked ulceration of tongue was present. She was advised to attend her doctor, with whom the Medical Officer of Health also corresponded on the case. Treatment was given at once; a full-time healthy child was born, and both mother and child did well. They were kept under observation for the first year after the child's birth.

Case 2.—Mrs. B. complained at time of ante-natal visit of headache, pain in back and considerable oedema of the legs; she had been told by a neighbour (and accepted the statement) that this was quite natural. She was suffering from albuminuria of pregnancy to a marked degree. She was advised to consult her doctor, with whom the Medical Officer of Health also corresponded, and was duly treated; she was confined of a full-time healthy child, and did well.

Case 3.—Mrs. R. Age 22. Notified 21/7/21. Case of flat pelvis (history of fall many years ago with injury to spine in lumbo-sacral region). She gave a history of still birth (with craniotomy) 2 years ago. Seen at 6½ months on notification of midwife engaged for confinement.

(N.B.—This was a different midwife than the one who attended the first confinement and "had not been told" of the previous difficulty.)

On the advice of Assistant Medical Officer of Health Mrs. R. saw Doctor McCully of the Infirmary Staff, who had been called in consultation at the previous confinement—who performed Caesarean section—at term. Result—a live full-term female child, healthy, thriving.

Case 4.—Mrs. D. Had previously had a miscarriage which was attributed to the fact that she had femoral hernia, which was extremely painful and caused excessive vomiting. The same conditions were found on the Assistant Medical Officer of Health's visiting during this pregnancy, which was notified. A Home Help was supplied to her so that she could stay in bed, and she was advised to call in a doctor. She did well. A full-time healthy child was born.

Case 5.—Mrs. P. On visiting this woman was found to be very weak and anæmic, with considerable oedema of the legs. She had already had two premature children, and feared that this one would be premature too. She

had not called in a doctor for two months, but promised to do so. A Home Help was sent and a woman to wash for her, so that she could remain in bed. A full-time healthy child was born.

Case 6.—Mrs. W. A primipara. Found on visiting after notification to have a marked degree of pelvic contraction. The midwife was informed of this, and her medical practitioner was communicated with. The woman was admitted in due time to the Infirmary, and a living child was born.

That is all I have to say, Mr. President, on this subject, but in the course of its preparation I was reminded of statements which are current in certain circles to the effect that all the work for the promotion of Maternity and Child Welfare has not resulted in any benefit to the newly born.

It is not to be expected that the neo-natal figure can be favourably influenced by any protective measures to the same extent as later mortality, because the majority of the former mainly result from inherent constitutional defects—that is to say, conditions existing within the child at the time of birth, while many causes of death coming to the infant from outside of itself—from its environment—can be readily controlled by intelligent work.

None the less the following figures seem to me to encourage hope that even the neo-natal mortality is capable of amelioration:—

NEO-NATAL MORTALITY FOR THE YEARS 1901 TO 1920.

Year.	No. of Registered Births.	No. of Registered Deaths.	Infant Mortality Figure.
1901	2175	97	44
1902	2354	99	42
1903	2252	103	46
1904	2243	93	41
1905	2256	106	47
1906	2301	106	46
1907	2189	95	43
1908	2348	90	38
1909	2318	86	37
1910	2164	92	42
1911	2122	88	41
1912	2056	77	37
1913	2196	90	41
1914	2030	96	47
1915	1935	79	41
1916	1906	83	43
1917	1650	58	35
1918	1575	61	39
1919	1519	67	44
1920	2102	85	40

NEO-NATAL MORTALITY IN HUDDERSFIELD.

Before Notification of Births	...	44.3
Since " " "	...	40.5
Before " " Pregnancy	...	42.2
Since " " "	...	40.0

NOTES FROM THE BRANCHES AND GROUPS.

THE MIDLAND BRANCH.

SCHICK TEST.

By kind invitation of Dr. E. H. R. Harries, Medical Superintendent, about 30 members of the Branch visited the Little Bromwich Isolation Hospital of the City of Birmingham on March 2nd.

Dr. Harries demonstrated the technique of the Schick Test, and showed the true and pseudo reactions in various stages. The necessity for the use of a standardised toxin, which must be fresh, also a fine needle, preferably of the dental variety, for the intra-dermal injection, was emphasized. Dr. Harries called attention to the brownish pigmentation following a positive reaction, and mentioned that in certain cases the reaction may be considerable delayed. By the demonstration of a large number of cases, the differences between the true and pseudo reactions were well shown.

The meeting terminated with tea at the invitation of Dr. Harries; the President, on behalf of the Branch, thanked Dr. Harries for his most interesting demonstration and also for his hospitality.

APPOINTMENTS.

The Stafford Borough Council are to advertise for a Medical Officer of Health at £600 per annum, the officer appointed to be allowed to do any other work in his spare time except general medical practice. We understand that the Ministry of Health has sanctioned this arrangement, but whether it will meet with the general approval of the profession is another matter.

The short list for the post of Medical Officer of Health and School Medical Officer for the County Borough of Dudley consisted of the following:—Dr. L. D. Graham, Assistant M.O.H., Southampton; Dr. G. C. Walker, Assistant M.O.H. and S.M.O., Derby; Dr. W. A. Muir, Deputy M.O.H., Wallasey; Dr. S. M. Gibson, Assistant Medical Officer of Health, Cumberland; and Dr. P. S. Blaker, Assistant Medical Officer of Health, Colchester.

Dr. Muir withdrew his application.

Dr. P. S. Blaker was appointed.

WEST OF ENGLAND BRANCH.

AN INTERESTING DISCUSSION.

The discussion on the Schick reaction which took place at the Branch Meeting held at Bristol on February 24th proved full of interest. About 25 members and friends were present, of whom four or five were able to speak on the matter with

an authority based on a good deal of experience. Dr. Davies spoke of the administrative possibilities, and was followed by Dr. Nixon, who showed some beautiful lantern slides to illustrate his remarks on clinical details. Dr. Nixon's intellectual candour was very refreshing. He evidently felt that the test had a future, but made no attempt to hide its present waywardness and uncertainty. Professor Walker Hall, realising that the reaction was essentially a measure of the antitoxic content of the blood, thought it would be more scientific and likely to lead to better results if research were concentrated rather on a direct study of the blood itself. Dr. Savage, who published a paper on the subject in this journal several years ago, had little reason to alter the conclusion he then formed, that the test was not yet of much practical importance to medical officers of health in their ordinary everyday work. This, indeed, was the impression left in the minds of most of those present.

THE COUNTY OF WILTSHIRE.

Dr. Tangye's second annual report as C.M.O. consists of 72 quarto pages and contains a great deal of very interesting matter. Rather over a page is devoted to a description of the "Duties of the Public Health Committee," which are set out in a way that should convince other members of the Council of the multiplicity and importance of the matters dealt with.

One is struck by the great variation in statistical figures drawn from relatively small populations in which, presumably, the general conditions of life are not very dissimilar. The death rates, for example, in 19 rural districts vary from 2.86 to 14.04, with a mean of 11.28. Infant mortality in 13 urban districts varies from 12.3 to 113.2, with a mean of 61.2.

Valuable extracts are given from Dr. Brewer's report of two outbreaks of diphtheria in Swindon. These seem to have been investigated with extreme care, as might indeed be assumed from the single fact that without exception every one of the 49 cases was removed to hospital. Out of 303 contacts examined, only two were proved to be carriers of the bacillus.

As far as tuberculosis is concerned, only ten English counties appear to have a smaller death rate than Wiltshire, where it was 0.86 per thousand population. Dr. Crossly (T.O.) indicates that there has been a great fall in the number of notifications of non-pulmonary tuberculosis and attributes it, no doubt rightly, to the fact that notification can seldom be followed by any useful action.

THE NEXT BRANCH MEETING.

It was arranged to hold the next meeting at Torquay on Friday, the fifth of May, when it is hoped that as many members as possible will make it convenient to attend. The usual notices giving further particulars will be posted in due course. On receiving a request to do so, the Hon. Branch Secretary will be happy to send notices of meetings regularly to members of neighbouring branches who may care to attend from time to time as opportunity offers.

THE HOME COUNTIES BRANCH.

DR. THRESH'S GOLDEN WEDDING.

The good wishes of the Branch have been sent to Dr. Thresh on the occasion of his golden wedding. Dr. Thresh was the first Secretary of this Branch on its formation.

M.O.H. SOCIETY OFFICIALS.

From the reports received from the representatives on the Council of the Society it would seem that the members should be congratulated upon having such energetic officials. In both the Houses of Parliament and at the Ministry of Health matters which are submitted by the medical officers are receiving close attention.

SALARIES.

The communication from the General Secretary relative to the campaign for better remuneration came at a very apt moment, both on account of the attempt being made to rope in all members of the Public Health Service and Dr. Buchan's paper, which was under discussion. The manifesto was received with approval, though item 6, viz., "that application should be made by every medical officer for a rise in salary," seemed to create some uneasiness of the minds of those present. The legend of the old lady and the stile is perhaps apt in this respect, as it cannot be expected that the Society should do everything; each officer concerned must do his bit in his own district.

THE METROPOLITAN BRANCH.

MATERNITY AND CHILD WELFARE SUB-GROUP.

Medical officers concerned with maternity and child welfare work will be interested to know that it has been decided to form one sub-group in connection with the Metropolitan and the Home Counties Branches of the Society. Members desirous of joining are invited to communicate with Dr. Mary Kidd, 3, Cheyne Court, Chelsea,

S.W.3, who has expressed her willingness to act as secretary to the sub-group, which promises to be one of great usefulness.

A DUSTBIN DEPARTMENT.

It is probably a general experience that the ordinary sanitary dustbin claims a far larger share of attention at the hands of the sanitary authority than its humble position in the scheme of things rightly warrants, and particularly in districts where the system of refuse collection from the kerb is in force, the service of notices regarding inadequate or defective storage accommodation assumes considerable proportions. Any suggestion, therefore, which aims—literally and figuratively—at keeping this receptacle in its proper place may be considered deserving of reference. The proposal to hand is that a council might establish a sub-department where new receptacles could be obtained, missing lids replaced, and old bins repaired. It is suggested that this service would not only leave the inhabitants of a district little excuse for failing to comply with the local authority's demands in this direction, but would prove a boon to them and possibly a source of revenue to the authority. Failing this, perhaps the possibility of running a business solely for the provision and maintenance of dustbins may commend itself to an enterprising firm with a bent on specialising.

"THE FLYING SQUADRON."

One of the London public health departments claims to have achieved considerable success in speeding up work to slum property by sending a "flying squadron" of sanitary inspectors into a given area. Where property in various parts of a borough varies greatly in type, it sometimes happens that an inspector whose normal district gives little trouble in public health matters can be spared to relieve the pressure on a colleague in a less favoured area. In the metropolitan borough in question some four or five inspectors have been drafted into a small slum area, and by taking a street each have inspected the property house-to-house and issued the necessary notices with a minimum of delay.

THE NORTHERN BRANCH.

"IT'S AN ILL WIND."

For three weeks Newcastle-upon-Tyne has been in the throes of a strike of tramwaymen, resulting in a complete cessation of municipal transport, and although trains and privately owned busses have absorbed a certain number of travellers, the majority of suburban residents have been compelled to walk to and from the city. Protests, of

course, against the Tramways Committee of the City Council for inaction, incapability, etc., have been forthcoming, but have been easily outnumbered by expressions of gratification from the corpulent and gouty and from sufferers from peristaltic inertia, and it is indeed pleasing to observe on any of the main thoroughfares, their flexibility and acceleration increasing daily, with a corresponding improvement in mental outlook that must lead many a harassed clerk or junior into the hope that the strike may continue indefinitely. Certainly from the public health standpoint, a tramway strike is not altogether regrettable.

PNEUMONIA.

During the last outbreak of influenza, 34 cases of pneumonia were admitted to the Newcastle-upon-Tyne City Hospital, the case mortality being 40 per cent. The criteria for removal were unsuitability of home conditions, lack of nursing facilities, and severity of disease, and the general type of case is sufficiently indicated by the high mortality. Although the numbers are too small to allow of a definite opinion being given, the impression was gained that cases removed to hospital after the fourth day of illness did badly, whilst in those admitted before that day, the prognosis was much better. Of 17 cases admitted on the fifth and sixth days of disease, eight, or 47 per cent., died, indicating that removal immediately before the crisis might be expected to be especially contra-indicated.

HOUSING.

The erection of "block" dwellings in crowded areas to relieve the housing shortage, is again being advocated, although previously condemned in favour of the "villa" type on the outskirts of towns. Admittedly the latter is ideal, but the attempt to rectify existing conditions as exemplified in the poorer quarters of any industrial town by a gradual redistribution of population, does not appear to be the most practical line of action. Ideals in other branches of public health work have to be sub-ordinated to the necessities of the times, and apparently housing is to be no exception.

THE TUBERCULOSIS GROUP.

THE TUBERCULOUS PROBLEM.

Hitherto the Group has necessarily concentrated in the main upon administrative and medico-political questions and but little attention has been given to promoting discussion and investigation regarding important and interesting

clinical, scientific, and philosophic aspects of the duties of Tuberculosis Physicians engaged upon the work of dispensaries or institutes, laboratories, sanatoria, hospitals, and other institutions specialising in surgical and orthopaedic treatment of the non-pulmonary manifestations of the disease.

It will be generally admitted that the most pressing need in connection with the anti-tuberculosis campaign even at the present comparatively advanced stage of developments is for scientific research. On all questions affecting causation, immunisation, variation in type of both disease and causative organism, influences of environment, occupation, quantity and quality of food, and elements effecting epidemiological distribution, there is urgent need for concise and accurate scientific knowledge. Even in respect of the value of vaunted but imperfectly tested special methods of treatment any degree of unanimity of opinion amongst experts in conspicuously lacking.

Tuberculosis Physicians who by reason of their official appointments enjoy unique opportunities for unravelling these and kindred questions might with advantage to themselves and the public initiate and promote investigation and discussion within the Group and Sub-Groups in many directions, perhaps more particularly with regard to its social, economic and psychological aspects.

THE CLINICIAN IN THE PUBLIC HEALTH SERVICE.

Clinical workers within the Public Health Service irrespective of what their speciality may be will endorse the view recently expressed by the Principal Medical Officer to the Ministry of Health in his introductory address to a course of instruction for the School Medical Service inaugurated at the London Hospital when he emphasised the difficulty experienced in retaining the clinical spirit in administrative posts.

The President of the Society of Medical Officers of Health in his presidential address this year recognised the existence of two essentially different spheres in preventive medicine, each requiring the services of skilled Medical Officials having the same fundamental knowledge in regard to the broad principles of medicine and surgery, but educated in totally different schools, the one as the trained clinician, the other as the trained administrator, but both skilled in methods of investigation. How to attain this ideal and develop these two classes of public medical officers under conditions existing in the public health service is admittedly difficult if not actually impossible. It has been said that the administrative atmosphere within the service is too toxic to allow of evolu-

tion of the skilled clinician, and there are many both within and without the public health service disposed to agree.

A mistake not uncommonly made is that of assuming the Public Health Service is mainly concerned with environment, though the illuminating and admirable writings of the Principal Medical Officer to the Ministry of Health draw attention to the pressing need for gradual shifting of the centre of observation from the environment to the person.

THE SPIRIT OF CO-OPERATION.

Expansion of the scope of Public Health constantly tends to gradually relieve the private or insurance practitioner of responsibility in regard to diagnosis, treatment, and prevention of diseases which have come to be regarded as specially within the purview of preventive medicine.

Development of medical services has in general taken the line of least resistance so far as administrative convenience and economic considerations were concerned, the intention being to ensure efficiency with economy in preventing and removing causes and conditions of disease and of its propagation.

Such laudable purpose, however, should not be allowed to obscure the possible issue that the general practitioner of the future, lacking incentive to keep his knowledge up to date in regard to these and other diseased conditions, and to acquire skill in the application of routine and specialised examination, scientific investigation and modern treatment, may gradually tend to become careless and mediocre in his methods, and less competent to recognise disease in its early beginnings.

There is evident need for sympathetic understanding and toleration between all ranks of the whole-time medical services and the practitioners of curative medicine which would tend towards evolution of a broad-minded comprehension of the requirements and of the possibilities of employment of all classes of medical men within the sphere of preventive medicine.

A recent writer prefaces his book with a wholesome quotation which would appear to be applicable to present requirements within our service:—

“The strength of a character is measured by its resistance to the contagion of accepted ideas.”

DENTAL GROUP.

DENTAL INSPECTION AT 3½-5 YEARS.

There is a period during the life of a child when it is very essential that he should come under the care of the dentist, a period too when

he is most difficult to get at. The period referred to is when the child is between the ages of three and a half years and five; the age when he has ceased going to M. and C.W. centres and toddlers' clinics, and before he enters on his school life. It is in the homes that he is to be found. It is an age group when the child has found, to his content, that he can chew anything edible; and when incorrect habits of diet are ingrained. The result is familiar to every school dentist who inspects his entrants. It is a most difficult matter to get this child to a dental clinic in order to do any conservative work. About the only time he does turn up, is for the relief of acute toothache, and the condition is, then, usually too far gone for anything but radical measures.

USE OF HEALTH VISITORS.

To cope with this problem, it is suggested that health visitors, midwives, and, generally, any health workers who have access to the homes, should be provided with mouth mirrors. No skill is necessary to use one, and most people can tell a dirty or decayed tooth from a sound one. If such an instrument formed part of the health workers' equipment when visiting homes, these youngsters might be caught, examined, and mothers instructed to bring them to the dental centre.

DENTAL ORGANISATION.

Latterly, there has arisen a question that is exercising the minds of many public dental officers. It is to whom the dental officer should be held responsible for the efficiency of his work, either to a medical officer or directly to the local authority? No universal system of the chain of responsibility exists and much diverse opinion is held in dental circles. The problem partly depends on the work required in the dental appointment, viz., whether the work is purely school dental inspection and treatment; or, whether additional work such as maternity and child welfare dental treatment is added, as many advertisements of new posts demand; and partly as to whether the school medical officer and the medical officer of health are two distinct appointments, each responsible to a separate committee. Where the S.M.O. and the M.O.H. are two distinct appointments, and the dentist undertakes work additional to his school work such as M. & C.W. dental treatment, a branch which is under the M.O.H.'s organisation, the dental officer is responsible to two officials, and possibly a third, now that Directors of Education are meddling with the medical side of Education. Undoubtedly when the medical functions of the Board of Educa-

tion are transferred to the Ministry of Health much confusion will be dispelled.

It is desirable that public dentistry should be treated as a department of public health, similar to the tuberculosis, school medical or maternity and child welfare departments, in which the dental officer is responsible directly to the medical officer of health, the whole coming under the public health committee of the local authority.

It is argued that the M.O.H., not being a trained dentist, cannot exercise efficient supervision in dental matters, and as many appointments are held by juniors the quality and quantity of work turned out is not up to standard. It must be remembered that the dental officer is afflicted in a similar respect to his medical colleague, in regard to salaries. Dental salaries bear little relation to the earnings of private practice, and, consequently, experienced and responsible men are not attracted. Still, it is reasonable to imagine, that were the pay and future prospects of the service sufficient to make a career, efficient work would necessarily be the result.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

COUNCIL MEETING.

A meeting of the Council was held at the House of the Society on Friday, March 17th, 1922, the President (Dr. W. J. Howarth) being in the chair. There were present: Col. F. E. Fremantle, M.P., Drs. Kirkhope, G. F. Buchan, Charles Porter, Pearce, Wheatley, Barlow, Joseph, Snell, Clements, Gibbons Ward, McMaster, Stocks, Duncan Forbes, J. T. C. Nash, Sanders, Veitch Clark, Ewart, Auden, and Col. H. W. Grattan.

Letters of apology for absence were received from Drs. Herbert Jones, Peyton, J. J. Buchan, Eustace Hill, Lyster, and Prof. Kenwood.

Correspondence.—(1) From the Ministry of Health, in reply to a letter from the Society asking for a definite statement in regard to the security of tenure afforded to Medical Officers of Health under the Housing, Town Planning, etc., Act, 1909, and the Public Health (Officers) Act, 1921:—

MINISTRY OF HEALTH,
WHITEHALL, S.W.1.

16th March, 1922.

SIR,—I am directed by the Minister of Health to advert to your letter of the 3rd instant with reference to the security of tenure of appointments of medical officers of health.

I am to inform the Society of Medical Officers of Health that the Minister's consent is required to the determination of the appointment of a County Medical Officer of Health, and that, from the 1st proximo, his consent will be required to the determination of the appointment of all Medical Officers of Health to whom the Public Health (Officers) Act, 1921, applies. At the same time I am to state that in deciding whether he should consent to the determination of an appointment, the Minister would take into consideration all relevant circumstances affecting the case.

I am to add that the Minister has not received any application from the County Council of . . . shire for sanction to the determination of the appointment of Dr. . . . , and that it is not competent to the County Council to determine the appointment without the Minister's consent.

I am, Sir,

Your obedient Servant,

(Signed) F. F. MARCHBANK.

G. S. Elliston, Esq.,

Executive Secretary,

Society of Medical Officers of Health.

(2) From the National Union of Teachers, referring to the proposal of a local Education Authority to ask teachers to spray the caps required to be worn by children with ringworm during attendance at school.

It was agreed that the N.U.T. should be informed that the Society does not recognise any obligation on the part of teachers to accept responsibility for the treatment of ringworm. The Executive Secretary was directed to send to the N.U.T. extracts from a communication from the School Medical Officer of the L.E.A. referred to, showing that there was, and had been, no intention to ask for anything but the voluntary assistance of teachers in regard to precautionary measures necessary when children with ringworm were permitted to attend school.

(3) From the Royal Institute of British Architects stating that their members had rejected the proposals for higher buildings in the metropolis, and had expressed the opinion that the powers possessed by the London County Council are adequate and are exercised in a reasonable way.

(4) From the Women Sanitary Inspectors and Health Visitors' Association, asking the support of the Society for the following resolution:

"That the Executive Committee of the Women Sanitary Inspectors and Health Visitors' Association is of opinion that the low salaries now being paid to Health Visitors, which fall in some cases to £129 a year (in pre-war figures about £74 a year) are entirely incompatible with efficiency in the vital national service which they perform—a service which is primarily concerned with the health of mothers and children. It appears that such low remuneration has been encouraged by the Minister of Health. In view of the need for a high standard of efficiency in this

service, to be obtained only after several years of education, training and experience, the Executive Committee of the Women Sanitary Inspectors and Health Visitors' Association wishes to call the attention of the Minister to the need for a proper standard of payment to secure efficient service."

The Executive Secretary was directed to inform the W.S.I.A. that the Society fully sympathise with any effort to secure fair remuneration for Women Sanitary Inspectors and Health Visitors.

(5) From the Bread and Food Reform League asking the Society to support a memorial addressed to members of Parliament regarding the use of preservatives in foods sold for human consumption. It was agreed that the President should sign the memorial on behalf of the Society.

(6) From Dr. F. J. Allan suggesting that the Society should appoint another representative in his place on the British Committee of the International Congress of Infant Welfare, as other engagements prevent his attendance. It was agreed that Dr. Allan should be thanked for his services and that the M. & C.W. Group should be asked to nominate his successor for election by the Council.

(7) From a Fellow of the Society whose appointment as M.O.H. is likely to be affected by the extension of adjacent areas, involving reduction of population and rateable value in his district. It was agreed that the N.A.L.G.O. should be asked what steps are being taken to safeguard the interests of other officials affected, so that the Society may act in co-operation with that body.

Diplomas in Public Health.

Dr. Harold Kerr and others having drawn attention to difficulties in connection with the Draft Rules for Degrees and Diplomas in Public Health now awaiting adoption by the General Medical Council, it was agreed that the D.P.H. Rules Revision Committee (Col. Fremantle, Prof. Kenwood, Drs. Porter, Auden, Kirkhope, and Herbert Jones) should report to the next meeting of the Council regarding any suggestions that should be forwarded to the G.M.C.

London Local Government.

The special committee, consisting of representatives of the Metropolitan and Home Counties Branches, appointed to watch the proceedings of the Royal Commission on London Government, reported that the general questions raised before the Commission had been discussed, from which it appeared that the difficulties concerned rating, transport and education, and that the Public Health Services were not greatly concerned. It

seemed, therefore, to the Committee that any intervention at the present moment was hardly likely to achieve any good object. It was, therefore, proposed that the Chairman and Secretary should hold a watching brief on behalf of those likely to be affected, and should call the Committee together should it appear to them that the circumstances warranted such action. Finally, the general problems involved and the application to the country as a whole was fully dealt with. The Committee, however, felt that they were badly constituted for that purpose, and did not feel that an opinion could be expressed. The feeling seemed to be that the London problems were very peculiar and could not be applied generally.

"Public Health."—It was proposed by Dr. R. Veitch Clark, seconded by Dr. Porter, and carried unanimously, that the Editorial Committee should meet regularly at intervals not exceeding two months to discuss the policy of the Journal.

Dr. Kirkhope gave notice that at the next meeting he would ask the Council to consider a recommendation of the Home Counties Branch that the subscriptions to the Society be increased so as to permit the publication of a weekly journal.

Health Propaganda.—Prof. Kenwood forwarded a report by the Navy, Army and Air Force Hygiene Group of the Society on co-operation between civil and military authorities in the matter of health propaganda. The Council thanked the Group for the report, and expressed the hope that it would be published in the journal of the Society.

Sir Shirley Murphy.—It was proposed by the President, and carried by acclamation, that the Society should be recommended to elect Col. Sir Shirley F. Murphy an Hon. Fellow in recognition of his services to Preventive Medicine and to the Society.

The meeting then adjourned.

ORDINARY MEETING.

An Ordinary Meeting was held at the house of the Society on Friday, March 17th, 1922. The President (Dr. W. J. Howarth) was in the chair, and there was a very large attendance.

The minutes of the last Ordinary Meeting having been approved and signed, the President submitted a recommendation from the Council that the Honorary Fellowship of the Society should be conferred on Col. Sir Shirley Forster Murphy, K.B.E., F.R.C.S., in recognition of his

distinguished services in the advancement of Preventive Medicine and Public Health Administration. The President said it was unnecessary to remind members of Sir Shirley's devotion to the interests of the Society, of which he had thrice been President, or to recall the good work he had done as Editor of the official journal. The recommendation of the Council was then put to the meeting and carried by acclamation.

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

As Members:

Broderick, Daniel, M.B., B.Ch., N.U.I., D.P.H.; Day, James John, O.B.E., M.R.C.S., L.R.C.P., D.P.H.; Govan, Robert, M.A., M.D., Ch.B. Edin., D.P.H.; Jenkins, William David, B.A., M.R.C.S., L.R.C.P.; Paton, Richard Reid Kirkwood, M.B., Ch.B. Glasg., D.P.H.; Willcock, Maurice Exell, M.B., Ch.B. Edin., D.P.H.

As Associate:

Gray, Wm. Gilmour, L.D.S. Glasg.

The Executive Secretary submitted the list of candidates nominated for election at the next meeting.

Dr. W. McC. Wanklyn then read a paper: "A Review of the present position of Smallpox and Vaccination as affecting this country."

An excellent discussion followed, the speakers including the President, Col. W. Butler, Dr. W. G. Willoughby, Dr. Charles Sanders, Dr. J. C. McVail, Dr. A. Ball, Dr. Clark Trotter, and Dr. A. B. McMaster. The proceedings closed with a cordial vote of thanks to Dr. Wanklyn for his valuable paper.

METROPOLITAN BRANCH.

A meeting of this Branch was held at the Society's house in London, on Friday, 10th March, 1922, the President (Dr. W. H. Hamer) occupying the chair. Twenty-one other members were present.

A letter was received from the Metropolitan Asylums Board stating that when the demand for hospital accommodation for cases of scarlet fever and diphtheria slackens sufficiently to enable beds to be provided for measles and whooping cough this will be done, and adding that, in fact, a very limited amount of accommodation has already been set aside and is being used for the latter cases.

It was resolved that the whole question as to the giving of evidence before the Royal Commission on the Local Government of Greater London be referred back to the Council of the Branch for further consideration.

It was reported that Dr. Higgins and Dr. Porter (Hon. Secretary) had attended a conference, convened by the Minister of Health, of the various agencies concerned in the question of the co-ordination of Rescue and Preventive Work amongst women and girls in London, when it was decided to form a Central Council for the direction of this work. The Hon. Secretary was appointed to represent the Branch on that Council.

Dr. F. M. Turner, of the South-Eastern Fever Hospital, received a cordial vote of thanks for an interesting paper on "Hospital Isolation in Relation to the Prevention of Scarlet Fever," which was followed by a discussion in which many of the members took part.

THE HOME COUNTIES BRANCH.

A well-attended meeting of the Home Counties Branch of the Society of Medical Officers of Health was held on March 2nd, on which occasion Dr. Buchan read his paper entitled "The Public Health Medical Service as a Career."

He briefly outlined the scope of the work of a Medical Officer to a County Borough of average size, and drew attention to the extraordinary change that had taken place during the past twenty years of the present century, and as a consequence the length of time taken to train and the diverse avenues through which the ultimate ambition was reached.

Dr. Buchan made a calculation of the number of officers required for the service, on the basis of various official memoranda and reports, from which it appeared that something more than 3,000 whole-time officers were necessary. He also drew attention to the extraordinary improvement in the comforts of life and prevention from disease enjoyed at the present time, and that much of the credit must be due to the work of the Public Health Departments of Sanitary areas.

He then drew attention to the differences between the Public Health and her sister services in the Army and Navy, and submitted a detailed statement.

Further comparison between the average earnings of panel practitioners and a corresponding officer of the Public Health Service were also given, from which it appeared that the average earnings of a man of about 40 years was £1,850 less 25 per cent. for working expenses, of 9s. 6d., and £1,000 was obtainable with a capitation of 7s. 3d.

The President opened the discussion and coupled the letter from the Secretary *re* salaries, with the address; he outlined the relations of the

Society with the National Association of Local Government Officers. He was of the opinion that in spite of the financial position the present was not an inopportune time for active efforts. Dr. Cates referred to the improvement that had already occurred, with the small effort that had been made, and suggested that success was assured if a solid Society could be depended upon. Dr. Greenwood gave certain instances of successful organisation in the Kent area.

Dr. Clarke enlarged upon the importance of basic salaries and the relative insignificance of bonuses, also the necessity of warning all aspirants as to what is to be expected by those entering the service. Dr. Milligan seemed to be overborne by the obstacles that might be raised from the legal departments of public administration, while Dr. Sanders suggested that much benefit might arise if the paper were published in pamphlet form, and Dr. Wood dealt with the position of men working in rural areas, and Dr. Simpson from the point of view of the Junior Staff.

Dr. Buchan, in his reply, outlined the steps taken to secure the co-operation of the British Medical Association and the National Association of Local Government Officers.

MIDLAND BRANCH.

Meeting held at the Council House, Birmingham, February 2nd, 1922. Present Dr. Snell (in the chair) and 18 members.

The Minutes of the last meeting were read, confirmed and signed. The President welcomed Dr. Jolly to the Branch.

The Council recommended to the Branch the election of Dr. Middleton Hewat as Correspondent. This was carried unanimously. It was further recommended and carried that Dr. Middleton Hewat be elected to the vacancy on the Branch Council caused by the resignation of Dr. Banks.

With respect to the Presidency of the Society for 1922-23, the Council recommended that Dr. Ridley Bailey be nominated by the Branch. This was carried *nem. con.*

Dr. E. H. R. Harries then read his paper on "The Carrier of Diphtheria Bacilli from the Fever Hospital Standpoint." The paper was of great interest to all those present, reference was made to considerable work done with the Schick test, and modifications of the virulence test were also described. Discussion followed, and a suggestion made and adopted that the next meeting should be devoted to a practical demonstration of the

Schick test. The following took part in the discussion: The President, Drs. Goldie, Bell Ferguson, and Cowie. Dr. Harries briefly replied. The thanks of the Branch to Dr. Harries were voiced by the President.

Dr. Davison raised the question of the curtailment of reports of Branch Meetings in "Public Health," as forecasted on page 88 of the January issue. He deprecated such curtailment. No resolution was passed.

Dr. Reid.—On the proposition of Dr. Clendinnen the following resolution was passed:—"That this meeting notes with regret Dr. Reid's decision to sever his connection with active Public Health work," and the Secretary was instructed to forward the same, embodied in a suitable letter, to Dr. Reid.

YORKSHIRE BRANCH.

A meeting of the Yorkshire Branch of the Society was held at the Town Hall, Leeds, on Friday, February 24th, 1922.

Present: Dr. J. J. Buchan (President), Professor H. R. Kenwood, Mr. Elliston (Executive Secretary of the Society), and Drs. E. M. Smith, Jefferson, Jervis, Linton, Fernandez, Jennings, Thornley, Mitchell Wilson, Pick, C. L. Williams, Wear, Pearce, Banks, Mair, Buck, Woodcock, and Castle. Dr. Cates, of the Home Counties Branch, together with Drs. E. H. Williams, Cory, and Dagnall, were present as visitors.

Apologies for absence were received from Drs. Moore, Robinson, Fraser, Mason, Holden, Gibson, Wynne, Francis, J. A. Sutherland, and Newsholme, together with Mr. White Wallis (Secretary and Director of the Royal Sanitary Institute).

The President welcomed Mr. Elliston (the Executive Secretary of the Society), who addressed the meeting respecting the action of the Council of the Society who have adopted a more aggressive policy in regard to inadequately-paid appointments. Mr. Elliston was cordially received and his remarks warmly approved, the members being much encouraged to know that the Society is now about to take active steps where necessary on their behalf in support of their legitimate claims. Questions were invited by the Executive Secretary. Several members took advantage of this, and received satisfying replies.

A letter was read from the Midland Branch asking the Yorkshire Branch to support the nomination of Dr. T. Ridley Bailey for the Presidency of the Society for 1922-23. The support of the Branch was also requested on behalf of Dr.

Eustace Hill, who had been nominated by the Northern Branch. It was proposed by Dr. E. M. Smith, seconded by Dr. Jervis, and carried unanimously, that the candidature of Dr. Eustace Hill for the Presidency be supported by the Yorkshire Branch. It was proposed by Dr. E. M. Smith, seconded by Colonel Wear, and carried unanimously, that Dr. J. Mitchell Wilson (Consulting M.O.H., East Riding County Council) be nominated by the Yorkshire Branch for the Presidency of the Society during the year 1923-24.

Dr. Pearce informed the members that he had received two letters from Dr. Hill (Hon. Secretary of the Branch), whose health is improving, the members being much gratified.

A paper was read by Dr. Jervis (M.O.H., Leeds), entitled "Damage," and the following took part in the discussion:—The President (Dr. Buchan), Professor Kenwood, and Drs. Cates, Mitchell Wilson, Woodcock, Smith, Pearce, Wear, and Castle.

Subsequently sixteen members dined together at the Queen's Hotel, Professor Kenwood and Captain Elliston being the guests of the President, this function being of a very enjoyable nature.

Later the members attended the sessional meeting of the Royal Sanitary Institute, which was presided over by Professor Kenwood.

NORTHERN BRANCH.

Meeting held in the Medical Institute, Newcastle-upon-Tyne, 3rd March, 1922, twelve members being present.

A vote of sympathy was passed with the President, Dr. T. Eustace Hill, in the death of his famous father, the late Dr. Alfred Hill. Dr. T. Eustace Hill, President of the Branch, was again nominated (for the fourth year in succession) for the Presidency of the Society, and in view of the fact that on three previous occasions Dr. Hill had withdrawn his name in favour of another candidate, the hope was strongly expressed that his candidature would receive general support this time. It is now 33 years since a President was selected from the Northern Branch.

The Executive Secretary's communication regarding a more aggressive policy with respect to inadequate salaries was ordered to be circulated among all the members of the Branch.

Communications were received as to the Minister's speech at the Lord Mayor's luncheon in London, and as to the Joint Deputation with the B.M.A. to the Ministry of Health on the School

Medical Service, and satisfaction was expressed with these.

Dr. G. R. Bruce, Medical Officer of Health, Jarrow, read a paper upon "The present position of Isolation Hospitals in Preventive Medicine." Owing to the general interest and importance of this, it was decided to adjourn the discussion until the next meeting.

SCHOOL MEDICAL GROUP.

The fifteenth meeting of the School Medical Group of the Society of Medical Officers of Health was held in Birmingham on Saturday, 25th February. The President, Dr. G. A. Auden, was in the chair. Apologies for absence were received from Dr. Fraser, of Hull, Dr. Anderson, of Liverpool, and others. A telegram from Dr. H. Herd, of Manchester, regretted that sudden illness prevented attendance for reading of his paper on "Diagnosis of Moral Imbecility."

Arising out of the "Minutes," which were read, approved and signed, the Group's Representative explained the relation of the Ministry of Health and the Board of Education and another member explained the cause of the unreasonable attitude of the *Times*, re Medical Inspection and Treatment of School Children and Public Health in general.

Correspondence was read from (1) the Society of M.O.H. approving a Group resolution re Annual Leave. (2) The Northern Sub-Group re salaries.—The Group Representative explained that the Salaries Committee of the Society is now actively engaged in improving and preventing reduction of salaries.—It was unanimously resolved:—

"That Sub-Groups appoint a member to report to the Salaries Committee of the Society particulars of salaries and the conditions of appointments, present or prospective, likely to be detrimental to the school medical service." The difficulty of finding out such appointments and dealing with them was said to be due mainly to the unsympathetic attitude of the Board of Education and its lack of influence with Local Authorities.

The meeting unanimously agreed that Dr. C. J. Thomas, Chief S.M.O., L.C.C., be proposed as President of the Group at the Annual Meeting. It was also decided that he represent the Group on the Metropolitan Branch Council.

New members recommended to the Group by the North-Western, Northern, and Midland Sub-Groups were elected.

The North-Western Sub-Group reported a

meeting held at Manchester on the 11th November, at which officers for 1922 to 1923 were elected, and Dr. Kingsford read a paper on "The Present Position of the School Medical Service."

The Northern Sub-Group reported a meeting held at Newcastle on the 25th November at which officers were elected and a lecture was given by Dr. Frank Wilson on "Nose, Ear and Throat Conditions in School Children."

A discussion took place on the proposed alteration of the Society's constitution to allow voting by members at Branch Meetings and representation of Groups on the Society's Council.

The meeting now resolved to (1) delete "Member" (3rd word, 1st line) from Article 16 of the Society's Constitution; (2) alter "two thirds" to "one half" in 7th line in Article 19 b; (3) but not to take away the one and only Representative of the Group on the Council of the Society.

The Society's letter dated 17th February was considered. It was resolved unanimously to send the following replies:

(1) Whether their members having equal voting rights with other Fellows of the Society, it is essential that the Groups should be directly represented on the Council?—Reply: Yes.

(2) Whether they recognise the claims of Medical Officers of Health as founders of the Society to any fixed proportion of the seats on the Council, and, if so, what the proportion should be?—Reply: "That considering the great increase in the number of whole-time members in the Public Health Service who are not Medical Officers of Health, it is not advisable for Medical Officers of Health to have a definite proportion."

A letter from the B.M.A., containing a resolution by the National College of Teachers of the Deaf, and considered by the Medico-Political Committee, was considered. The Meeting agreed "To help whenever possible the object of the National College of Teachers of the Deaf. Difficulties arise because no compulsion can or should be used and Elementary Teachers do not carry out compulsory vision tests."

A possible forced economy by the Government on the medical work in connection with school children was considered. The President offered to accept suggestions, giving the order of importance of the various duties of a S.M.O. The following resolution was adopted to be sent to the Society: "That any necessary curtailment of expenditure should be applied to routine medical inspection rather than to the treatment of defects."

TUBERCULOSIS GROUP.

Meetings of the Committee of the Group were held at the House of the Society on Fridays, 20th January and 17th February, at 8 p.m.

Reports of proceedings at meetings of the Midland and West of England Sub-Groups were read and discussed.

It was decided to endeavour to form a joint Sub-Group of the Metropolitan and Home Counties Branches, as both these Branches meet at the House of the Society.

The following matters were also discussed:—

1. The procedure in regard to examinations and reports made by Tuberculosis Officers on behalf of the Ministry of Pensions.
2. The procedure outlined by the Ministry of Health in Memorandum 48/T for obtaining Medical Reports from Medical Practitioners, under National Health Regulations, 1921.

ASSOCIATION OF COUNTY MEDICAL OFFICERS OF HEALTH.

Report on the Memorandum of Education Secretaries.

The aim of this memorandum is the subordination of the School Medical Officer to the Education Secretary, who claims the right to undertake the administrative side of school medical work, to debar the medical officer from direct communication with the schools, and thus of necessity to conduct a large part of his professional correspondence.

These contentions cannot for one moment be admitted, nor can the assertion that the Medical Officer should advise his Education Authority through the Education Secretary, who claims to control the whole of that Authority's activities. Medical Officers do not desire any privileged position, but they claim the right to be directly responsible to their Committee for their own professional work in the schools. There is no valid reason why they should not directly advise the Education Committee in the same way as they do the Public Health Committee and other committees which they serve.

Experience does not bear out the assertion that it is advisable that the administrative side of medical work should be carried out by the staff of the Education Secretary. Such a course would result in serious delay and added clerical work and expense, while the detailed nature of the work would make such a procedure fatal to efficiency.

This applies with special force to medical treatment, which it would be quite impracticable to carry out as a live scheme on the lines of the Memorandum.

The adoption of the principles of the Memorandum would convert the Medical Officer from a principal officer responsible for the health of children during school age, into a subordinate member of the staff of a lay officer, the Education Secretary, and the medical care of this child section of the community would become a consideration quite secondary to purely educational considerations.

Observations upon the Summary of the Memorandum.

(The italicised portions represent the claims of the Directors in their own words.)

1. "That all communications from the School Medical Officer or his assistants to the Schools, should pass through the Chief Education Officer."

The strongest exception is taken to this proposal. Communications to teachers arising out of the work of the Medical Officer should be sent direct by him, as he alone is familiar with the details of the individual cases and matters concerned, and it is obviously desirable that his relations with the teachers should be as intimate as possible.

The effect of the proposed procedure would be to delay a voluminous correspondence, to duplicate clerical staffs, to prevent a complete understanding between the medical staff and the teachers, and to convert live schemes into a formal minimum compliance with legal requirements. Such intervention on the part of the Education Secretary would also be very prejudicial in dealing with such urgent matters as notification and consequential action in cases of infectious disease. The fact that such a proposal has been made indicates clearly that the Secretaries of Education have no appreciation of the volume of business which is constantly being carried on between the medical staff and the schools, or of its very detailed professional character.

2. "That all forms and circulars issued by the School Medical Officer should be approved by and issued through the Chief Education Officer."

While it may be desirable to keep the Education Secretary informed as to medical forms and circulars which it is proposed to issue, the only approval required should be that of the Committee where such is necessary. It must be

obvious that as a layman, the Education Secretary is not in a position to assess the value of medical forms.

3. "The School Medical Officer's Report is a report to the Education Committee, who are consequently at liberty to publish such report in whatever form or with whatever alteration they see fit."

It is the School Medical Officer, who is specifically required by the Board of Education to furnish an Annual Report on school medical work, and not the Education Authority or its Secretary. The Board have made no modification in this requirement since the issue of their Circular 576, and there is no provision for a joint report with the Secretary of Education as suggested in the Memorandum. The Medical Officer is therefore solely responsible for the terms of the Annual Report, and no alteration of its text should be made by any person or Authority.

It is recognised that in the event of disagreement on any point raised in the report, the Education Authority are fully entitled to append their comments when transmitting it to the Board.

4. "All reports of the School Medical Officer or his assistants, including reports as to school buildings and similar matters, should be presented through the Chief Education Officer."

It is essential that all reports of the Medical Officer shall be presented by him to the Committee direct.

CORRESPONDENCE.

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

DENTAL DEFECTS.

From Dr. A. J. LAIRD.

Sir,—With reference to Mr. Doswell Wallis' letter in "Public Health" for March, may I be allowed to offer some comment upon that portion of his letter upon Dental Defects in which he controverts a statement of mine that too much time is wasted upon the temporary teeth.

It would seem as though Mr. Doswell Wallis considered that I was advocating completely ignoring the temporary dentition. This is far from the case.

Our scheme for the dental treatment of school children, launched in 1907, was the joint work of a committee on which sat three eminent members of the dental profession, two of whom occupied high places in the British Dental Association.

After long and serious deliberation of the pros. and cons., it was decided that in view of the enormous amount of work requiring to be done and the limited help which could be afforded, no fillings of temporary teeth should be done. This cannot be taken to mean that this Committee with three dentists upon it deliberately decided that work upon temporary teeth was in a general way a waste of time. It does mean, however, that, although they considered the best way to benefit the largest number of school children with the help of one dentist only was to limit conservative treatment to the permanent dentition, the treatment of sepsis due to the temporary dentition was a prominent feature of the scheme, as may be seen by reference to the annual reports written by Mr. A. W. Gant, our first dentist, and his successor, Mr. W. H. Jones. It would have been quite possible for our dental advisers to have decided to do all the work necessary in both dentitions for a much smaller number of children. Whether this would have been a better plan or not is a matter of opinion—it has not yet been submitted to a practical test. The method adopted in Cambridge, on the other hand, has, and I think I am right in saying that it has stood that test and that time has shown that it has resulted in enormous benefit to the elementary school children of Cambridge.

It was with all this in my mind, and after a very careful study of what was going on in England as a whole, that I formed the conclusion (expressed possibly somewhat crudely) that given a mass of caries in both dentitions, it is better in the first instance to deal primarily with the permanent rather than with the temporary dentition. In most districts it is a choice of saving one or the other, and in so far as it is so, I am still of the opinion that the choice should be that of saving the permanent teeth.

Yours faithfully,

Cambridge.

ANDW. J. LAIRD.

DR. GEORGE BANKS, medical officer of health for the royal burgh of Wick, died on 9th February in his 86th year. A J.P. for his county, and formerly Surgeon-Lieutenant-Colonel in the Caithness Volunteer Artillery, he was identified with every public movement in his neighbourhood. Two years ago he celebrated his professional diamond jubilee, and medical colleagues from far and near assembled to do him honour.

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Public Health

THE JOURNAL OF

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Editorial.

THE MANCHESTER VACANCY.

In response to an invitation from the Manchester Town Hall Committee the Society of Medical Officers of Health sent three representatives to a conference held at Manchester on Friday, April 7th. The representatives were Dr. Howarth, M.O.H., City of London; Professor Kenwood, C.M.O., Bedfordshire; and Dr. Lyster, C.M.O., Hampshire; and these gentlemen were the chief speakers at the conference after an introduction by Mr. Bolam (Chairman of the B.M.A. Council), who headed the deputation on behalf of the B.M.A.

Most valuable support was afforded by speeches from Sir William Milligan, the eminent Manchester consultant; Dr. Cox, Secretary of the B.M.A.; Mr. Elliston, Secretary of M.O.H. Society; and Dr. McGowan, Secretary of the Manchester Branch of the B.M.A.

The *Manchester Guardian* on April 8th published the following report of the conference:—

"The question of the vacancy for a Medical Officer of Health in Manchester was again discussed at a joint conference at the Manchester Town Hall, between representatives of the Town Hall Committee, of the British Medical Association, and the Society of Medical Officers, and representatives of the medical profession in Manchester. The conference sat from two until five o'clock in the afternoon, and Alderman Derwent Simpson, the Chairman of the Town Hall Committee, afterwards announced that it had broken up without arriving at an agreement. During the discussion certain proposals had been made, he said, which would be further considered by the Town Hall Committee and submitted in due course to the City Council. The medical delegates to the conference, who also acted merely in a consultative capacity, would report to their respective associations.

"Although the conference resulted in no agreement, it is probable that the discussion may help

in arriving at such an agreement. The representatives of the Town Hall Committee were not in a position yesterday to make any new proposal with regard to the starting salary—for which £1,500 is still offered. But the doctors were asked to consider whether their case would be met by a proposal that that salary should be increased in two years to £1,750 and in four years to £2,000. On their part the doctors were still insistent upon a higher starting salary than has yet been offered, though they went some of the way to meet the Corporation in suggesting an immediate £1,700, rising in three years to the £2,000 which was their original demand. It was understood that this proposal would be reported to the Town Hall Committee.

"On one point at any rate the negotiations appear to have cleared the ground somewhat; it seems possible to agree upon an eventual salary of £2,000. Under what may now be considered the Corporation's proposal that figure would be reached in four years; on the suggestion of the doctors in three. The issue now seems to be narrowed down to the question of the starting salary. If the two proposals already referred to are compared, the difference amounts only to £900 in five years. After that the proposals are the same.

"In view of the emphasis which has been laid by the doctors on the desirability of such a settlement as would encourage the medical profession to give the Corporation its whole-hearted support—particularly in helping it to secure the best man for the appointment—it is thought likely that, after yesterday's meeting, the difference still remaining may be seen in its true proportions and the gap bridged."

The conference was conducted in a most friendly fashion, and the whole discussion was free from any resentment on either side. The fact that only four applications had been received in response to the advertisements in the lay press has convinced the Manchester City Council that the B.M.A. and the M.O.H. Society could exercise very considerable powers, and both sides were anxious for an amicable settlement, which now appears to be actually in sight.

Many valuable lessons were learned at Manchester. The most important was that the earliest possible action must be taken by the M.O.H. Society in connection with all impending vacancies. A letter was sent by the Society to the Manchester City Council in November last, but it is evident that that communication was not sufficiently forcible, or definite, because the pre-

vailing impression among the Manchester City Councillors was that they had had no warning of any professional opposition until the advertisement was refused by the medical press. This defect in our procedure can be remedied quite easily.

The success of the salaries campaign depends entirely upon the loyalty of our members. If every member is loyal the result is a foregone conclusion. Special loyalty is necessary in the case of assistant officers, who may be tempted to accept an underpaid appointment because it represents an increase in salary, and the weakest spots in our case at the present time are a few towns where an assistant has accepted an obviously inadequate salary to the grave injury of the whole service. We appeal with confidence to our members to prevent such unfortunate happenings in future, and thereby to further not only the ultimate professional interests of every member, but also, what is of much greater importance, the public health of the nation.

HOUSING LEGISLATION.

Housing legislation in the past has undoubtedly been the chief cause of the existing prejudice against houses as a form of investment, and has led largely to the present difficulty. In some areas the difficulties have been accentuated by a drastic application of the powers given by the Housing Acts, and those districts are now paying the penalty in the way of a specially acute house shortage. Things seem to be drifting towards either more definite State responsibility for housing or a relaxation of those drastic powers which were until quite recently supposed to be removed from the possibility of appeal through the ordinary processes of the law. Owners of small house property are financially feeble and politically impotent, and all political parties have therefore regarded them as fair prey. Recently, however, they have formed unions for mutual protection, and the legal points in the Housing Acts are likely to be contested actively in future.

A situation which has always bristled with difficulties is now made still more complicated by the Government's decision to limit their expenditure on housing to £200,000 for the whole of Great Britain. Under the Housing Act, 1919, local authorities were entitled to assistance in the replacement or restoration of insanitary houses beyond the expenditure of a penny rate, but it is now evident from the sum provided that housing

schemes requiring Government assistance will be held up indefinitely.

Added to the difficulties of a political nature, there are legal difficulties and conundrums arising from recent cases in the Courts. For example, Section 28 of the Housing Act, 1919, was enacted to give an improved procedure over Section 15 of the Housing, Town Planning, etc., Act, 1909, but the position, in the light of present knowledge, is very uncertain and, in view of the widespread interest in this Section, it is interesting to review the decisions on three recent cases, two in the High Court and one in the County Court.

The first is that of Bermondsey Borough Council v. Cubitt, Heath and Sneath, decided by the Divisional Court (Justices Darling, Sankey and Branson) in November, 1921. The action was an appeal against the decision of the Police Court Magistrate, who had dismissed twenty-three summonses by the Council against Heath, Brook and Sneath. These summonses had been issued to recover expenses incurred by the Council in carrying out the requirements of twenty-three notices under Section 28 of the 1919 Act, with which the defendants had failed to comply. The Magistrate held that the twenty-one days allowed in the notices for the completion of the works was not a reasonable time, that the notices were consequently invalid, and he accordingly dismissed the twenty-three complaints. The Divisional Court upheld this decision.

The interesting point raised in this case was the fact that, as there is nothing within the text of Section 28 which provides for any appeal against the requirements of the local authority, the Magistrate held that he was entitled to enquire into the reasonableness of the notices from every point of view, and with this opinion the Divisional Court agreed.

The Bermondsey Borough Council, after considering the decision of the Court, resolved to ask the Minister of Health to amend Section 28 by inserting a sub-section, similar to sub-section 6 of Section 15 of the Housing, Town Planning, etc., Act, 1909, which gives a landlord the right of appeal against any notice or demand made under this latter Section.

The provision of this "appeal" sub-section would enable the owner to object to any notice served by the Council before the latter had incurred expenditure on repairs and, consequently, deprive certain unscrupulous property owners of the possibility of evading payment by alleging before the Magistrate, after the Council had put their property in good repair, that the notices

were unreasonable and that no earlier opportunity of appealing against them had been provided.

On looking at the case of the King v. the Minister of Health (*ex-parte* Rush), heard in the King's Bench Division (Lord Chief Justice, Mr. Justice Avory, and Mr. Justice Roche) in January, 1922, it would appear that the Minister of Health held the view, which appeared to be clear in the Bermondsey case, that there was no appeal by owners against notices issued under Section 28 (except where re-construction may be declared necessary—which question did not come up either in the Bermondsey case or the one now under review). In this case, the applicant, Rush, applied for a mandamus directing the Minister of Health to hear and determine his appeal against a demand for payment by the Paddington Borough Council in respect of work which they had carried out at his house after he had failed to comply with a notice served by the Council under Section 28 of the Housing Act of 1919. The applicant alleged that he had executed the necessary repairs, but the Council subsequently caused their contractor to do certain works at the premises and followed up their action by submitting a demand to the applicant for the payment of £134 15s. in respect of these works. The applicant appealed to the Minister of Health under Section 15, sub-section 6, of the Housing Act of 1909, against the Council's demand. He received a reply that, as the notice requiring the execution of the works was given under Section 28 of the Act of 1919, the Minister had no power to entertain the appeal, because his jurisdiction was limited to the determination of questions arising between local authorities and owners in cases where an owner had declared his intention of closing the house on the ground that it was not capable, without re-construction, of being made fit for habitation.

At the Divisional Court hearing the applicant's counsel relied on Sections 39 (2) and 40 of the Act of 1919, which read as follows:—

Section 39 (2):—Sections fourteen and fifteen of the Housing, Town Planning, etc., Act, 1909, shall be deemed to be part of Part 2 of the principal Act.

Section 40:—This Part of this Act shall be construed as one with the principal Act, and any provisions of this Part of this Act which supersede or amend any provisions of the principal Act shall be deemed to be part of that Part of the principal Act in which the provisions superseded or amended are contained, and references in this Part of this Act to the principal Act or to any provision of the principal Act shall be construed as references to that Act or provision as amended by any subsequent enactment, including this Part of this Act.

The arguments submitted in favour of the applicant may be briefly summarised as follows. Section 39 incorporates Section 15 of the Act of

1909 in Part 2 of the Housing of the Working Classes Act, 1890, and sub-section 28 (6) does the same for Section 28 of the Housing Act of 1919. Section 40 of the Act of 1919 enacts that any provisions of the Act of 1890 (and therefore Section 15 of the Act of 1909) which are superseded or amended by the provisions of Section 28 of the 1919 Act, are to be (in effect) amended as required. Therefore any action which may be taken under Section 28 of the Act of 1919, by reason of the provisions of Sections 39 and 40 of the 1919 Act, become actions which were taken under Section 15 of the Act of 1909. Accordingly, the right of appeal, which was given by Section 15, sub-section 6, of the Act of 1909, still subsists and applies to anything which may be done under the superseding or amending Section 28 of the Act of 1919. The Court approved these arguments and allowed the appeal.

It will be obvious from this case, therefore, that the appeal sub-section, which the Bermondsey Borough Council desired to have inserted in Section 28, is actually provided by Sections 39 and 40. In spite of this satisfactory result, however, the case of *Rex v. Minister of Health* appears to create rather than to remove difficulties; for example, it is found that there are two definitions as to the class of house which can be dealt with under these Sections 15 and 28. Section 15 of the 1909 Act is restricted in its application to houses at a rent not exceeding those sums mentioned in Section 14 of the 1909 Act, namely, (1) £40 in London, (2) £26 in a borough or urban district with a population of fifty thousand or upwards, and (3) £16 elsewhere. Section 28 of the 1919 Act refers to "any house suitable for occupation by persons of the working classes."

No difficulty arises in the case of a house within the rental limit stated in Section 14 of the 1919 Act, but, if the rent be above the sum therein mentioned, a very important question presents itself for answer.

It is obvious that, as a result of the decision in the *Rex v. Minister of Health* case, Section 15 of the 1909 Act and Section 28 of the 1919 Act are to be read as one, therefore it is necessary to know (a) whether Section 15 of the 1909 Act, by the amending Section 28 of the 1919 Act, now applies to "any house suitable for occupation by the working classes" and ceases to be restricted in its application to houses within the rental limit stated in Section 14, or (b) whether, in view of the fact that the appeal sub-section of Section 15 applies to Section 28 cases, the rental limit laid down in Section 14 of the 1909 Act also applies to Section 28.

While these points remain unsettled Medical Officers of Health should make quite sure that the position is clearly understood by his Committee and Council before he proceeds with notices under Section 28.

Section 28 was welcomed by Medical Officers of Health in 1919, for it was thought that it would provide means of securing better housing conditions than could be obtained under the Public Health Acts, but the Section will prove a failure unless some steps are taken to eliminate these doubtful points.

The third case which has been decided recently has the advantage of being fairly straightforward and easy to understand. The decision, however, was not a High Court one, but was given by the Wandsworth County Court Judge. In this case (*Battersea Borough Council v. Haines and others*) the Council had served a notice on the owner of a house under Section 28 of the 1919 Act requiring him to execute necessary repairs and, as he did not comply within the required time, the work was undertaken by the authority at a cost of £200 3s. They served a demand on the owner for payment and, as it was not met, took proceedings in the Police Court and obtained a Magistrate's Order for payment. The owner having failed to comply with this, the Council asked the County Court for a declaration that they were entitled, under Section 28, to a charge on the premises for the above-mentioned sum, together with interest thereon, and that the charge was entitled to priority over any mortgage or other encumbrance on the premises. They also asked the Court for an Order for sale and such other relief as might be necessary.

The persons who were brought before the Court as defendants were all those who had any proprietary interest in the premises in question, including the freeholders, the leaseholders and the mortgagees. The freeholders contended that the Order could not be made against them on the grounds that no notice had been given them that the work was to be done and that they had had no opportunity of doing the work. The mortgagees advanced a similar argument. The Judge, however, did not uphold their contention and pointed out that Section 28 does not require any persons having an interest in the premises, other than the owner, to be served with notices, and he stated that the charge must affect the interests of the freeholders, mortgagees and leaseholders as well as the person who is the owner within the meaning of the Section.

It was decided that the Borough Council were entitled to the relief for which they asked and that

their charge, together with the interest thereon, should be entitled to priority.

An Order was given that all documents and deeds should be handed over to the Council, but the Judge indicated that it was open to any of the defending parties to pay off the charge.

This decision seems to show clearly that if the various anomalies and difficulties in Section 28 can be cleared up, the measure will be exceedingly effective, for many freeholders and superior leaseholders, who have taken little or no interest in their slum property in the past, provided that their ground rents were regularly paid, will have to take a more direct share in the management, in the future, if they wish to safeguard their interest.

Slum property has for too long been left in the hands of sub-landlords, who do not, as a rule, possess the necessary money to carry out the requirements of local authorities under the Public Health Acts, with the result that the property has become more and more dilapidated; but this decision will, if maintained in future cases, awaken a sense of responsibility in those other and more substantial parties who have a proprietary interest in this class of property.

TRAINING FOR THE D.P.H.

The notes on the above subject which were published in our April issue have awakened considerable interest, and numerous letters have been received largely confirming the opinions already expressed. The following comments from "M. D.," an eminent M.O.H., as well as an experienced teacher, shows that some explanation is desirable. He says:—"The interesting article in the current number of *Public Health* indicates an agreement with the aims and objects of the General Medical Council in their effort to revise and improve the regulations relating to Diplomas in Public Health.

"The article recognises that the present requirements are out of date and need revision, and that when the new regulations come into force, the public health service will at once be placed thereby in a vastly superior position than that which it occupies to-day. It expresses a doubt whether the necessary courses would be provided outside London, and even in London it is doubtful whether such courses could be conducted successfully anywhere outside the new Rockefeller Institute.

"These views are, in my opinion, too pessimistic. Each of the University towns in England (other than Oxford and Cambridge) has a very large population, and each of the Universities is fully

equipped with the means to give the necessary additional training for the Diploma, whilst the sanitary activities carried on provide the necessary field for the fullest training. Facilities at the great Scottish Universities are too well known to need comment.

"I cannot think that the huge facilities available in London are so lacking in organisation as to render it a matter of doubt whether this simple course could be conducted successfully there. Surely this is purely a question of co-ordination."

We agree entirely with the views expressed by "M. D." There is no lack of material, either in London or the big University towns, which could provide for adequate training in accordance with the draft regulations, and the difficulties of co-ordination are not insuperable. But the apparently insuperable difficulty at present is the question of *cost*. An important item among the urgent matters for reform in connection with medical teaching is the question of remuneration. In all the English Medical Schools the teachers of medical subjects have always been grossly underpaid, and in the great majority of cases this sweating is being continued at the present time. In a few of the London Medical Schools a revolution has just been brought about and whole-time teachers of Medicine, Surgery, and Midwifery at salaries of £2,000 have been appointed. In the teaching world, just as in so many other spheres, Public Health plays the part of the Cinderella of Medicine, and we believe that in the whole of England there is no teacher of Preventive and State Medicine who makes anything like a living wage out of the work. In other words, there is no teacher of this subject who can afford to give to teaching that concentrated attention which is necessary if any subject is to be taught properly.

"M. D." very properly refers to the facilities at the great Scottish Universities, where whole-time salaried professorships are common.

The business part of this important matter constitutes the great obstacle to the adoption of the new syllabus. No medical school could afford to provide the necessary courses of instruction without substantial endowments. Any increase in fees would correspondingly reduce the number of students, because the financial attractions of a public health career are not sufficient to make men consider it worth while.

The M.O.H. Society will, we feel sure, give whole-hearted support to all proposals which tend to raise the level of the public health service, but ordinary business considerations make it evident that such schemes are of doubtful practicability without either State endowment of public health

teaching or an enormous increase in the pecuniary attractions of the public health service. Associated with this revision of syllabuses there should also be made a determined effort to secure adequate remuneration of the teachers and the creation of whole-time teaching posts in all the medical schools.

The subject is one the consideration of which presents considerable difficulty. Every Medical Officer of Health who is engaged in teaching for the D.P.H. must regard the proposals as more or less impracticable not only from the point of view of cost (if the teachers are to be remunerated adequately) but also the time involved, and they feel that, in present circumstances, the effect of such regulations would be to shut down the majority of the centres where D.P.H. training is now undertaken, and at the same time decrease the number of candidates to vanishing point. All teachers, as such, would view such a result with considerable regret, as it would mean almost an entire suspension of higher public health teaching in this country for a time.

Another regrettable result would be the elimination in future of the practitioner with the D.P.H.—a class of practitioner one would very much like to continue, as he is almost invariably above the ordinary level in every way.

There is much, however, to be urged on the other side. The result of the new regulations should be to produce more highly trained candidates for a public health career, and the possession of the D.P.H. would in future prove to be more valuable because it would become more rare. This would be distinctly to the public good as the public health service would in future be manned by men who are obviously and admittedly specialists. To this it would follow naturally that the status and emoluments of the service would improve and much that we have, as a Society, been fighting for in the past, and for which we are struggling at present, would become easily practicable.

As soon as the attractions of the public health service were made sufficient the number of candidates ready to pay high fees and to sacrifice the necessary time for training would be increased and the balance thus restored automatically.

V.D. PREVENTION.

We offer our congratulations to Lord Dawson upon his success, achieved in the face of strenuous opposition, in bringing the great controversy to the impartial judgment of a representative committee. Lord Dawson has received the active

support of *The Times* in this matter, which is second to none in importance.

The Committee will be presided over by Lord Trevithen, the ex-Lord Chief Justice, and includes among its members Professor Kenwood and Colonel Tremantle. The items of reference are: "To consider and report upon the best medical measures for preventing venereal disease in the civil community having regard to administrative practicability, including costs."

CITY OF LONDON M.O.H.

The Corporation of the City of London have now definitely increased the salary of Dr. W. J. Howarth from £1,500 to £2,000 per annum. The increase was originally voted, by a majority, in July, 1921, but it was ruled that the procedure on that occasion was not in compliance with standing orders. The Corporation have, however, now put matters right and have recorded in this practical fashion their appreciation, not only of Dr. Howarth's services, but also of the vastly changed circumstances which now exist with regard to official salaries. Some ten years ago Dr. Howarth was appointed at a salary of £1,000 per annum and he succeeded a medical officer who, after many years' service, had attained the salary of £1,250. The City Corporation are to be congratulated in thus leading the way in this practical fashion, and thereby setting an example to other Local Authorities in the readjustment of values.

SALARIES—WARNING TO MEMBERS.

Members of the Society are particularly warned against expressing any opinion as to a salary suitable for any particular post. The best reply to all such inquiries is a copy of the Scale of Salaries draft by the M.O.H. Society, and it is hoped that no member will express any opinion apart from that scale. Difficulties are already being encountered as a result of the failure of certain members to observe this very important rule.

Another point of the greatest possible importance is in connection with new schemes such as the re-arrangement of districts and posts in county areas. Before advising any local authority as to the salary which should be attached to such posts, it is desirable that the M.O.H. Society should be consulted by all members. It is the intention of the Society to oppose as vigorously as possible all suggestions for the employment of medical officers of health at salaries below those stated on the scale, and no exceptions can be made.

THE APPLICATION OF BACTERIOLOGICAL STUDIES TO THE PREVENTION OF DIPHTHERIA.

BY

SIR F. W. ANDREWES, M.D., F.R.S.,
F.R.C.P., D.P.H., Professor of Pathology,
University of London.

I do not need to offer you any apology for having chosen the subject of diphtheria for my paper this evening. It is a well-worn subject, it is true, but diphtheria must possess an ever-green interest to the M.O.H. until we have learned to control it better than we can at present. I therefore felt certain that, whatever the defects of my paper, a good discussion was certain, for everyone present has only too practical a knowledge of the disease. I have not any novel observations to bring before you, but it is a useful thing now and again to review the state of our knowledge respecting even the commonest diseases, and, having seen where we stand, to consider why we have not made better progress.

Bacteriology is the hand-maiden of public health, and I shall speak merely as a bacteriologist and pathologist; I shall not venture to propound answers to the practical problems which arise from the facts which bacteriology lays down. That will be your business, and I hope to stimulate discussion on several such problems. What I propose to do is to pass in review what may be considered to be well-established facts in the pathology and bacteriology of diphtheria, with some observations on the practical issues they raise.

We perhaps know more about the pathology of diphtheria than of any other common zymotic disease. It is no idle boast to say that during the past 30 years the bacteriologist has shed unnumbered blessings upon medicine and public health in respect to this disease alone. Its exciting cause was discovered by Loeffler. Its diagnosis now leaves little to be desired in the hands of a competent bacteriologist. We have fairly clear ideas as to the way in which the disease spreads, and are well aware of the carrier condition. Von Behring has given us a serum, the timely use of which has gone far in reducing the mortality of diphtheria. The nature and effects of the poison to which the bacillus owes its terrors have been thoroughly studied; immunology has illuminated the nature of susceptibility and

its reverse, and has indicated a practical method of immunisation. Yet, in spite of all these bacteriological gifts to public health, diphtheria shows little sign of diminution. That is the main fact we have to face this evening, and see if we can divine the reason.

The first established fact which I would lay down is that the bacillus of Loeffler is the *vera causa* of diphtheria. I do not think this is now disputed. We may well review the evidence for the supposed "cause" of any infection, in the light of modern knowledge about associated organisms and secondary infections, but in the case of the diphtheria bacillus I know of no shadow of a reason for denying to it the primary rôle. Further, bacteriologists are now more than ever agreed that this bacillus is a specific entity, distinguishable from allied forms. The stories of its transformation into Hofmann's bacillus, or *vice versa*, are now credited by few; the evidence offered will not stand critical examination.

In the second place, I would affirm that an experienced worker can recognise the diphtheria bacillus with practical certainty. So characteristic is the appearance of the bacillus in a well-stained film, that he will make very few mistakes even in the customary 24-hour diagnosis—at least in throat cases; while, if he is allowed time for verification by subculture and the application of suitable tests, the margin of error is negligible. I would add that by an experienced worker I do not necessarily mean the man who has reported on so many thousands of throat swabs: I mean the man who has been at the pains to control and correct his opinion by subsequent verification of its accuracy. I am not unmindful of the fact that a negative result is naturally of less value than a positive one: repeated examinations may be needed to establish the absence of the bacillus. More than this, it is well known that in rare cases of true diphtheria, the bacillus fails to grow in cultures, though it may be demonstrable in a direct film from the membrane. Nevertheless, in spite of occasional and perhaps unavoidable errors, the medical profession has come to place such reliance upon the laboratory diagnosis of diphtheria, that one not rarely notices a tendency for the physician to shift the responsibility for such diagnosis upon the shoulders of the bacteriologist. Now in the diagnosis of the carrier condition and in the recognition of the bacillus in animals or in milk, the bacteriologist must take sole responsibility:

he may justly demand the fullest information as to the source of his material before he pronounces his opinion, for far more stringent tests may be advisable in one case than in another, but there will be no one to dispute his correctness. In the diagnosis of the disease—diphtheria—the circumstances are very different: here the responsibility rests solely with the clinician, and he cannot pass it on to the bacteriologist. All that the bacteriologist does is to affirm the presence or absence of the bacillus in the material submitted to him—a very important datum for the clinician, but only one factor in the diagnosis. If the result is positive the case may be one of true diphtheria, or of scarlet fever or simple tonsillitis in a diphtheria carrier—the physician must decide which. And if the result is negative the case may nevertheless be one of diphtheria. And with the responsibility for diagnosis runs also the responsibility for prompt administration of anti-toxin. When it is remembered that the mortality of diphtheria rises steadily with each day's delay in the use of this remedy, it is clear that the physician is bound to use it on any reasonable clinical evidence. In at least half the cases of diphtheria—and this the graver half—it has been estimated that a fairly certain clinical diagnosis can be made, and in such cases it is surely inexcusable to wait 24 hours for a laboratory opinion. It may even be right to give anti-toxin in face of a negative laboratory report, if, in the judgment of the physician, the clinical evidence warrants it.

The third point which may be regarded as established as regards diphtheria is that, like tetanus, it is a purely toxic disease, in the sense that the all-important factor is the toxin produced by the bacillus. In this, diphtheria offers a strong contrast with such a disease as scarlet fever, which is not in itself a very toxic disease. Scarlet fever owes its terrors to secondary infections, notably by streptococci: most fatal cases of scarlet fever die either of streptococcal septicaemia or, later, or nephritis. In diphtheria, secondary infections, though they occur, are usually of much less moment: when the disease is fatal, it kills by the direct action of the toxin, or indirectly in laryngeal cases, by suffocation. Further, the defence of the body against the disease is now shown to be, to all intents and purposes, an anti-toxic one. The essence of modern tests for susceptibility and immunity, in diphtheria, is that they measure the anti-toxin present in the blood.

Nothing else has been proved to matter. All attempts to improve therapeutic sera by making them anti-bacterial as well as anti-toxic have met with little or no success: the prophylactic, no less than the curative virtue of a serum, seems to rest wholly on its content in anti-toxin. Moreover, just as the diphtheria bacillus is a single entity, so its toxin is a single entity. It is true that recent work has shown the existence of serological races of the bacillus, recognisable by agglutination, and this fact, when more fully worked out, may well prove of signal value in epidemiological enquiries by enabling the path of infection to be more closely traced. But just as in the case of the tetanus bacillus and the vibriion septique, these serological races produce a common toxin. It would seem that there is no more hope of improving a serum by making it polyvalent than by making it anti-bacterial.

A fourth point concerning which we now possess considerable information concerns the factors which determine the severity of any given case of diphtheria. As in all infective processes, this severity is the resultant of two factors—namely, the virulence or toxicity of the bacillus, on the one hand, and the susceptibility of the patient on the other. Toxicity and virulence are two different things; in the case of the diphtheria bacillus, which has no great disposition to invade the tissues deeply, toxicity is doubtless the more important of the two. The numberless experiments which have been made on animals certainly enable us to conclude that different strains of the bacillus vary in toxicity: one strain will kill a guinea pig in 24 hours, another in four days, while a third may cause only a local swelling, with survival of the animal. Again, different strains vary considerably *in vitro* in the potency of the toxin they produce. Much has been made of such differences, but in real life it would appear that strains of intermediate toxicity are by no means common. My own experience is that a freshly-isolated strain of the organism is either markedly toxic or wholly non-toxic; and Dr. O'Brien tells me that in the much larger experience of the workers at the Wellcome Laboratories they have found the same. It is well established that strains isolated from cases of the active disease are almost invariably of fairly high toxicity: those isolated from carriers are either fully toxic or wholly non-toxic; intermediate properties are rarely encountered. Here a matter

of great practical importance arises. The non-toxic bacillus is apparently indistinguishable from the toxic one except in that one respect. It will be of great interest, when agglutination methods are more fully perfected, to ascertain whether this difference is associated with a serological one; at present we cannot assert this. It was at one time assumed as a matter of course that the two forms were identical and that the non-toxic bacillus was an ordinary one which had degenerated, losing its power of forming toxin. This view is still commonly held and is supported by analogies with similar facts amongst other pathogenic bacteria. It was further conjectured that such non-toxic strains might, under favourable conditions, regain their toxicity: thus the carrier of a non-toxic strain was to be regarded as at least potentially dangerous. In recent years considerable doubt has been cast on this opinion: the matter is still unsettled, but there is certainly a singular lack of evidence that non-toxic strains ever become dangerous again. Whatever the original relationship between toxic and non-toxic strains, it is now commonly believed that the carrier of a non-toxic strain may be disregarded as a source of danger: even the Ministry of Health, in a recent memorandum, has not shrunk from the responsibility of maintaining this belief. In any case, in considering the relative importance of the toxicity of the bacillus and the susceptibility of the patient in determining the severity of the disease, opinion is fairly unanimous in ascribing very much less importance to toxicity than to susceptibility. There is little relation, indeed, between toxicity of the bacillus and severity of attack. Intense toxicity may be found in bacilli recovered from mild cases of diphtheria, while the modest degree of immunity implied by the presence of 1/50 unit of anti-toxin per c.c. of blood appears a defence against the most toxic strains of the bacillus.

The *susceptibility* of the individual is thus recognised at the present day as the prime factor in determining not only the severity of attack, but whether attack takes place at all. And here we are able to register important advances in knowledge during the past decade, in determining by simple tests whether a given person is susceptible or immune. Simple cutaneous tests, of which the first was devised by Römer and the second by Schick, enable us to determine whether or not a given person's blood contains sufficient anti-toxin to protect

him from an attack of diphtheria even when his throat is invaded by virulent bacilli. It would appear that he is exempt if his serum contains 1/50th unit per c.c.: there is, of course, no hard and fast limit, but that is roughly the amount which a negative Schick test is believed to register. Very large numbers of normal people have been tested by different observers in Europe and America, and we seem entitled to draw certain definite conclusions. It would appear from the published figures, which, however, are derived largely from examination of the lower classes, that rather more than 80 per cent. of infants at birth have a passive immunity derived from the mother, and, as always in passive immunity, that this fades during the first month or two of extra-uterine life, though prolonged by breast feeding, till by about three years of age only 28 per cent. of children are immune. After this the percentage of immunes rises, slowly at first, more rapidly as adolescence sets in, till by eighteen years of age, it reaches more than 80 per cent. again and this is now maintained. For, unlike the immunity of the infant, it is active, not passive, and it has been conjectured with some reason that it is due to a sub-infection during childhood not sufficient to set up recognisable diphtheria. This curve of liability to the disease, confirmed by all large series of observations, represents, of course, the percentage of immunes at different age periods, not the curve of immunity run through by any given individual. It is constructed chiefly from observations on children in institutions or persons of the out-patient class, and it may well be that amongst the better classes, less exposed to the disease, the proportion of immunes may be lower.

Further conclusions, which bear out the value of the cutaneous test, are that cases of active diphtheria, *i.e.*, persons who were *ipso facto* not immune, almost invariably yield a positive Schick reaction, while chronic carriers of the diphtheria bacillus habitually show a negative reaction: if a person yields the bacillus and has a positive reaction he is probably in the incubation stage of the disease.

It has long been known that a temporary immunity against diphtheria can be conferred by the injection of anti-toxin. It is now established that a much more enduring protection can be achieved by active immunisation with toxin to which sufficient anti-toxin has been added to prevent untoward results. This active

protection requires some few weeks for its development, but is achieved without undue risk or severe discomfort.

I must next refer to the well-known carrier condition, which from the point of view of public health must be accounted one of the most important facts established by bacteriologists concerning diphtheria. As with the carrier condition in other well-known infectious diseases, it is a phenomenon essentially associated with immunity, and it is this which renders the diphtheria carrier so fertile a source of danger to the community. It may indeed be affirmed that until some means are found for detecting and dealing with the healthy carrier of virulent diphtheria bacilli, the real control of the disease under existing conditions remains almost impracticable. If we had to deal only with the case of manifest diphtheria, detection and isolation would be a comparatively simple thing, but as in the case of the meningococcus, only the skilled bacteriological examination of every individual in a community can reveal the bacillus which is living as a saprophyte in the normal person. And even if all carriers could be detected, the practical difficulty of dealing with them would be great. It is unfortunately only too well established that there is no specific means of ridding the carrier of his bacilli. Inasmuch as he is already immune, the use of serum or vaccines would seem foredoomed to failure, while the application of antiseptics to the complex recesses of the nose and fauces is almost impossible to carry out with the requisite thoroughness. There are, however, two circumstances which help to alleviate the position. One is that the carrier condition is often, some would say always, associated with an unhealthy state of the nasopharynx: if this can be remedied, as by the removal of enlarged tonsils or adenoids, the bacilli will often spontaneously disappear. The other is that many carriers harbour only non-toxic strains of the bacillus and may be practically disregarded as a source of danger. If, as is commonly held, the non-toxic strains are of the same species as the toxic ones, it would seem to argue that in the course of time the purely saprophytic mode of life leads to loss of toxicity: carriers are certainly the chief source of such non-toxic strains.

The last, and perhaps the greatest, of the bacteriological discoveries in diphtheria which I must mention is that of an efficient anti-toxic serum by Von Behring, available not only for

prophylaxis, but for treatment. And of this great discovery I will only say that more than 25 years' experience proves that its therapeutic efficacy is in direct ratio with the promptness with which it is employed. We have, however, now come to realise that even this potent weapon, vastly as it has reduced the mortality from diphtheria, has been almost without effect in diminishing the incidence of the disease. Some, indeed, have argued that it has even tended to increase it by interfering with the immunity which might arise if the disease were allowed to pursue its natural course.

I have now, I think, recited the outstanding facts and discoveries which have been contributed by bacteriologists to the study of diphtheria. It will be admitted that they are numerous and important, but you will not fail to have noted one point on which I have been unable to make any claim. Bacteriologists cannot boast that they have discovered any certain means of ridding the carrier of his bacilli. Could that means be found it would scarcely be too much to say that we should have gone a long way to solve the problem of preventing diphtheria, at least in theory.

Meanwhile, we have to discuss what, in the present position of affairs, can be done to check the disease. Bacteriology has placed at the disposal of public health a body of facts which suggest more than one line of attack along which reduction of incidence and mortality should theoretically be possible. Public health, however, is concerned not merely with the theoretically possible, but with what can in practice be carried out in the existing state of public opinion.

I come, therefore, to the essential subject of this paper, namely, the consideration of the means of dealing with diphtheria which are within the range of present possibility, and which I hope will offer the groundwork for a practical discussion.

It is, I fear, hopeless to expect much more from mere sanitation. Statistics prove that there are some infectious diseases the incidence of which can be greatly reduced, and in some cases practically abolished by such means, while there are others in which no such result is observed. Diphtheria unfortunately belongs to the latter class. It is true that improved sanitation in elementary schools may do something to check the spread of infection, but this is a mere palliative and not a radical remedy.

The improbability of effecting any serious improvement by sanitation is emphasised by the results obtained by the Schick test. It seems that the proportion of immunes is actually much higher amongst the lower classes than amongst those higher in the social scale, actually because the more insanitary conditions under which they live offer more opportunity for larval infection.

Nothing, again, can be expected from anti-toxic serum, as a prophylactic measure for the community as a whole. The passive immunity which it confers is of great value to the individual, or even to an institution, in the face of immediate danger, but its effects are too transient to be of any service in the face of unknown or future dangers. The only effective prophylactic use of an anti-serum on a large scale, which one can call to mind, was the employment of tetanus anti-toxin for the wounded in the late war, and here the risk was more or less immediate: the protection was not complete and was a fading one, but it was of indisputable value. The problem of prophylaxis against diphtheria is an easy one so far as concerns the individual. Immediate though transient protection can be obtained from serum; a more slowly developed, but much more lasting protection by means of immunisation with toxin-anti-toxin mixture. The problem is almost as easy of solution in the case of institutions in which the inmates are under efficient control, and by the same means, to which may readily be added the segregation of carriers. It is not too much to say that up to the level of the institution, the problem of the prevention of diphtheria has been solved in the sense that the means at our command are sufficient, if we choose to employ them. It is when we pass above the level of the institution to that of the population at large, that serious difficulties arise. It is not so much that the methods just mentioned are inadequate as that their application on a sufficiently extended scale appears to us impracticable and that the necessary sanctions of law and public opinion are at present wanting. Given these, and an adequate machinery, one can see no theoretical reason why diphtheria should not be stamped out.

There are two main lines of attack upon such a disease. On the one hand we may attempt to deal with the sources of infection, on the other, with the susceptibility of the population exposed. Our efforts hitherto have been almost confined to the first of these lines: recent work

has been devoted, especially in America, to the second line of attack, though with what ultimate success remains to be seen. It may be worth while to consider the two methods a little more closely.

The law has already, in a measure, dealt with the diagnosed case of diphtheria: no serious difficulty arises in its segregation and exposure of such a case in a public place is an offence. There remain the still more serious dangers of the undiagnosed case and the carrier. The problem of the undiagnosed case is a twofold one: its solution rests on the education of the public, and especially of the more uneducated classes, as to the need for prompt medical advice in illness, and also on the education of the doctor as to the need for bacteriological diagnosis in every doubtful case. The latter is already largely an accomplished fact, but much remains to be done in the education of the public. There is undoubtedly a very large amount of diphtheria in its slighter and larval forms, and especially in the form of diphtheritic rhinitis, which escapes detection because it does not cause acute illness. The frequent absence of fever and of noteworthy constitutional symptoms in such cases is one of the chief difficulties attending the recognition of diphtheria.

It is, however, when we turn to the carrier that our difficulties present themselves in their most acute form—difficulties of detection, of efficient segregation and of treatment. It is well to consider these difficulties frankly. The mere detection of carriers, when once we pass beyond the limits of an institution, would involve a bacteriological organisation and legal powers far beyond anything that we at present possess. It is necessary, if hardship and needless trouble are not to be incurred, to discriminate between the dangerous carrier of virulent bacilli and the harmless or relatively harmless bearer of the non-virulent organism. The method of cutaneous diagnosis in guinea pigs has so largely reduced the expense of this discrimination, that it is no longer outside the range of practical politics. The segregation of the virulent carrier is probably the one dominant factor for success along the line of attack here being considered in any campaign against diphtheria: yet we possess neither the organisation nor the legal powers for dealing efficiently with this problem. When a child is found to be a carrier it is quite rightly excluded from school, but provided that it doesn't go to school nobody seems to mind

what it does. Many such cases are notified as diphtheria and sent to fever hospitals—a most unjustifiable proceeding, falsifying the statistics of the disease, and occupying beds which are needed for more urgent cases. In many cases the child remains at home, infecting other members of the family, spreading either the disease or the carrier condition. What is needed is institutional treatment—some place where the education of these carriers can go on, while at the same time attempts are made to cure them. I can picture, in the future, a country house where such carriers can live largely in the open air, attend school classes if necessary and receive such curative treatment as may be needed, while a resident bacteriologist watches their progress. An objection to the aggregation of carriers in this fashion would be the constant opportunity for re-infection—a difficulty which might largely be met by open air treatment, by the avoidance of overcrowding and by separating those who had begun to give negative swabs from those who were still positive. This is but a dream, and in the present state of affairs may sound impracticable, but could it be carried out, I believe that it would do more to reduce the incidence of diphtheria than any other one measure. Moreover, if it proved successful, the number of carriers ought progressively to diminish till it became small and easily manageable.

I have spoken of curative treatment for the carrier condition. I do not pretend to any large personal experience, but such as it is it has led me to the belief that few chronic carriers are really normal. Chronic enlargement of the tonsils, or adenoids, are to be found in very many, and due surgical attention to the throat and nose is often at once efficacious in getting rid of the diphtheria bacillus. This I should put in the forefront of curative methods. I advocate surgical measures if the slightest ground for them can be found, and I have the impression that it is not merely the removal of the local nidus of growth which is responsible for the result, but the acute inflammation which is set up and which accompanies healing. If surgery fails, as it sometimes does, or if no excuse can be found for active intervention, I know of no reliable remedy. I have already referred to the uselessness of serum treatment, and the evidence in favour of vaccines is unsatisfactory; moreover, as I have said, the carrier is *ex hypothesi* already immune, and one cannot hope to cure him by increasing his immunity. There

remains the use of disinfectants, and everyone is familiar with the unsatisfactory results of these. One sees little or no good from gargles, nasal douches, or paintings of the pharynx, and I am inclined to believe that the most efficient method of applying a disinfectant is by the finely divided steam spray introduced during the war by Gordon and Hine for the treatment of carriers of the meningococcus. A two per cent. solution of sulphate of zinc seems as efficacious as anything, but my personal experience is small.

It is perhaps worth noting that if a campaign against the bacillus itself, such as I have indicated, were ultimately successful to the extent that diphtheria ceased to be endemic amongst us and occurred only in scattered outbreaks when infection chanced to be introduced from without, a result would presumably follow which was by no means intended. The severity of the disease would probably be greatly increased when it did occur. For in the absence of habitual exposure to infection in childhood, the number of immunes, and partial immunes, among the population should fall almost to zero, and the case mortality should rise. Fortunately the possession of a specific remedy in anti-toxic serum would allow us to face such a prospect with equanimity.

Let me now turn to the other line of attack against diphtheria—that in which the source of infection is practically disregarded, and attention is focussed on improving the resistance of the population. The method, as you are all aware, consists in conferring active immunity, by injections of a suitable mixture of toxin and anti-toxin, upon all those members of the population who give a positive response to the Schick test. It is clear that such a procedure must be carried out in early childhood, since the maximum incidence of diphtheria is between the third and fifth years of life. There is reason for the belief that protection thus conferred is of a fairly lasting kind, though how enduring we have not yet evidence to determine. It is indeed not improbable that even after the blood has ceased to contain any anti-toxin appreciable to ordinary tests, a considerable degree of immunity may remain, since the earliest stimulus of a commencing infection may re-awaken the dormant machinery of anti-toxin production so rapidly as to ward off danger.

There is an obvious analogy between this mode of procedure and the practice of vaccination against small-pox. It need not be carried

out quite so early in life, or upon those individuals who have acquired protection in a natural way, but it requires two or three injections to produce a sufficient degree of immunity and would therefore be more difficult to carry out than ordinary vaccination. There seems no reason for doubting that, could it be carried out, there would arise a population largely insusceptible to diphtheria, and it will be an exceedingly interesting thing to watch the statistics of New York for the next ten years and see what effect is produced by the experiment now in progress there.

The success of such a method as this must rest upon the extent and thoroughness with which it can be carried out. The choice lies between persuasion and legal compulsion. Our experience of the Vaccination Acts and their weak modifications, is hardly such as to incline us to invoke legal compulsion. In one respect we should have an advantage: small-pox has become so rare that the memory of its dangers has become too faint to stimulate the necessary precautions, but diphtheria is still a living terror to the more ignorant classes. Perhaps, if protective inoculation against diphtheria were to be effective in abolishing the disease, a generation would arise who knew it not and the same ignorant opposition would grow up. But at the present time I believe that there would be fewer conscientious objectors in the case of diphtheria than in that of small-pox, and should we elect the method of persuasion we should meet with a large measure of success.

It is an interesting speculation to consider what would happen to the diphtheria bacillus if a campaign of general immunisation were successfully carried out in a community. It is plain that the carrier spread of the organism would proceed unchecked, but it is possible that, its occupation gone and condemned to an existence of helpless saprophytism, the bacillus might degenerate into a relatively harmless atoxic form. There is at least some reason for believing that this change may occur in the individual chronic carrier under existing conditions. The attentions of the medical officer of health would then be required only for stray importations of the virulent organism from without.

I have endeavoured to put before you, I fear very imperfectly, the problem of stamping out diphtheria as it appears to a bacteriologist. I have, I hope, taken a wide and dispassionate view of the lines along which we may hope for

greater success, and I trust that there may be those present who will have strong preferences for one line rather than the other, thus producing a good discussion. There is the whole administrative aspect of the question, all-important to the medical officer of health, upon which I have scarcely ventured to touch.

But, in closing, I would express my strong conviction that there must be an energetic effort to arouse and educate public opinion, that of the poorer classes in particular, before effective measures can be carried out on any line at all. If people could be convinced of the paramount importance of early treatment we should see a marked reduction in the death-rate from diphtheria. We shall never secure the effective segregation of carriers till the public understands its necessity and reasonableness, and we shall never persuade parents to submit their children to prophylactic inoculation till we can demonstrate to them its value and success.

THE PROPOSED REVISION OF THE RULES OF THE GENERAL MEDICAL COUNCIL FOR DIPLOMAS AND DEGREES IN PUBLIC HEALTH.

BY

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In November, 1920, it was remitted to the Public Health Committee of the General Medical Council to consider and revise the existing Resolutions and Rules for Degrees or Diplomas in Sanitary Science, Public Health or State Medicine, which were originally adopted by the Council in 1889, and amended and amplified from time to time subsequently, particularly in 1911, with a view to bringing the special course of instruction required of candidates into harmony with the duties of a modern Medical Officer of Health, which have developed considerably with the passing of the years.

The examinations at 21 medical schools in Great Britain and Ireland which grant such diplomas or degrees were inspected by Dr. R. Bruce Low, a sanitarian of eminence and exceptionally wide experience, and the Recommendations of the Committee appear to be founded mainly upon consideration of his full and very able Report; it is stated that other evidence was heard, but no particulars of this appear to have been published. Under the circumstances, therefore, it is perhaps as well that the Council decided

to defer coming to a decision upon the subject until the medical schools concerned had been afforded an opportunity for expressing an opinion upon the Recommendations. The subject is down for consideration by the General Medical Council in May of the present year.

Such as have had access to Dr. Bruce Low's detailed Report, or even to the abbreviated summary of it, must have been impressed by the whole-hearted sincerity of the author, his intimacy with the kaleidoscopic nature of the duties of a medical officer of health, and his ambitions for his branch of the profession. His desire obviously is that no one shall enter that branch as an accredited practitioner without providing evidence of having made very good use of a thorough and varied training, a training to obtain which the candidate must be prepared to make a substantial sacrifice in time and money. In thus setting up and endeavouring to attain a high ideal Dr. Bruce Low must surely gain the warm approval of all of us who have the honour of our profession at heart.

The scope of State Medicine, with its continual developments, is vastly wider than it was even eleven years ago, and there yet remain many fields to conquer, each new responsibility demanding of the administrative officer a knowledge, more or less profound, of yet another subject.

Where is it all going to end?

Already we have admitted our limitations by the creation of the various groups of allied clinical and laboratory specialists, and in the detail of their subjects medical officers of health do not as a rule pretend to be experts.

Many of the original incidental duties of the medical officer of health have themselves expanded far beyond his ability to cope with them, such as, for example, analysis of water, food and drugs, and bacteriology, in each of which alone there is now scope for many special lines of practice.

So we find a steady process of devolution going on, but always the medical officer of health must have sufficient knowledge of each branch to co-ordinate the various efforts to a single end.

The problem is, not how much shall he know of how many subjects (for the greater his all-round knowledge the more efficient he is likely to prove), but what is the least equipment with which it is legitimate to turn him out as qualified to devise and guide the machinery for disease prevention.

There is no question that in the past there have been not infrequent instances of looseness in awarding diplomas, where certificates of training have been given for merely nominal or perfunctory fulfilment of the Council's requirements, and

where "passes" have been obtained by candidates whose knowledge was, to say the least of it, sketchy. That the examination standard has been greatly improved, however, is obvious from Dr. Bruce Low's Report, although it is not by any means certain that all those who even now present themselves have really carried out the conditions of training for which they have been "signed up," and this probably accounts for the heavy mortality that characterises these tests.

We are all familiar with that undesirable type of aspirant who does not like hard work, and who thinks he sees in a public appointment a sure and soft job. He pays his teaching fees, puts in the least possible amount of attendance, does little or no independent reading, and is greatly aggrieved when he finds himself "plucked." We are well rid of him, and there should be no place for him or his like in our service. It is pretty safe to say, however, that he is being effectively excluded under the system of examination as it is to-day.

Another type is the keen but green youth, newly qualified, who is anxious to pass whatever examinations yet lie before him while cramming still comes easy to him. He is undoubtedly wise in his generation, but he lacks experience in other aspects of life, and may never gain it later. Him we frequently meet—and pass, but he is not much of an acquisition, and his desire for the diploma is often merely as a speculative asset.

Yet another is the man who is engaged in private practice or other more or less arduous work which has first call upon his time and energies. His training is carried out under considerable difficulty, and is apt to be interrupted, fragmentary, disconnected, and spread out over a lengthy period. He is ultimately "signed up" for the requisite attendance, although he may have got no real good out of it. By burning much midnight oil at the last he manages to make some sort of show at the examination, and a compassionate examiner, knowing his circumstances, may give him the benefit of the doubt, a decision the wisdom of which is highly questionable. In connection with one or two such, in my earlier experiences as an examiner, I have had subsequent cause to regret exceedingly an ill-advised leniency.

Dr. Bruce Low emphasises all these points, and it is satisfactory to note that the Draft Rules prescribe an interval of not less than two years between qualification in medicine and admission to the final examination for a D.P.H. Although not specifically required, the intention is that at least a year shall be spent first in general practice or in

a general hospital—a very necessary preliminary to the adoption of any specialism.

The training requirements generally are increased, and are bound to take more time than under the existing regulations. Training is to extend over a period of not less than twelve calendar months (not an academic year, which is only nine working months). Indeed, it would not appear feasible to do the prescribed work in less. It would still seem to be possible, however, for the man who is continuing to earn his living at the same time to get in the necessary attendances by spreading them over a more or less prolonged period, for "whole-time" study, as recommended by Dr. Bruce Low, is not mentioned. This I regard as somewhat of a weakness, unless such other occupation is limited to an appointment in connection with a public health department.

Another valuable condition which most schools already observe is that Part I. shall be passed before the candidate may proceed to Part II.

Now we come to the consideration of the details of the curriculum that it is proposed to lay down, and it is in regard to these that diversity of opinion is most likely to arise.

The main points of amendment of the existing Regulations are as follows:—

For Part I. the course in Bacteriology is increased from 120 to 180 hours (of which 150 hours are to be occupied in practical laboratory work), while that in chemistry and physics is shortened from 120 to 90 hours (of which 70 hours are to be spent in the laboratory), the two together thus being increased by 30 hours.

Parasitology and entomology are now specifically included with bacteriology.

If the work is taken consecutively, daily, the foregoing alone mean, at three hours a day, and five days a week, eighteen weeks' continuous occupation.

For Part II. the requirements are considerably increased.

The three months' attendance at a fever hospital remains, but instead of a minimum of two attendances a week for that period (26), there are now to be 30 attendances of not less than two a week, together with clinical records of not fewer than six cases observed in the wards.

Six months' practical work, on at least 60 days, with a medical officer of health are again required, with the new prescription that an attendance shall be of not less than three hours; the instruction is to include certain specified subjects—Maternity and Child Welfare, School Medical Service, Venereal Disease Service, Tuberculosis Service,

Industrial Hygiene, and the Inspection and Control of Food, including meat and milk. There is no longer an exemption as to three months of this work on account of having attended a course of lectures or held a residency for three months in a fever hospital, or of having been a Medical Officer of Health for three years.

An entirely new and additional requirement is that the candidate shall have received during not less than 100 hours, at an approved institution or from approved teachers, instruction in

The Principles of Public Health and Sanitation (30).

Epidemiology (20).

Sanitary Law and Administration (20).

Sanitary Construction and Planning (12).

Vital Statistics (10).

Meteorology and Climatology (8).

There can be no question that these changes will go very far towards ensuring that such candidates as satisfy the conditions will be of a relatively high order, and that the standard of experience of recruits in the future will be distinctly above that of to-day.

But, while readily conceding the desirability of the scheme from the point of view of, may I say, the employer—i.e., the State, or at least the local authorities, and of the professional prestige of the service, there are certain other aspects which must be regarded.

Firstly, what will be the probable effect upon entrants? Well, it must be admitted by us all that, however attractive may be our work to many, the conditions of remuneration compare unfavourably with the prospects and possibilities in almost any other line in medicine, and, particularly since the war, the service has lost considerably in popularity. Just as an example, may I mention that of about 50 of my own pupils who have completed their course during the last eight years, barely half have sat the examinations, most of the defections having occurred within the last three years. And these are not cases of mere procrastination, but of definite abandonment. Nor were the seceders by any means undesirables, but men, and women, of good average ability who had come to the conclusion that the public required too high a sacrifice of its servants, and decided to cut their losses before it was too late.

As things are, over the past ten years there was an average casualty rate of 27 per cent. in the first examination, and 25 per cent. in the second, in the twenty-one schools. Nevertheless 1,556 candidates obtained the diploma. For how many of these does it lead to a competency?

It is difficult to obtain exact figures, but it is estimated that there are in England and Wales approximately 340 whole-time medical officers of health, to 1,150 whole-time subordinate officers dealing with school children (830), maternity and child welfare (56), tuberculosis (250), and venereal disease (15). Thus the chances of the entrant ever becoming a chief would seem to be less than one in three, even if he have the patience to wait his turn, which only a proportion can afford to do; and while the number of the subordinate posts is always increasing, the number of Medical Officers of Health is practically fixed. Although the former appointments carry real responsibility, and demand a considerable degree of skill and special experience, their remuneration is only such as is attractive to the very junior man, and to him alone, with little or no prospect of improvement, while there are comparatively few men in the latter category (of Medical Officer of Health) whose salary is equal to the income that is well within the reach of the most mediocre and unambitious panel practitioner.

Dr. Bruce Low states that there is an abundant reserve of unplaced diplomates, more than sufficient to supply all requirements for the next few years, and that it would not be a bad thing if new regulations did impose a check upon the number of candidates, especially of the "haste-to-be-qualified" type, and in this I cordially agree with him.

But what is to happen when the present surplus (which includes the "haste-to-be-qualified" gentlemen) is exhausted? I question very much if there will be a sufficiency of "the earnest and persevering men who are more likely to become efficient and trustworthy custodians of the Public Health," as Dr. Bruce Low anticipates. Certainly not unless the present conditions of remuneration are improved. Otherwise, I greatly fear, posts, especially the clinical ones, will go by default to people without any Public Health training at all.

So far my comments have been entirely critical, and I should like now to put forward a few suggestions for your consideration.

We are all agreed that the standard must be maintained and, if possible, raised, and if the latter, then it must be brought about in such a way as will not merely shut the door against the student with the limited purse, who is not as a rule the inferior man.

The proposals before the Council practically preclude any earning employment during the year of study, and involve the consequent severe sacrifice of a year's income. A candidate cannot get

in satisfactorily all the attendances demanded and do any other work. Therefore I suggest, firstly, that a considerable reduction be made in the laboratory requirements for Part I., and in substitution there be a series of 40 lecture demonstrations on the chemistry of public health, and another of 60 on micro-organisms in relation to public health, the purpose of each being not to make the candidate an expert practical analytical chemist and bacteriologist, as seems to be the rather ineffective aim at present, but, taken as adjuvant to careful reading, to give him a good working comprehension of the subjects, sufficient for the ordinary purposes of an administrative officer.

For Part II. I would suggest a strict insistence upon the fulfilment of the conditions attaching to the course of practical work under a medical officer of health, in all the sections of his department, and of the fever hospital attendance, a careful record of time spent and work done being required in place of the bare certificates that are produced at present. I would even go further, and suggest that if possible this experience should be obtained from within the department, that is, not as a detached tri-weekly visitor, but as an actual member of the staff, and to this end would limit any coincident occupation to a post connected with a public health department such as a junior residency in the fever hospital, or assistantship in the Maternity and Child Welfare, or Tuberculosis Section, or in a recognised bacteriological laboratory, the tenure of which for six months should be compulsory. The limited opportunities attaching to the fulfilment of this condition would alone prevent a flooding of the market with imperfectly trained and unemployed diplomates.

Also I suggest that the new proposal for 100 hours of special "instruction" should be dropped. If the work in the public health department is properly arranged such a course becomes superfluous; in any case it is difficult to see who indeed could give it, involving as it would a great burden of preparation for a necessarily small audience. Even a whole-time professor or lecturer on public health (a luxury only within the means of a very few well-endowed schools) would hardly meet the requirements, since active medical officers of health alone are in a position to keep abreast of the changes and modifications that are constantly occurring from day to day, and who of them could spare the necessary time?

Another objection I have to such a course is that an outstanding characteristic of the average

student is the depressant effect of "spoon-feeding" upon his initiative and power to follow out and study things for himself. I used to give my pupils a considerable amount of coaching, apart from their practical work in the department, and always found in the examination that they could answer well upon any subject I had shovelled into them, but the more I taught them in this way, the less they knew about anything else. We seniors got very little actual teaching in our time, and our best experience was obtained by independent observation, investigation, and subsequent following up in our books or questioning our more experienced colleagues.

The suggestions which I submit to you for discussion as minimum requirements for training are therefore as follows:—

For Part I. (which should be regarded merely as a preliminary to Part II.), courses of, say, 60 and 40 single-hour lecture-demonstrations in Bacteriology and Chemistry respectively, in place of the present or the proposed long laboratory courses.

For Part II.—Tenure for at least 6 months of an appointment in one or other section of a public health department (which should count for the attendance required in that particular section), or in a recognised bacteriological laboratory. Such appointments, permitting of time for other work, might have to be evolved by arrangement with local authorities.

Three months attendance (on 30 days) on the practice of a recognised hospital for infectious diseases.

Six months' practical work (60 days, of 3 hours each) under a medical officer of health, during which the candidate should obtain practical instruction in the sections relating to maternity and child welfare, school medical service, tuberculosis, venereal diseases, industrial hygiene, inspection and control of food (including meat and milk) infectious diseases prevention, general sanitation, and in the office (administration, records, and statistics), a certified detailed statement of the time spent in each being required of him.

I assume that we all are in agreement with the proposals to prohibit entrance for Part II. within two years of qualification in Medicine, and until Part I. be passed.

These suggestions, I submit, would meet present-day needs adequately, imposing a sufficient safeguard upon the quality of recruits without

making utterly prohibitive the conditions of entry into the service. In any case there are not likely to be many candidates for some years to come at least, and there is a real danger that there will be none at all if things be made too difficult for both the potential candidates and those who have to train them, and if the material attractions of the service are not substantially improved.

*THE PUBLIC HEALTH MEDICAL SERVICE AS A CAREER.

BY

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The Public Health Medical Service comprises sanitary, infectious diseases, maternity and child welfare, school medical, tuberculosis, venereal diseases and mental deficiency services, and the medical man who decides on a public health career may enter by any one of the services named. To secure an initial appointment appropriate experience after obtaining the full medical and surgical qualifications required for practice is necessary. A year spent in house appointments, clinical assistantships in special departments of hospitals or assistantships in private general practice is essential for entry into the service as a junior medical officer. If the entrant aspires to become a medical officer of health, it is further necessary for him to obtain an additional qualification in public health involving at least nine months' further attendance at classes and study after he has become a doctor. The general medical Council has recently had this period under review, and at their Winter Session, 1921, agreed that two years should elapse between the attainment by a candidate of a registrable qualification in medicine, surgery and midwifery, and his admission to the final examination for a Diploma in Public Health. The President of the General Medical Council, in dealing with this subject, stated that the rapid growth in the number and importance of the functions of a medical officer of health made it necessary to lengthen the curriculum and generally raise the standard of examination for the Diploma in Public Health. The greater length of time which the Council required the presumptive medical officer of health to spend on his training was intended to insure a greater

* A paper read at the meeting of the Home Counties Branch.

maturity and a higher level of practical efficiency in those who proposed to devote themselves as administrative specialists in the Public Health Medical Service. The Diploma in Public Health, according to the view of the General Medical Council, is not to be regarded merely as an academic distinction, but as a qualification which can only be acquired after full study and practical experience in relation to actual public health work, and is intended only for people who really mean to use it.

Training of the character indicated is necessary for medical men entering the Public Health Medical Service, for the work to be done is work of great public usefulness and scientific interest, and presents many opportunities for research. The medical officer, therefore, engaged in public health work must be a man of good medical education, sound clinical training, and practical knowledge of laboratory and research methods. During his whole career as a public health medical officer he has to keep himself abreast of scientific knowledge and its application to the work of his department. The men chosen to fill the higher posts in the Service require administrative ability of a highly-specialised character. They must associate business capacity with scientific knowledge and attainments, possess initiative and imagination, and yet be thoroughly practical. One of the main functions of these principal medical officers is the education of the local authority whom they serve and of the public beyond. They must, therefore, in addition, know human nature and have common sense, tact and patience. The life of a medical officer of health is hardly possible for one who is not by nature an optimist or who has not in any case got some faith in human nature. Only rarely does he receive any spontaneous word of praise or material encouragement, no matter how hard he may work or how well his work may be done, and he will often find himself in the minority striving against public ignorance, vested interests, political intrigue and professional jealousy.

Official records do not disclose the total number of medical workers employed in the Public Health Medical Service. 1,125 Urban Districts, including county and municipal boroughs, 28 Metropolitan boroughs, the City of London, 62 administrative counties and 672 rural districts in England and Wales, with a total population of 37,885,242 at the census of

1921, require to appoint medical officers of health. If a population of 100,000 is allotted to a whole-time medical officer of health, it will be seen that the equivalent of 379 medical men giving their whole time to the work are employed as medical officers of health by local authorities.

37,351 beds are provided in isolation and port sanitary hospitals. If 70 beds are allotted to a full-time medical officer, it will be seen that 533 medical practitioners working full time are required for the isolation hospital work of local authorities.

In connection with maternity and child welfare schemes, 1,960 centres have been established. Each of these centres probably employs a medical officer on two half-days a week, and on this basis the equivalent of 326 full-time doctors are employed by local authorities on maternity and child welfare work.

In respect of the school Medical Service, the annual report of the chief medical officer of the Board of Education states that 812 whole-time school medical officers and assistants and 730 private practitioners undertook for local authorities in 1920 the work of medical inspection or medical treatment, or both, and to this number there requires to be added private practitioners engaged at hospitals and a number of practitioners who treated school-children in private practice or under the Poor Law. Neglecting the time given to the School Medical Service by these latter, and assuming that the 730 private practitioners referred to each give half a day a week to school medical work, it may be said that the work of the 812 whole-time medical officers actually employed is supplemented by the equivalent of at least 60 whole-time medical men, making a total of 872 medical men giving their full time to the work of the School Medical Service.

Tuberculosis schemes again absorb a large amount of medical work. The annual report of the chief medical officer of the Ministry of Health for the year 1920 recommends that there should be one tuberculosis medical officer for every 120-150 deaths per annum from the disease. This standard has not yet been attained, but on the basis of one tuberculosis officer for 150 deaths the equivalent of 281 whole-time tuberculosis officers would have been employed in 1920, when there were 42,545 deaths from tuberculosis in England and Wales. In 1920, 17,352 beds were provided

for tuberculosis in sanatoria (including consumption hospitals), isolation hospitals (including small-pox hospitals having beds for tuberculosis), general hospitals and children's institutions. On the basis of 60 beds to one doctor, the equivalent of 289 doctors giving their full time would be employed in this department of work.

Again, in connection with venereal diseases, 142 schemes had been approved, and 1,891 treatment centres established up to June, 1921. Assuming that each centre occupies the time of a medical man no more than half a day a week, it may be calculated on this conservative basis that the equivalent of 158 doctors give their full time to venereal diseases schemes of local authorities.

The seventh Annual Report of the Board of Control for the year 1920 shows that 12,026 mental defectives were under care. I am unable to give any reliable estimate as to the number of whole-time medical men required for this work.

The following table shows in summary form the estimated number of medical men employed in the Public Health Medical Service in 1920, on the assumption that their whole time was given to the work:—

Medical officers of health ...	379
Isolation and port sanitary hospitals ...	533
Maternity and child welfare ...	326
School Medical Service ...	872
Tuberculosis ...	570
Venereal diseases ...	158
Mental deficiency ...	?
Total for England and Wales ...	2,838
(Population 37,885,242, census 1921.)	
Total for Scotland in proportion to the population (4,882,288, census, 1921)	355
Grand total for Great Britain ...	3,193

All the medical officers employed in the Public Health Service are not whole-time, but the above estimate, excluding mental deficiency work, that the equivalent of 3,193 whole-time medical men are employed in Great Britain shows that the service, in point of magnitude, is not less important than the Royal Naval

Medical Service employing 456 medical officers in November, 1921, the Army Medical Service employing 1,082 medical officers in October, 1921, or the Indian Medical Service employing approximately 750 medical officers in February, 1922.

The medical officers of the Public Health Medical Service are charged with great responsibilities. To them is entrusted primarily the prevention of disease and the initiation of reforms with the view of improving the public health. That they have fulfilled their trust is exemplified by the fact that since the passing of the Public Health Act (1875) requiring every sanitary authority to appoint a medical officer of health, the death-rate in this country has continuously declined. In 1875 it was 22.8 per 1,000 of the population, while in 1920 it was 12.4. This fall in the death-rate represents a saving of 392,000 lives per annum in England and Wales, and while it is not maintained that it is solely due to the work of medical officers of local authorities, they may still very properly claim a large share in effecting this desirable reduction. With the establishment of a Ministry of Health, and later the long-awaited-for unification of local health authorities, the promise of the future is that still greater progress will be made towards the improvement of public health, and the medical man, therefore, who decides on public health as a career may properly enter the service with high aspirations. Before him is the whole field of preventive medicine, which includes not only the prevention of disease, but also the raising of the general standard of health and increasing longevity. It is a new and important phase of medicine requiring all the brains and energy that the best medical men possess. At the present time the practice of medicine is essentially built up on the practice of treating disease once it has developed. The physician of the future unquestionably must prepare himself to prevent the development of disease, rather than to deal with it only after it has developed and be able to advise the public on how to keep well. This is the work which is being tackled by the Public Health Medical Service. It might be thought that the country would have done its best to attract the most capable of the younger physicians to its service, so that medicine along these lines might be developed in the interests of the community; but the young man who enters the Public Health Medical Service full

Public Health Medical Service. (Salaries claimed by Society of Medical Officers of Health.)	Royal Naval Medical Service.	Army Medical Service.	Indian Medical Service.
Class or Rank. Pay. Resident Medical Officers in Hospitals, etc., of Local Authorities. £505. (Pay falling—includes cost of living Civil Service bonus, index figure taken as 80.)	Surgeon-Lieutenant. £438—£529. (Pay fixed—may hold Specialist appointment with additional remuneration.)	Lieutenant. £550—£617. (Pay fixed—may hold Specialist appointment with additional remuneration.)	Lieutenant. £488. (Pay fixed—Rupce taken as 1/3—May take private practice or obtain Specialist appointment with additional remuneration.)
Class or Rank. Pay. Medical Officers employed in Departments. £636—£1,023. (Pay falling—includes cost of living Civil Service bonus, index figure taken as 80.)	Surgeon-Lieutenant-Commander to Surgeon-Commander. £638—£1,040. (Pay fixed—may hold Specialist appointment with additional remuneration.)	Captain to Major. £762—£1,000. (Pay fixed—may hold Specialist appointment with additional remuneration.)	Captain to Major. £600—£1,125. (Pay fixed—Rupce taken as 1/3—May take private practice or obtain Specialist appointment with additional remuneration.)
Age at Retirement. Maximum Retired Pay. None.	50 years. £600.	About 50 years. (After 25 years' service.) £450.	About 42—45 years. (After 17 years' service.) £400.
Promotion beyond this point. By application and selection.	By selection.	By selection.	By selection.
Class or Rank. Pay. Medical Superintendents, Senior Medical Officers in charge of departments or Assistant Medical Officers of Health. £41,130. (Pay falling—includes cost of living Civil Service bonus, index figure taken as 80.)	Surgeon-Captain on Promotion. £1,186. (Pay fixed.)	Lieutenant-Colonel. £1,183—£1,274. (Pay fixed.)	Lieutenant-Colonel. £1,312—£1,575. (Pay fixed—Rupce taken as 1/3—May take private practice or obtain Specialist appointment with additional remuneration.)
Age at Retirement. Maximum Retired Pay. None.	55 years. Title below.	55 years. £800.	About 52—55 years. (After 27 years' service.) £800.
Class or Rank. Pay. Medical Officers of Health. £1,234 to £2,000, depending on appointment. (Pay falling—includes cost of living Civil Service bonus, index figure taken as 80.)	Senior Surgeon-Captain. £1,460. (Pay fixed.)	Colonel to Major-General. £1,502. (Pay fixed.)	Colonel to Major-General. £1,650. (Pay fixed—Rupce taken as 1/3.)
Age at Retirement. Maximum Retired Pay. None.	55 years. £900.	57 years. £800.	60 years. £1,625. (Pay fixed—Rupce taken as 1/3.)

of ambition, with a single-minded devotion to duty and a whole-hearted desire to serve the public well, finds but little encouragement from the awards given in the service for strenuous work faithfully done. For the present emoluments of the Public Health Medical Service compare unfavourably with the emoluments in other departments of medical service or practice, promotion in the service is not regular or assured, superannuation of medical officers of local authorities is rare, security of tenure applies only to some medical officers of health, while in the annals of history only one medical officer of the Public Health Service has been created a Knight.

The Society of Medical Officers of Health have had the status and emoluments of medical officers in the service of local authorities under consideration, and in January, 1920, obtained a return from 244 areas as to the salaries payable. These returns show that less than five per cent. of medical officers of local authorities receive a salary of £1,000 per annum, and that the normal salary expectation of a medical officer entering the service is not more than £650 per annum.

The salary payable in any office largely depends on the prospect of promotion. Prior to 1908, when school medical work began, every medical man entering the Public Health Medical Service had an excellent prospect of becoming a medical officer of health—assuming always he had normal aptitude and ability for the duties of the office. Since 1908, however, many medical services have been added, and the Public Health Medical Service of to-day includes, sanitary, infectious diseases, maternity and child welfare, school medical, tuberculosis, venereal diseases and mental deficiency services—with the result that the prospect of promotion to the higher position is small as compared with fourteen years ago. Certainly four out of every five men employed in the Public Health Medical Service are destined to remain as ordinary workers in Departments throughout their careers, with salaries as aforesaid of not more than £650 per annum. The Society of Medical Officers of Health have recognised this disability of their younger members for a considerable time, and in 1919 formed a Committee to go into the general question of the prospects, and in relation thereto the remuneration of medical officers of local authorities.

The Committee, after a large amount of

work, drew up a memorandum dealing with the typical career of medical men in the Public Health Service, facts bearing on the determination of minimum salaries of medical officers, and set forth a scale of minimum salaries which was approved by the Council of the Society of Medical Officers of Health on September 24th, 1920. The basis of the scale is that it assures to the medical officer doing responsible clinical or other work in relation to tuberculosis, the School Medical Service, mental deficiency, maternity and child welfare, venereal diseases, port sanitation or the like, a salary of £800 per annum plus bonus, but without superannuation. With the cost-of-living index figure at 80—it was 86 in March, 1922, and falling—£800 plus bonus per annum equals £1,023 per annum, and £940 per annum when the index figure is 50—surely not excessive remuneration for an efficient medical practitioner approximately 40 years of age after at least 10 years service and possessing special qualifications and experience.

The principal public medical salaried services are the Royal Naval, Army and Indian Medical Services, and comparison of these with the Public Health Medical Service is therefore not out of place. It has been already shown that from the point of view of numbers the Public Health Medical Service is no less important than the Royal Naval, Army and Indian Medical Services. Similarly, the medical officers of local authorities of England and Wales to whom are entrusted the protection and care of the health of the civil population have responsibilities at least as great as those of the medical officers of the Navy, Army, or India.

A medical officer entering the Navy or Army is assured of promotion up to a certain rank provided he shows normal competency, while promotion beyond that is by selection. In the case of the Navy, he is reasonably certain of promotion to the rank of Surgeon-Commander, which carries with it pay at the rate of £1,040 per annum, with retirement at the age of 50 and a maximum retired pay of £600 per annum. In the case of the Army a medical officer entering the Service is reasonably assured of promotion to the rank of Major, which carries with it after 15 years' service £1,000 per annum with compulsory retirement after 25 years' service—about the age of 50 years—and retired pay at the rate of £450 per annum. In the Army Medical Service there are also, in addition up to the rank of Major, certain

allowances for specialist hospital or Royal Army Medical College appointments ranging from £46 to £200 per annum. In the case of the Indian Medical Service the medical officer entering is reasonably assured of promotion up to the rank of Major, carrying pay at the rate of £1,125 per annum, with retirement after seventeen years' service—about the age of 42-45 years—and retired pay of £400 per annum.

The above officers may be considered the equivalent of medical officers employed in Departments for whom the Society of Medical Officers of Health asks for pay after at least ten years' service at the maximum rate of £800 with bonus (being £1,023 with index figure of 80 and £940 with index figure of 50), with work till old age and seldom with superannuation or retiring allowance. In cases where superannuation is in force it is invariably on a contributory basis—unlike superannuation in the Services named, which is non-contributory.

Senior medical officers in charge of Departments, medical superintendents and medical officers of health represent the successful medical officers of local authorities, and are appointed by selection just as surgeon-captains and surgeon-rear-admirals are in the Navy, and lieutenant-colonels, colonels and major-generals in the Army or Indian Medical Service. The pay of a surgeon-captain varies from £1,186 to £1,460 per annum. Retirement is compulsory at the age of 55, with a maximum retired pay of £900 per annum. The pay of a surgeon-rear-admiral is £1,916 per annum, with compulsory retiral at the age of 60 and a maximum retired pay of £1,010 per annum. In the Army the pay of a lieutenant-colonel varies from £1,183 to £1,274 per annum, with a maximum retired pay at the age of 55 years of £600 per annum. The pay of a colonel is £1,502 per annum, with a maximum retired pay at the age of 57 years of £800 per annum, while the pay of a major-general is £2,212 per annum, with a maximum retired pay at the age of 60 of £1,000 per annum. In the Indian Medical Service the pay of a lieutenant-colonel varies from £1,312 to £1,575, with greater pay for colonels and major-generals up to £2,250 per annum. Additional allowances are also granted according to the nature of the appointment which may be held. Compulsory retirement is for a lieutenant-colonel at the end of 27 years' service about the age of 52 to 55 years on a pension of £800 per annum. Higher ranks receive retiring allowances beyond this sum, depending on length of service.

For men holding analogous positions in the Public Health Medical Service the Society of Medical Officers of Health ask for salaries, according to the post held, ranging from £900 to £2,000 with bonus, being £1,130 to £2,000, with an index figure of 80, and £1,044 to £2,000 with an index figure of 50. These salaries are lower than the rates for officers holding corresponding positions in the Services, and, unlike the latter, carry no superannuation as a general rule.

The following table gives comparisons between the rates of pay (based on the falling index figure of 80) asked for by the Society of Medical Officers of Health for the Public Health Medical Service and those payable in the Royal Naval, Army and Indian Medical Services:—

The report of the proceedings of the Panel arbitration relating to the rate of medical remuneration, which awarded a capitation fee of 11s. per insured person per annum, appears in the supplement to the "British Medical Journal," dated March 30th, 1920, and gives certain information as to the rate of remuneration of Panel practitioners which seems to have met with general acceptance. The British Medical Association claimed that £1,800 a year was the gross income at present-day values (November, 1919, cost of living figure, 125) which an efficient medical practitioner expected to earn in middle age when working his ordinary full time. The Association also claimed that the expenses of practice amounted on the average to 25 per cent. of the gross income, thus giving a net income of £1,350 per annum to an efficient medical practitioner working full time.

In the course of the proceedings it was stated on behalf of the Government that the pre-war fee of 7s. 3d. for Panel remuneration produced a whole-time rate of remuneration of about £1,000 a year, and the Government representatives suggested that a capitation fee of 10s. would produce a whole-time income of £1,300 a year net. The rate of Panel remuneration has now (January, 1922, cost of living figure 92) been fixed for two years at 9s. 6d. per insured person per annum—equivalent on the foregoing figures to a net income of over £1,200 per annum for an efficient medical practitioner working full time.

When the facts and figures which I have reviewed in this paper are studied, it will be seen that the claims of the Society of Medical Officers of Health in respect of remuneration

are just and reasonable. The Society claim that their members are doing specialised work, that many of them require in addition to the ordinary qualifications of a doctor a registrable qualification in public health, and they ask that they be paid on the basis of the earnings of efficient medical practitioners working whole-time in other salaried services or private practice. The request is moderate, and if a claim so just is withstood, then the Public Health Medical Service regarded as a career must be considered as closed, for first-rate men will not enter or remain. In these circumstances the Service is bound to deteriorate, and the development of preventive medicine and the discovery and institution of measures for the improvement of the public health will be long delayed.

THE SCHICK TEST AND DIPHTHERIA TOXIN-ANTITOXIN IMMUNISATION.

BY

T. E. DICKINSON, M.D., D.P.H.

In addressing a meeting of medical officers of health, it would be superfluous for me to stress the formidable role of diphtheria, either as an administrative problem or as a clinical entity. In spite of the time, money, and energy spent upon prevalent methods of control, the incidence and mortality of diphtheria have not declined during the past decade; rather, on the other hand, they have increased. This condition of affairs renders the Schick test for the determination of susceptibility to diphtheria a subject of more than academic interest, and it is the purpose of this paper to outline, briefly, my personal experience with the test, and to hazard certain suggestions as to the manner in which it might be employed most profitably in the public health services.

The utility of the test depends upon the fact that persons, whose blood serum contains no diphtheria anti-toxin, react in a specific manner when diphtheria toxin is injected into their skins. The intracutaneous exhibition of 1/50 M.L.D. of toxin produces, in the non-immune, a skin reaction having the following characteristics:—After 24 hours the area at the site of inoculation becomes very slightly raised and infiltrated. In colour, it varies from a deep pink to a dark dusky crimson. In shape, it is round or oval. The edge is distinctly, but not very sharply, defined. The surrounding skin is usually normal; rarely there is a faint

pink enclosing zone, which fades in the course of 24 or 48 hours. The diameter of the area varies from 10 to 30 millimetres, usually 15 to 25. There is no pain, itching, nor any feeling of discomfort. The reaction is at its height from 48 to 72 hours after the injection. At the end of a week the skin shows brown pigmentation and scaling. The scaling assumes all degrees of intensity, from a very fine powdery desquamation marking out the folds of the skin, to massive exfoliation. Very occasionally scaling occurs as early as the third day, or may be delayed until the end of the second week. The pigmentation gradually disappears in the course of weeks or months.

The above phenomena constitute the positive Schick reaction. There is another reaction, not specific, which sometimes occurs, especially in adults. It is due, not to toxin, but to protein substances in the toxin broth used for the test, and it may be regarded as being due to a hypersensitivity of the person in question to foreign protein. This, the pseudo-reaction, when compared with the positive reaction, presents certain distinguishing features: it reaches a maximum in 20 or 30 hours; it begins to fade before 48 hours; it rarely leaves pigmentation or scaling; the colour is a more vivid red; the skin is more infiltrated; there is often a well-marked pink zone round it. In other words, it is a transient inflammatory reaction, as opposed to a persistent specific reaction. It occurs comparatively frequently in adults, more rarely in children. It may be combined with a positive reaction. With a negative reaction, nothing is visible after 24 hours, except, perhaps, an ill-defined red line marking the needle track.

In the early part of 1921, at the suggestion of Dr. Niven, Medical Officer of Health for Manchester, I performed the Schick test upon 1,200 persons, normal and diseased. A detailed account of the technique and an analysis of the results obtained will be found elsewhere; this afternoon I can only mention the more salient features.

To perform the test, one requires a ripened, standardised toxin, a sterile diluting medium, a graduated all-glass 1 c.c. syringe, and a very fine needle. The toxin is diluted with phenol-saline so that 0.2 c.c. of the mixture contains exactly 1/50 M.L.D. This quantity is injected into the skin on the flexor aspect of the forearm. The other arm receives a control injection of heated toxin. (Heating to 75 degrees C. for

ten minutes destroys the toxin content of the solution, but does not affect protein.) Hence a reaction on both arms would denote pseudo; the final result would be positive or negative, according to whether the toxin arm reaction persisted or not. Readings are made at intervals of 24 hours, 72 hours, and ten days.

Among 1,091 cases, normal and diseased, children between the ages of two and five years gave the greatest percentage of positive reactions, the figure reaching 65 in the 3-4 years group. This period of life, 2-5 years, is that in which the incidence of clinical diphtheria is most marked. The agreement between clinical experience and experimental test is significant, and is strong presumptive evidence of the reliability of the Schick test.

Among 650 scarlet fever cases the test gave a slightly higher percentage than 381 normal cases. This again demonstrates the accuracy of the test, for it is a well-known clinical fact that persons suffering from scarlet fever are more susceptible to diphtheria than are normal people. The pseudo-reactions varied directly with age and normality, occurring more than twice as often above fifteen years, and nearly twice as often in healthy people.

Injections of diphtheria anti-toxic serum were given in 109 cases, ranging from 2,000 to over 20,000 units, before the test. Eighty-three out of the 109, or 76 per cent., gave a pseudo-reaction. It would appear that the protein in the serum solution had sensitised the individuals, and rendered them hypersusceptible to the protein in the toxin solution.

A table was arranged to show the quantity of anti-toxin given to each of the 109 cases, and the time elapsing before the test was performed. The first positive reaction, indicating loss of passive immunity, occurred in the third week. Once more there is agreement with clinical experience. Further, the positive reactions gravitated to that quarter of the table where the factors of small dose and long period acted in unison. No final conclusion can be drawn from the numbers tested, but there is indication that, by means of the Schick test, it would be possible to demonstrate that the larger the quantity of anti-toxin given, the longer would be the duration of passive immunity.

Eighty-four family groups were tested, and it was found that like positive or negative results occurred in 60 groups, or 71 per cent.; but that with pseudo-reactions the reverse was

the case. Fourteen persons out of the total of 1,200 were retested at intervals varying from three to 75 days. Some were borderline cases, and in nearly every instance the different readings for the first test agreed with the corresponding readings for the subsequent test. The final results were always the same. Among fourteen infants under three months, there was only one positive reaction. The mother of this case was positive also.

The above results may be interesting from a purely scientific point of view, but it is when considered in relation to toxin-anti-toxin active immunisation against diphtheria that the Schick test becomes of practical importance. As a result of experiments extending over several years, Drs. Park and Zinger, of the City of New York Health Department, have come to the conclusion that immunity to diphtheria, possibly life-long, can be obtained by the injection of a mixture of toxin and anti-toxin. As a preliminary to such immunisation, it is very desirable to possess a means of distinguishing the naturally immune from the non-immune. To attempt to immunise the whole of the population by means of toxin-anti-toxin injections would, obviously, be impossible. But if some method—safe, reliable, and easy to perform—were discovered which would enable one to distinguish the immune from the susceptible, so that only the latter need be protected; and, further, if it could be shown that the majority of the non-immune were children, who could be immunised conveniently in batches in schools and elsewhere; then a distinct advance would have been made towards the realisation of immunisation upon a large scale. Such a method we do possess in the Schick test. I have pointed out that the majority of non-immunes are, in fact, children; that the test is reliable, I have tried to make clear; that it is safe is shown by the fact that in the whole of my series there was no case of sepsis nor any untoward after-effect; that it is easy to perform, I hope to demonstrate at the close of the meeting.

Since the original papers of Schick and V. Behring in 1913, a great amount of work has been carried out in New York, where tens of thousands of children have been tested and immunised. A detailed account of the methods and results of Park, Zingher, and other workers will be found in the Archives of Pediatrics, vol. 38, No. 6 (June, 1921), and also in the Collected Studies of the New York

Bureau of Laboratories, vol. 9 (1916-1919). Here I will epitomise some of the more important conclusions.

1. All children from six months to five years should be injected with toxin-anti-toxin, without a preliminary Schick test, as most of the children in this age-group give a positive reaction. No child should be pronounced immune until, when tested some months later, it gives a negative Schick reaction.

2. Children under six months should not be injected with toxin-anti-toxin, as they are generally immune (85-90 per cent.).

3. Children above five years should be Schick tested, and the positive reactors immunised.

4. A control of heated toxin should always be used along with the Schick test, in order to facilitate the recognition of pseudo-reactions.

5. In 90 per cent. of the cases injected, toxin-anti-toxin confers immunity to diphtheria for five years at least, probably much longer—possibly for life.

In this country, for information regarding the test and immunisation, we are mainly indebted to Dr. R. A. O'Brien and his co-workers at the Wellcome Research Laboratories. In the "British Journal of Experimental Pathology" for February, 1922, there is a paper by Dr. Moncton Copeman, Dr. O'Brien and his colleagues, showing, among other things, immunisation results for 102 children. Eleven weeks after injection, 98 per cent. gave a negative Schick reaction, and were therefore immune.

With Dr. Moncton Copeman's report to the Ministry of Health, dealing with the test and immunisation, you are all doubtless familiar, and I shall not dilate upon it.

At the Monsall Fever Hospital I have started to immunise the Schick-positive members of the nursing staff. For a variety of reasons the work has progressed slowly, but by the end of the year I hope to have protected all those who are susceptible. Three injections were given at weekly intervals. The mixture consists of toxin which is just under-neutralised with anti-toxin. (Technically, each c.c. contains 3 L + doses of toxin and 3.5 units of anti-toxin. The L + dose is that amount of toxin which, when added to one unit of anti-toxin, will cause the death of a 250 gram guinea-pig, on the fourth day after injection.)

In all, twelve nurses have been inoculated, and ten, or 83 per cent., gave a negative Schick test from one and a half to three months after

injection. In two cases there were rather severe local and constitutional after-effects. Within 24 hours the temperature rose to 103 degrees F., there was headache, vomiting, prostration, and the arm became very inflamed and swollen. These signs and symptoms subsided in two days. I discovered that both these nurses had given a combined positive-pseudo reaction with the Schick test. Thereafter, in every such case, I started with 1/10th of the dose, giving 0.1 c.c. for the first inoculation, increasing it to 0.2 for the second, and 0.5 c.c. for the third; there were no further reactions. With these doses, I believe, there is no danger of such distressing sequelæ. Children are far less liable to local and constitutional reactions. When they occur they are doubtless anaphylactic in nature, being due to foreign protein.

Reference to the last annual report of the chief medical officer of the Ministry of Health will show that both the incidence and mortality of diphtheria have increased during the past four years. In 1920 there were 5,641 deaths from the disease, the majority being young children. When we consider the amount of money spent upon notification, isolation, disinfection, anti-toxin, and upkeep of hospital accommodation, this can hardly be regarded as a satisfactory outcome, and we are bound to consider whether it would be practicable to employ toxin-anti-toxin immunisation for the control of diphtheria. According to American observers, it is possible to confer immunity for at least five years. Even if no more could be accomplished, this in itself would suffice to protect children during that period—1-6 years—when the disease is most prevalent and deadly. But there is reason to believe that immunity, once conferred, will last much longer—possibly for life.

There would seem to be no insuperable difficulty about performing toxin-anti-toxin immunisation on a large scale in this country. According to Sir George Newman, at least 1/6th of the total number of babies born come directly under medical control at the infant welfare centres. The medical personnel is already in existence, and the only thing further required is a supply of toxin-anti-toxin. Other young children could be reached in hospitals of all kinds, orphanages, homes, day nurseries, dispensaries, and finally in their own homes. Use could be made of the school medical service for older children. Here again the

personnel is in existence, the children are under control, and are so situated that the necessary inspections can be made at any time. Already a start has been made at certain hospitals, orphanages and schools, and, in a large measure, it depends upon the action of medical officers of health whether the work shall be greatly extended. Propaganda among the medical profession, municipal bodies, and the general public would be a necessary preliminary, but once medical officers themselves are convinced, the rest will follow.

It is possible that the Schick test may become of importance in the treatment of diphtheria "carriers." In his report to the Ministry of Health, Dr. Moncton Copeman says that the diphtheria bacilli in a majority of otherwise healthy carriers are non-virulent: Dr. O'Brien has recently stated ("Lancet," 1922, 1, 227), it is probable that all true carriers of virulent bacilli give a negative Schick response, and that if positive they are incubating the disease. Should these statements be confirmed, the carrier problem will be simplified. Healthy carriers who gave the positive reaction would only need to be isolated for a few days, to make sure they were not incubating diphtheria, and then released on the assumption that they were non-virulent.

As regards expense, 1,000 Schick and control tests can be made at a cost of £20. To immunise 1,000 people would entail an outlay of £300.

In conclusion, the Schick test and toxin-anti-toxin immunisation against diphtheria are still in the experimental stage in this country, and one must not be too sanguine. Yet there are valid reasons for believing that we may be in possession of a method which will not only effectively control the disease, but in the course of time stamp it out. If, as the result of the efforts of the medical officers of the present day, future generations regard diphtheria as we do smallpox, then to those medical officers will belong no small share of the credit for one of the most signal achievements of preventive medicine.

WILLS proved during the past month include those of Dr. James Lawrence, formerly medical officer of health for Darlington (£11,800) and Dr. G. S. Elliston, C.B., formerly medical officer of health for Ipswich (£15,932).

THE PRESENT POSITION OF THE ISOLATION HOSPITAL IN PREVENTIVE MEDICINE.*

BY

DR. G. R. BRUCE, Medical Officer of Health, Jarrow.

(1) When the policy of isolation in special hospitals was generally adopted between 1880-1890 the so-called major epidemic diseases, smallpox, scarlet fever, diphtheria, enteric fever, and typhus fever both as regards incidence and death rate were a most serious menace, and even in retrospect the policy of setting up isolation hospitals must be justified.

(2) The position to-day is vastly different in certain of these diseases.

(a) *Scarlet Fever.*

The total death rate is 1/20th of what it was in the decade 1870-1880.

The incidence is still high.

The case mortality is only about 1 per cent.

(b) *Enteric Fever.*

The mortality is now only 1/20th of that of 1870-1880.

The severity of the disease, both as regards incidence and death rate is rapidly decreasing.

(c) *Diphtheria.*

The total mortality is as great now as it was between 1870-1880, although the severity of the disease is generally diminished.

(d) *Typhus Fever.*

Has practically disappeared.

(e) *Smallpox.*

In spite of spasmodic outbreaks, only a very few deaths in the past few years, as compared with 5,762 annually between 1871-1880.

(3) In estimating the factors responsible for the reduction of infectious disease incidence and mortality, due weight must be given to the widespread improvements in general hygiene during the past 40 years.

(4) Parson's Report (L.G.B., 1911) gave a modified blessing to isolation policy as practised at present—admitted faults, *e.g.*, cross-infection, overcrowding of wards in epidemics; but claimed some of the credit in the reduction of the mortality of scarlet fever, and advocated up-to-date provision where required, especially of the isolation pavilion or the cubicle system.

(5) From an early period in the history of isolation hospitals there have been active critics of the value of isolation especially as regards scarlet fever; for example—inquiries have proved that the case incidence in non-isolation areas of exactly similar type over a prolonged period has been less than that of areas in the same district which

* Summary of Paper read at the Northern Branch.

isolate most of the scarlet fever cases; also that cases left at home do not tend to cause secondary cases any more than cases removed to hospital, the damage being done before admission.

(6) *What can the Isolation Hospital of To-day Fairly Claim?*

(a) *Scarlet Fever.*

(a) Scarlet Fever isolation in hospital has but little, if any, effect on the rise and fall of the 3-yearly or 4-yearly waves of this disease.

(b) Any claim to being responsible for the decline in the severity of scarlet fever must be debated. In all probability this is part of the natural history of the disease.

(c) The treatment of the severer types of scarlet fever, the septic and the toxic, in hospital has saved a considerable number of lives from time to time.

(d) The isolation hospital cannot as a rule compete with epidemics. If an attempt is made to take in all cases, it generally fails. There is risk of cross-infection in wards, the setting up of a septic type, and of carriers being sent home to infect return cases.

(e) The isolation of cases, even of the milder type, is an enormous convenience, for the poorer classes living under overcrowded conditions, and while we subscribe to our present idea of infection and quarantine, is of economical value in houses where breadwinners are connected with food, or clothing, or many children have to go to school.

(f) I submit that the nursing of all types of cases of scarlet fever in isolation hospitals under good conditions, without overcrowding of wards, must produce better results than treatment at home under the social conditions which prevail.

(b) *Diphtheria.*

There is little evidence to support any claim that isolation has reduced the incidence of diphtheria, but plenty to prove that isolation hospitals are necessary for its effective treatment. The diagnosis in many cases is still too long deferred, and anti-toxin treatment prior to hospital admission much too meagre.

(c) *Enteric Fever.*

Isolation hospitals by restricting and destroying infection in known cases may fairly claim along with the factors, *e.g.*, the improvement in water supplies, in cleanliness of shell fish, and so on, a share in the decline. Effective treatment in a severe case except in good-class houses is impossible unless in hospital.

(d) *Smallpox.*

The chain of smallpox hospital is fully warranted by the present spasmodic outbreaks, and must be accepted as an investment against the growing anti-vaccination attitude of the public. The smallpox hospital in many places pays its way by doing sanatorium work.

(7) *Number of Beds and Cost of Isolation Hospitals.*

There are in England and Wales about 37,000 beds, 7,000 approximately being for small-pox. A rough estimate on present prices of this annual cost (subject to correction) is £3,000,000.

(8) *What Policy can be Recommended in View of the Fact Stated?*

(a) *Scarlet Fever.*

(a) Sufficient beds should be reserved to treat all severe and septic cases, if possible, under cubicle or bed isolation methods.

(b) Mild cases in non-epidemic times to be accepted where circumstances render it advisable, *e.g.*, family connected with food, milk, or clothing stores, overcrowding, etc.

(c) No objection to home isolation under reasonable circumstances.

(d) In epidemics, no panic provision of beds or overcrowding of wards.

(b) *Diphtheria.*

Provision as at present.

(c) *Enteric Fever.*

Considerably fewer beds need now to be set aside for this disease.

Other Possibilities.

It should be possible by adopting some such programme to save beds and to make isolation hospitals of more use to the community in other directions, *e.g.*:

(a) Severe measles.

(b) Severe whooping-cough.

(c) Summer diarrhoea.

(d) The meningitic types of disease, *e.g.*, cerebrospinal, poliomyelitis, oncophalitis lethargica.

(e) The school child with early tuberculosis or the protuberular diathesis.

(9) *Quarantine as Regards School Children.*

The Ministry of Health would be well advised to revise their edict dating from 1908, which more or less governs our action in this matter. Our ideas—and probably those of the medical staff of the Ministry—have changed considerably since that time.

DOMESTIC QUARANTINE AND VENEREAL DISEASE.

In the United States the migration of persons suffering with venereal disease from their home State to another State without first procuring from their local health officer a permit stating that their travel is not dangerous to public health violates the Federal law, forbidding the spreading of contagious diseases, and will be rigidly suppressed.

Last spring the Attorney-General, at the request of the Service, instructed all United States attorneys to co-operate fully with it and to prosecute offenders vigorously. Since then several violators have been sentenced to reformatories, where their disease-spreading activities have been stopped and they themselves are receiving proper medical treatment.

The law and the regulations based on it are not so widely known as they should be; and the objects sought in their enforcement are not everywhere clearly understood. The law seeks to control the spread of disease, but not necessarily to prevent the travel of venereally diseased persons. Such travel, if undertaken under proper precautions in search of medical help, will be encouraged by the Service. The law, however, seeks to close every channel through which venereal disease may be spread; and to do this it has been found necessary to put a stop to the movements of those who seek to migrate from one State to another in order more safely to carry on the business of spreading disease.

When such persons and their associates learn that travel from one State to another while venereally diseased leads to arrest and severe punishment, they will have an added incentive for submitting to voluntary treatment; and the day will be hastened when every infected person will at once place himself or herself under the care of a skilled physician of his or her own selection.

At present it is probable that very many persons either never receive proper treatment or that they cease treatment too early in the belief that they are cured, and thus become dangerous. Laws on this subject differ in the different States; and this fact leads to migration from those whose laws are rigid to those whose laws are less so.

No attempt either by the U.S. Government or by State governments to police the State borders seems practicable. The laws of practically all States, however, require physicians to report all venereal cases that come to their attention; and a judicial or police investigation of the history of any apparent new-comer who chances to be arrested will early disclose most of the new arrivals in the State. These may then be proceeded against under United States law.

Proceedings are based on the Inter-state Quarantine Regulations, whose making by the Secretary of the Treasury was authorized by Congress, February 15th, 1893, amended March 3rd, 1901. Objections on the ground that the regulations are insufficient or defective or that Congress may not delegate its legislative authority are without merit. The Secretary's act in making the regulations is administrative and is authorized by the Act of February 15th, 1893. The penalty for violation is fixed by Congress, is legal, and has been sustained in United States courts.

Permits for travel obtained from the local health officer must state that the travel in the opinion of the officer is not dangerous to the public health. The traveller must state where he intends to reside; and he must agree in writing to report to the proper health officer there within one week after arrival and to continue treatment under a reputable physician until the health officer certifies that he is no longer infectious. The health officer who issues the permit must promptly notify the new health officer, who must take appropriate action.

THE WORKER'S EYESIGHT.

As a result of a series of meetings and conferences of industrialist, educators and eye-experts from various parts of the United States, held under the auspices of the Eyesight Conservation Council of America, plans have been formulated to encourage eyesight conservation, particularly in industry. A campaign will be conducted for this purpose under the general direction of Mr. L. W. Wallace, Executive Secretary of the American Engineering Council of the Federated American Engineering Societies. These efforts are largely the outcome of the disclosures by the Committee on elimination of waste in industry of the huge waste resulting from defective vision. It has been found that the eye is involved in 11 per cent. of all permanently disabling industrial accidents in the United States, and that approximately 25 million workers in the United States have defective vision that requires correction.

Among other activities an educational campaign will be instituted to overcome the objections of workmen to the wearing of goggles, which are necessary in many employments.

NOTES FROM BRANCHES AND GROUPS.

THE METROPOLITAN BRANCH.

THE TWO VOICES.

Some four years ago the St. Marylebone Borough Council, appreciating the difficulties to be encountered in attempting to deal with nuisance caused by dogs on public footways and private forecourts, particularly in the neighbourhood of blocks of flats, but feeling disinclined to invoke the aid of legislative measures in an effort to minimise the trouble, accepted the suggestion of their medical officer of health (Dr. Charles Porter) that a small poster should be displayed in appropriate parts of the district, appealing to owners of dogs to see that the animals made use of the roadway. At that time the poster attracted considerable attention, and applications for specimen copies were received from a number of other authorities. It was worded as follows:

FOULING OF FOOTWAYS BY DOGS.

Nuisance and danger to health are caused by the excreta of dogs.

You can train your dog to use the roadway.

In the interests of the Public Health please try.

That much good has resulted from its exhibition there seems little doubt, the number of complaints of that nature having decreased greatly during recent years in the borough in question.

Now it appears that the Royal Borough has "taken the bull by the horns" and secured the passing of a "bye-law for the good rule and government of the Royal Borough of Kensington, and for the prevention of nuisances, made by the Council of the Borough in pursuance of Section 23 of the Municipal Corporations Act, 1882, Section 16 of the Local Government Act, 1888, and Section 5 of the London Government Act, 1899. . . ." It provides that "no person being in charge of a dog in any street or public place and having the dog on a lead shall allow or permit such dog to deposit its excrement upon the public footway." A penalty of 40s. can be imposed for an offence against the bye-law, which "shall cease to be in force after the 31st December, 1923, unless a bye-law confirming and continuing its provision has been duly made and come into force before that date." It will be observed that the bye-law refers to nuisances upon the public footway only, no provision being made as to nuisance that may be caused on property adjoining thereto, e.g., the doorstep, etc. As many of the complaints received in a public health department relate to nuisance caused on private premises this point is deserving of

notice. The results of a year's working under what is believed to be a pioneer effort in legislation of this kind in the metropolis will be awaited with interest, more especially having regard to the fact that the enforcement of such a requirement must be exceedingly difficult. Possibly by that time one may have discovered whether or not the Council of the Royal Borough and its officers have devised a method of enforcing the bye-law.

ROYAL SANITARY INSTITUTE CONGRESS.

The recording secretaryship of Section A. (Sanitary Science) of the thirty-third Congress of the Royal Sanitary Institute, to be held at Bournemouth from July 24th to 29th, 1922, has been undertaken by Dr. Charles Porter (Hon. Secretary of the Metropolitan Branch of the Society), and under his direction arrangements have been made for a full and varied programme. On the first day allotted to the section (Tuesday, 25th July) several papers on "Methods of Securing Continuous Treatment of Persons Infected with Venereal Diseases" are to be read. The subject will be dealt with from the viewpoint of the medical officer of health and of the clinic officer, and will include a review of notification systems of other countries. Other papers to be taken that day are "Compulsory Removal to Hospital of Cases of Pulmonary Tuberculosis," and "The Legal Prevention of Degeneracy." The second day (Wednesday, 26th July) will be devoted to papers on "Fuel in its relation to Health," and "Tropical Sanitation," the latter to be illustrated by lantern slides. Sir Arthur Newsholme, K.C.B., is the Sectional President, and it is particularly desired to secure the attendance of medical officers and others interested in the subjects to take part in the discussions which will follow the reading of the various papers. All members who propose going to Bournemouth for the Congress are cordially invited to assist in this direction.

NORTH-WESTERN BRANCH.

A CATTLE POISONING CLAIM.

An action was brought at the Shrewsbury Assizes against the Oakengates Urban District Council to recover damages with respect to the poisoning of cattle and the water logging of ground owing to alleged negligence in the management of the Council's Sewage Farm.

The plaintiffs had made a claim in 1913 for the poisoning of cattle, and they were satisfied

by the payment of £115. It was alleged that the sewage farm was badly managed, with the result that untreated sewage found its way into a brook used by the plaintiffs' cattle which contracted disease from this source and died.

For the defendants it was argued that as the Council had compromised two previous claims rather than oppose them in court, it was felt that people had an idea that they could be regarded as an insurance concern against tuberculosis. Evidence was given to the effect that the area of land was adequate for the purposes and the farm well managed. Dr. Meredith Young, County Medical Officer for Cheshire, stated that he had never heard of any case where cattle had been injured by drinking water polluted with domestic sewage except in a court of law, and this opinion was supported by Col. J. W. Brittlebank, V.S.

His Lordship stated that there was a grave difference of opinion between scientific people as to whether or not it was possible that sewage water, however bad, could so lower the vitality of cattle that tuberculosis would result, and gave judgment in favour of the Council with costs.

HEALTH PROPAGANDA IN BLACKBURN.

The "Publicity Committee on Health" of the Blackburn Council, realising the value of popular lectures on health subjects, arranged a series of three lectures on "The Maintenance of Health," which were attended by large audiences. The first lecture was given by Dr. J. Wheatley, County Medical Officer for Shropshire, and formerly Medical Officer of Health of Blackburn, on "Food and Health"; the second lecture was delivered by Professor William Stirling on "Keeping Fit"; and the third on the "Beginnings of Disease" was given by Dr. Allen Daley, Medical Officer of Health of Blackburn.

ASSISTANT M.O.H., STOCKPORT.

Dr. Charles Sutherland, M.B., Ch.B., D.P.H., has been appointed Assistant Medical Officer of Health for the Borough of Stockport. Dr. Sutherland was a District Tuberculosis Officer under the West Riding County Council.

MUNICIPAL MATERNITY HOME AT BOOTLE.

A Municipal Maternity Home was opened in Bootle on February 28th. The premises consist of a double-fronted house in which three wards for the accommodation of ten patients and an infants' night nursery have been provided, in addition to accommodation for a matron and

nursing staff of four and a domestic staff of three. The approximate cost of furnishing and equipping the home was £1,100, and the charge to patients has been fixed at £3 3s. weekly, with reduction or remission according to an approved income scale.

BOROUGH OF CREWE.

A conference between local practitioners and the Education Committee was held at Crewe to consider the question of the appointment of an Assistant School Medical Officer. The Medical Officer of Health stated that the work which the local medical practitioners would be required to perform, if they consented to undertake the duties of Assistant School Medical Officer, was the medical inspection of 3,500 to 4,000 children (including tabulation on cards and preparation of reports), and attendance at the Infant Welfare Centres. The deputation of practitioners considered the matter and stated they were prepared to undertake the work under the supervision of the Medical Officer of Health for a period of twelve months for £300, and that a rota would be drawn up, and if any doctor was at any time prevented from fulfilling his place on the rota another would do his work. The scheme was adopted by the Council subject to the approval of the Board of Education.

DR. NIVEN.

On receiving an illuminated address recently from the Manchester City Council, in recognition of his 28 years' service as Medical Officer, Dr. Niven stated that the death rate in the area to which he was appointed had been reduced 24.5 to 15 per 1,000, and the infantile death rate had fallen from 190 to 103. The saving by the improved death rate in money value, he estimated, represented an annual income of not less than £1,200,000 to the city.

It was not, he said, commonly realised that works of public health had such actual cash value to cities.

Dr. James Niven, late M.O.H. Manchester, was entertained at a farewell dinner by the members of the medical profession in Manchester, on Tuesday, April 11th, at the Queen's Hotel.

M.O.H., SALFORD.

Some 30 applications have been received for the vacancy in the post of Medical Officer of Health for Salford, created by the retirement of Dr. C. H. Tattersall. A commencing salary of £900 has been offered, and the following applicants were invited to appear before the Health

Committee: Dr. Osborn, Salford, who has acted for many years as Dr. Tattersall's chief assistant; Dr. Young, of the Manchester Public Health Department; Dr. H. Gibbon Ward, of Leamington; and Dr. R. J. Ewart, of Barking.

DR. E. J. SIDEBOTHAM,

who is at present in charge of the late Professor Delepine's Laboratory, has been appointed a Member of the Board of the Faculty of Science of Manchester University.

CARLISLE CORPORATION ECONOMY.

A Special Committee of the Carlisle Corporation, appointed in January to suggest economies in the administration of the different departments, have issued a long report. In addition to several suggestions for the reorganisation of some of the departments, which would enable them to be run more economically, they recommend that the salaries of the heads of the various departments and their chief assistants should be reduced by 10 per cent., and that the salary of the Town Clerk, who receives £1,150 in that capacity and as Clerk to the Education Committee, be reduced by £100 per year, and that of the Chief Constable by £50.

POSITION AT MANCHESTER.

At a meeting of the Manchester Town Hall Committee, held on the 8th March, it was intimated that the vacancy for the post of Medical Officer of Health for the city caused by Dr. Niven's retirement at the end of this month, might not be filled for some time. There were only four applications in reply to the recent advertisement, and these will not be considered.

The joint conference between the Town Hall Committee and the B.M.A. and M.O.H. Society representatives was of a most satisfactory character and there are great hopes now of a satisfactory settlement.

MILK OFFENCES.

A farmer was summoned before the Oldham Borough Magistrates last month for selling milk deficient in fat to the extent of 34 per cent. in one case and 11.3 per cent. in another.

The first sample was taken from the bottom of the can, the milk not having been stirred. The second was from the top of a can containing 60 quarts of milk, out of which the farmer had taken three quarts of cream for sick persons. The magistrates regarded these cases as "very, very serious." All milk offences had to be so regarded. At times like the present, when farmers

were getting good prices, they could well afford to give the best quality. There was no doubt that offences had been committed, especially in the second case." The seriousness of the offences was not, however, reflected in the fines imposed, which were very paltry, namely, £2 in the first case and £3 in the second. It surely would be no hardship to a farmer who was, said the Chairman, "getting such good prices," to pay such a fine, and if the offences were so serious as to have drawn such a strong expression of opinion from the Bench imprisonment without option was the more fitting punishment.

N.W. SCHOOL MEDICAL SUB-GROUP.

Dr. Brown Ritchie, S.M.O., Manchester, has kindly arranged with Mr. Telford, Surgeon to Swinton House (Crippled Children's School), Manchester, to give a demonstration of the work done there, on Saturday afternoon, May 20th, 1922. This meeting will take place provided a sufficient number of members signify their intention to be present. Members who wish to attend should send their names to Dr. G. Norman Anderson, Education Offices, Liverpool, as soon as possible.

ASSISTANT DIRECTOR OF HYGIENE.

Lieut.-Colonel N. Dunbar Walker, O.B.E., R.A.M.C., Assistant Director of Hygiene, Western Command, Chester, has been transferred to Woolwich, and took up his new duties at the beginning of April.

HOME COUNTIES BRANCH.

The campaign for the increase of membership has been enthusiastically carried out by the Secretary, from which it appears that about 325 persons employed in the Public Health Service in the Home Counties area were eligible for membership of the Society. Of this number 250 are already enrolled.

It is to be hoped that every member will do all in his power to convert his colleague to the "error of his ways." Personal appeal goes much further than many circulars. The Secretary will supply information on application.

Dr. Sidney Lawrence, who is at present a resident of Bournemouth, has intimated that he is prepared to offer advice to any member seeking accommodation during the Conference of the Royal Sanitary Institute, in July next. He would like those who desire to avail themselves of his offer, to give him some indication as to terms,

boarding house or hotel. Please enclose stamped addressed envelope.

Dr. Lawrence has been accepted as prospective candidate for the Northern Universities, and should be assured of the support of all members of the Public Health Service who vote in that constituency.

Dr. Alfred Greenwood, Medical Officer for the Kent County Council, has been informed by the War Office that he has been transferred to Class 2 of the Reconstructed Territorial Reserve with the rank of Lieutenant-Colonel.

A very "snappy par" from the Home Counties. "Confound it," said the M.O.H., who was somewhat irritated by the receipt of the seventh communication from the "Economy Committee" of his Council. "This is not a question of pin-pricks, this is an attack of shingles, a painful eruption about the waste!"

The announcement of the death of Dr. Belilios, M.O.H., Wimbledon, was received with every mark of deep sympathy, on behalf of his widow, at the meeting in April last.

Many comments were made by colleagues and friends as to the loss to the Public Health Services in general and themselves in particular by his removal from our midst at a comparatively early age.

The Secretary of the Sub-Committee on London Government (M.O.H., Barking) would be obliged if any member, on becoming aware of circumstance in the preventing of present commission likely to affect the interests of the entire Metropolitan or other officers, would immediately communicate the circumstance to him.

THE TUBERCULOSIS GROUP.

TUBERCULOSIS SCHOOLS FOR U.S. PUBLIC HEALTH SERVICE.

The tuberculosis schools for medical officers in soldier hospitals and examining stations which were established some 18 months ago by the U.S. Public Health Service and were recently taken over by the Veterans' Bureau, have trained several hundred Service physicians, four-fifths of whom have qualified in making special examinations of the chest and in reporting thereon with accuracy satisfactory to the somewhat exacting requirements of the Rating Board of the Veterans' Bureau. This has lessened the expenses for travel and the inconvenience and hazard to tuberculous

veterans in going long distances to chest specialists, and has more than balanced the cost of the schooling.

These schools were established in the spring of 1920 in various parts of the United States. Courses of instruction were arranged and the students were chosen from among the medical officers and specialists in the service of the United States Public Health Service. In the Eight District alone, which comprises the States of Illinois, Michigan, and Wisconsin, and where more than 150 physicians were trained, seven such courses were conducted—three at Springfield, Ill., two at Mairdale Sanatorium, Wauwatosa, Wis., and two at the Michigan State Sanatorium at Howell. The broad benefits of the courses having become apparent, it was then thought advisable to concentrate the efforts and combine the staff of the three original schools into one school and to conduct it at Chicago, where the district office of the bureau was located. Four very intensive seven-day courses were conducted there.

The course embraced instruction in topography, inspection, palpation, percussion, and auscultation, demonstrations of the normal chest, chest pathology, and finally a study of advanced cases in hospitals. The classes were divided into small sections for individual instruction under specialists, who guided each student through the steps of diagnosis, and taught him to visualize the conditions accountable for the physical findings.

A review with quizzes was then conducted, thoroughly fixing each point in the minds of the members of the class, followed by special instruction in differential diagnosis and clinics. No member of the class was allowed to leave without learning individually to differentiate different breath sounds, voice conductivity, and kinds of rales, or without a mechanical and clinical knowledge concerning them.

A lecture and clinic on the heart, and a short course in X-ray and laboratory work were also given, and cinema diagnostic films were exhibited.

The latest course was held at Chicago during the week of December 5th—11th.

THE DENTAL GROUP.

THE PROPOSED DIPLOMA IN PUBLIC DENTISTRY.

The British Dental Association has had under consideration the desirability of there being instituted a diploma in public dentistry, analogous to the D.P.H., and, among others, cites the following reasons for the necessity for such a diploma.

Dental appointments are rapidly increasing in numbers and necessitate some measure of dental supervision and control. Arising out of the lack of control, diversity of organisation and methods employed exist, which do not conduce to efficiency. The duties of the Dental Officer require knowledge not included in the ordinary dental curriculum, and the latter is sufficiently overloaded as it is, without the addition of specialist subjects.

It is suggested that the diploma be open to licentiates and graduates in dental surgery, who are duly registered; and the instruction received for it be post-graduate. Certificates are to be produced; one from a senior dental officer of a local authority of an area with a population of not less than 50,000 in England and 30,000 outside England, showing that the candidate has attended under the supervision of the supervising officer for not less than twenty working days; and one, a certificate of attendance at a recognised course of lectures in State Dentistry at a dental school, such course to be not less than three months.

It is proposed to hold the examination in two parts, to be taken either separately or together at the option of the candidate. It is to be oral, written, and practical. The first part is to have reference to the general principles of Dental Science and to include the following subjects:—

- (a) Influences of Heredity, Syphilis, Tuberculosis, Diet, Vitamines, Rachitis, Enteritis, General Epidemiology, on the development of the teeth.
- (b) Special reference to the origin, pathology, symptoms, propagation, distribution and prevention of epidemics, endemic, and other infective diseases.
- (c) Unwholesome trades and occupations in relation to the teeth.
- (d) Principles of Oral Hygiene.
- (e) Preparation of Reports, Dental Statistics, Graphs, Inspection and Charting (recording).
- (f) Anæsthetics, General, Local, Toxins, Antidotes, Antiseptics, and Asepsis.

The second part of the examination is to comprise the following:—

- (a) Treatment as to expectant and nursing mothers.
- (b) Feeding of infants.
- (c) Teething.
- (d) Treatment of school children, object and aims:
 - (i.) Parasitic disease such as scabies, ringworm, etc.

- (ii.) General diseases such as Canca, Epilepsy, etc., and pathological oral conditions.
- (iii.) Abnormalities such as malocclusion.
- (iv.) Cleft palate.
- (v.) Principles and application of Radiology.

- (e) Treatment in factories and Public Dental Services; Laws and Regulations relating thereto.

We submit that this diploma is both desirable and necessary since the ordinary qualification does not include some essentials of public dental service which, at present, may only be acquired by continuous service. In the curriculum for this diploma might, with advantage, be included some considerations of methods of research, including a wider knowledge of bacteriology and physiology than is required for the L.D.S. curriculum, since the dental officer always has before him the problems of prevention, and also a knowledge of conditions due to pregnancy which may have a bearing on or be affected by dental treatment.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

COUNCIL MEETING.

A meeting of the Council was held at the house of the Society on Friday, April 21st, 1922. The President (Dr. W. J. Howarth) was in the chair, and there were present Profs. H. R. Kenwood and Harold Kerr, Lieut.-Cols. Herbert Jones and Caldwell Smith, Drs. Veitch Clark, Sanders, G. F. Buchan, Snell, Gibbons Ward, J. J. Buchan, Kirkhope, Peyton, J. T. C. Nash, Barlow, Clements, Stocks, McMaster, Auden, Wilshaw, Lyster, Porter, Wheatley, and Duncan Forbes.

The minutes of the last meeting having been approved and signed, an apology for absence was received from Dr. G. H. Pearce.

Correspondence.—

(1) From the Ministry of Health, referring to the joint recommendations of the Society and the Royal Sanitary Institute in regard to the Training of Health Visitors. The letter was referred to be considered by the Committee concerned, with a representative of the M. & C.W. Group and a representative of the School Medical Group added.

(2) From the Ministry of Health with reference to the Sanitary Officers Order, 1922, thanking the Society for observations and suggestions on the draft order, and pointing out that the article

relating to salaries "appears to make it clear that a salary cannot be altered without the Ministers' consent."

(3) From the Royal Sanitary Institute accepting the proposal of the Society to appoint a joint committee "to consider the danger to health resulting from the use of gas stoves for domestic heating where no proper provision is made for dealing with by-products of combustion.—The Committee also to consider the question of Geysers and the forms of domestic gas-heated apparatus." The Institute nominated as their representatives on the Committee: Prof. A. Bostock Hill, Dr. J. S. Owens, Mr. H. D. Searles-Wood, and Mr. J. Osborne Smith. The members of the Committee elected by the Society are Prof. H. R. Kenwood, Dr. F. N. Kay Menzies, Dr. D. C. Kirkhope, and Dr. E. H. Snell. It was agreed that the Executive Secretary should arrange with the Secretary, R.S.I., a convenient date for assembling the Committee.

(4) From the Fever Nurses' Association, asking the support of the Society for the following resolution: "That the Fever Nurses' Association draw the attention of the Ministry of Health to the importance of fever training for nurses engaged as school nurses and health visitors, and recommend that the possession of a fever certificate be made an essential qualification for these appointments."—The Executive Secretary was directed to forward to the Association the Report on the Training of Health Visitors which referred to the value attached by the Society to experience in Fever Nursing.

(5) From the London Society for Women's Service, urging the Society to oppose on every occasion the employment of untrained or inadequately trained persons as public health workers. It was agreed that the memorandum on the Training of Health Visitors should be sent to the L.S.W.S. as proving the Society's agreement with their policy.

Representatives of the Society. On the nomination of the Maternity and Child Welfare Group, Dr. Helen Robertson was appointed to represent the Society on the M. & C.W. Exhibitions Committee of the Central Council for Infant and Child Welfare. Also on the nomination of the M. & C.W. Group, Dr. Harold Scurfield was elected to represent the Society on the British Committee of the International Congress for Infant Welfare. Dr. Herbert Jones and Dr. G. Petgrave Johnson were elected to represent the Society at the Annual Conference of the National Association of Local Government Officers.

Report of Salaries Committee. The Council approved and adopted the scale of salaries and conditions of service of medical and dental officers as finally revised for inclusion in the combined N.A.L.G.O. scheme. The Council also adopted the following representation:—

Your Committee have had under consideration the recommendations of certain Medical Officers of Health to their Councils as to the salaries to be payable in respect of certain appointments. In some cases the salaries recommended are below the very modest minima agreed upon by the Journals at the present time for advertisement purposes. Your Committee are of opinion that Medical Officers of Health before making any such recommendations should themselves communicate with the Executive Secretary of the Society or advise their Authorities to do so.

The Manchester Appointment. The Council received and approved the report of the deputation (Dr. W. J. Howarth, Dr. R. A. Lyster, Prof. H. R. Kenwood, and the Executive Secretary), who with representatives of the B.M.A. attended a conference with a committee of the Manchester City Council on April 7th. On the proposal of Dr. Herbert Jones, the deputation were thanked for their services.

Proposed Weekly Journal. Dr. Kirkhope proposed that in connection with the reorganisation of the Society now under consideration, a committee should be appointed to report on the possibility of publishing a weekly journal to promote and safeguard the interests of the Public Health Service. Dr. G. F. Buchan, Dr. Barlow, and others supported the proposal. It was agreed that the officers of the Society, with Dr. Kirkhope and Prof. Kenwood, be elected as a committee to consider the publication of a weekly journal by the Society. It was further agreed that the same Committee, with Dr. Sanders and Dr. Barlow added, be directed to report on the financial position of the Society.

Pending Appointments. Members of the Council reported certain pending appointments the terms of which might be detrimental to the interests of the Public Health Service, and it was agreed that the various cases should be watched by the Salaries Committee.

The Council then adjourned.

ORDINARY MEETING.

An ordinary meeting was held at the house of the Society on Friday, April 21st, 1922. The President (Dr. W. J. Howarth) was in the chair, and there was a good attendance. The minutes of the last meeting having been approved and signed, the following candidates were elected to the Society:

As Members:

Crawford, Hugh Gregan, M.C., M.R.C.S., L.R.C.P.; Fleetwood-Outram, Gertrude Florence (née Fleetwood-Taylor), M.B., Ch.B.Glas.; Hutchison, Alice Marion, M.D.Ed., M.R.C.P.Lond.; Lane (Mrs.), Isabella, M.B., Ch.B.Edin.; Logan, Dorothy Cochrane, M.D., B.S.Lond.; Macfarlane, Wm. Mair, M.B., Ch.B.Glasg.; O'Connor, Mary, M.B., B.Ch., B.D.S., N.U.I.; Smith, Andrew, M.D., B.S.Durh.; White, Edmund Leigh, M.D., Ch.B.Edin., D.P.H.

As Associates:

Elmer, Lancelot William, L.D.S.Eng.; Wallace, Jas. Sim, D.Sc., M.D., C.M.Glas., L.D.S.Eng.

Nominations for elections at the next meeting were read by the Executive Secretary and duly received.

Prof. Harold Kerr, O.B.E., then read a paper on "The Proposed Revision of the Rules of the General Medical Council for Diplomas and Degrees in Public Health." A discussion followed, those taking part including the President, Dr. Kirkhope, Sir W. R. Smith, Prof. H. R. Kenwood, Dr. E. H. T. Nash, and Dr. T. Shadick Higgins. Dr. Kerr briefly replied, and received a cordial vote of thanks for his paper.

MIDLAND BRANCH.

Meeting held at the City Hospital, Little Bromwich, Birmingham, on Thursday, March 2nd, 1922.

Present.—Dr. Snell (in the chair) and 26 members.

Death of Dr. Alfred Hill.—The President proposed that a vote of condolence be sent to the relatives of Dr. Alfred Hill. This was passed, all the members standing.

Correspondence.—A letter was received from Dr. Ridley Bailey accepting with thanks the nomination of the Branch for the Presidency of the Society for the year 1922-23.

A letter was read from Dr. Geo. Reid thanking the members of the Branch for the resolution passed at the last meeting in reference to his retirement.

Letter from the Yorkshire Branch regretting their inability to support the Midland Branch's nomination to the Presidency of the Society.

Letter from the Executive Secretary with regard to the campaign of the Society against appointments at inadequate salaries, and asking for arrangements to be made for the early transmission of news to the special committee. In view of the fact that Dr. Hewat, the Correspondent of the Branch, will be leaving shortly, it was decided to refer it to the Council to recommend the appointment of a Correspondent, who

should combine with his duties those of supplying to the Central Office the information required.

The Secretary reported with regard to the business, and was given instructions thereon.

Dr. Harries then gave an extremely interesting demonstration of the Schick Reaction. Both the actual performance of the test, and cases in which the test was in various stages, the Pseudo Reaction was also well illustrated. He insisted especially on the pigmentation following a true reaction. Questions were asked by many members, and dealt with.

At the invitation of Dr. Harries, the members adjourned to tea, and the President voiced the thanks of those present to Dr. Harries for the extremely interesting time which had been spent, and also for his hospitality.

NORTH WESTERN BRANCH.

The meeting in March was held at Blackburn, on Friday, March 17th, in conjunction with a Sessional Meeting of the Royal Sanitary Institute. The proceedings opened with a meeting of the Branch, at which a paper was read entitled "The Schick Test," by Dr. T. E. Dickenson, of Monsall Fever Hospital, Manchester.

During the interval between the afternoon and evening assemblies a reception was held by the Mayor (Alderman J. Fielding, J.P.), who entertained the members at tea.

There was a good attendance in the evening, when "The Sanitation of Places of Entertainment" and "The Conversion of Pail Closets" were subjects for discussion opened respectively by Dr. W. Allen Daley, M.D., B.A., B.Sc., D.P.H., the local Medical Officer of Health; and Mr. A. T. Gooseman, M.Inst.C.E., the local Borough Engineer. The chair was taken by Professor H. R. Kenwood, C.M.G., M.B., F.R.S.E. (Chairman of the Council).

Dr. Daley suggested that when a licensing authority was considering applications for licensing places of entertainment they should take into consideration the following:—

- (1) Children in arms should not be admitted to theatres or picturedromes.
- (2) When schools were closed because of the prevalence of infectious disease children of or below school age should not be admitted.
- (3) In times of grave epidemics of disease such as Influenza which were spread by the assemblage of people together power should be given to the Sanitary Authorities to regulate the intervals between performances or even prohibit them altogether.

(4) Sanitary conveniences should be in the proportion of three for every 450 of the accommodation provided.

(5) In all new buildings 120 cubic feet of air space should be allowed per person.

(6) Windows to admit sunlight should be placed in all theatres and picturedromes.

(7) Cross ventilation should be provided whenever possible. Inlet ventilators should be installed and should remain open throughout the performance. This applies to the bars, sanitary conveniences and crush lounges as well as to the auditorium.

(8) A silently-running extraction fan or fans should be put into action at regular specified intervals, and that it is actually working should be demonstrated by the lighting of an electric lamp in circuit with the fan.

(9) The building should be flushed with air every morning and between the performances, and as far as possible during the interval.

(10) The standard of ventilation to be required should be: A dry Kata thermometer reading of not less than 6 and a wet Kata thermometer reading of not less than 18.

(11) The temperature should be maintained between 57 and 68 degrees Fahr. and the relative humidity between 35 and 65 per cent. of saturation.

(12) The whole of the upholstery should be cleaned by a vacuum-cleaner at least once a week; the floor should be washed weekly and wet brushed daily.

(13) Sanitary accommodation and a supply of hot and cold water should be provided for the artistes on every floor containing dressing-rooms. Accommodation for children should be as near the stage as possible.

(14) In all new picturedromes the angle of elevation should not exceed 35 and the lateral angle 25 degrees. In all existing premises children should be prohibited from sitting in positions where these angles are exceeded.

(15) The other causes of eye-strain in picturedromes should be eliminated.

(16) Proper ventilation and adequate sanitary accommodation should be required in dancing halls.

Saturday morning was devoted to visits to various places of interest in Blackburn.

Meeting held in Liverpool on Friday, April 7th, 1922. Present: Dr. T. W. N. Barlow (in the chair) and 18 members.

On the recommendation of the Committee it was decided to support the candidature of Dr. Eustace Hill for the Presidency of the Society for the Session 1922-23, and that the Branch would nominate Dr. T. W. N. Barlow the following Session.

A notice from Dr. G. N. Anderson, Hon. Secretary of the School Sub-Group, was read drawing attention to a demonstration to be held at Swinton House Crippled Children's School, on Saturday, May 20th, if a sufficient number of members signified their intention of being present.

A very interesting paper with charts illustrated by various lantern slides was given by Dr. C. O. Stallybrass on "Variations in Virulence and Infectivity, etc., of Diphtheria and Scarlet Fever." He came to the following 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 disease correspondingly.

(b) Since the outbreak of war this difference has become 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, 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 1913-15, 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 of 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.

Dr. Barlow, in calling upon Dr. Allen Daley to propose and Dr. Rees Jones to second a vote of thanks to Dr. Stallybrass, stated that although they had purposely refrained from removing a large proportion of the cases of Scarlet Fever to Hospital of recent years, there did not seem to be any greater incidence of the disease in Wallacey, and for three years there had not been a single death from Scarlet Fever.

Dr. Daley asked whether susceptibility was really dependent to a great extent on nutrition, as he had noticed in Bootle that there was a smaller incidence of Scarlet Fever among the children attending the poorer schools. He also inquired whether the administration of large quantities of antitoxin would ward off cardiac complications in Diphtheria. In Blackpool Dr. Rees Jones mentioned that for some years now he had had a system of regular supervision of all contacts in the homes by means of specially trained fever nurses without any marked alteration in the prevalence of Infectious Disease.

The question of the origin of disease "de novo" was broached by Dr. Claude Rundle, who without supporting this theory said it was difficult to disprove unless all infectious diseases were coeval with man. He considered that the greater incidence of Post-Diphtheritic Paralysis was due to the larger number of serious cases surviving now owing to the use of anti-toxin.

Professor Beattie drew attention to the fact that the lowest classes were not always the worst nourished, and mentioned some recent research work shortly to be published in which the effect of certain vegetable substances used in diet was shown on the growth of various organisms. Again an important factor was the question of the associated bacteria, and it was a question not so much of virulence of bacteria as of the kinds of bacteria with which disease-producing organisms were associated. It was found experimentally that paralysis occurred more frequently with non-virulent strains of bacilli than with virulent.

Dr. Gilmour pointed out the possibility of Scarlet Fever occurring in various forms all due to different strains of streptococci, and gave examples.

HOME COUNTIES BRANCH.

At a meeting of the above Branch of the Society, on April 7th, Dr. Veitch-Clark read a paper entitled "The Nursing Services and their Relationship to Public Health."

Dr. Clark outlined the history of the nursing services associated with Public Health work

during the last 20 years, and dwelt on their duties in the wide field of preventative medicine, in which they had been called upon to take an active part. He divided his comments into three sections: (1) Hospital Services, (2) Educational Work and Health Visiting, and (3) Domiciliary Services and Home Nursing. He referred to the difficulty experienced in obtaining an adequate supply of suitable women to undertake hospital work, and he classified the causes as being due to the following:—

- (1) Absence of material prospect.
- (2) No security for old age, in the way of pension.
- (3) Low average salaries paid.
- (4) Excessive hours of duty; and
- (5) Restrictions of personal freedom.

He pointed out that the average salary of a qualified nurse did not exceed £100 per annum, but that the main cause was perhaps the petty restrictions that were usually imposed by the matron in charge of such institutions. He thought that the atmosphere of the hospital was out of touch with modern female emancipation. He suggested the introduction of an eight-hour-day and a freer life as reforms likely to remove the present difficulties.

In dealing with the Educational Services, the inadequate average salary was again referred to, in view of the training and type of woman required for this work. The advantages and disadvantages of the various administrative methods used to co-ordinate this class of work were considered, and the result seemed to be that in sparsely-populated areas close association in the hands of one individual the various classes of work was desirable, but that in large areas some specialisation was attended with economy, but probably under no circumstances was it desirable to completely shut off one class of work from all others.

The point was again referred to in dealing with the Domiciliary Services, which were classified into:

- (1) Home Nursing of Infectious Ailments, and
- (2) Home Nursing of General Sickness.

The opinion was impressed that this class of work could be successfully combined with the Educational Services in rural areas, but in towns, these two aspects did not seem to mix well, and in his opinion was not desirable.

He outlined a scheme of Home Nursing which he had inaugurated at Croydon, and which was run independently from rate-aided services. He laid stress on the fact that no half-way house

existed between "voluntary subscription" and "rate aid," as the risk of losing the former was considerable if the latter lead to administrative control.

The details of the scheme were outlined with respect to contribution from patients, formation of works' clubs, etc. Four classes were formed as follows:—

- (a) Pay 5s. to 7s. 6d. per visit,
- (b) Subscriptions of 10s. 6d. per year,
- (c) Contributions of 2d. per week, and
- (d) No charges made; if possible, payment to be obtained from the Guardians or Public Health Authority for services rendered.

The details of the service were outlined from the nurses' point of view, and the novel suggestion was introduced relating to the necessity of three months' refreshed courses every three years. An outline of the conditions dealt with was appended.

The paper ended by a summary of the points raised and a series of recommendations for a better supply of suitable women for this class of work.

The President opened the discussion and laid stress on the undesirability of carrying the differentiation between the various types of work to too great an extent, and suggested that interchangeability was highly desirable. He also felt that the excessive use of institutions was not desirable and was in favour of developing a more thorough home nursing service than we are at present possessed.

Dr. Dupont outlined the work as carried out in his district and showed how home nursing for general sickness had been associated with the nursing of whooping-cough, measles, etc.

Dr. Nash referred to the steady deterioration of the type of women engaged in this work and dwelt on the necessity of caring for bodily comforts and the religious life of the staff employed.

Dr. Lawrence commented on the lack of suitable superannuation and was in general agreement with the previous speakers.

Dr. McMaster spoke as to the difficulties he had experienced and outlined the conditions as existed in Poor Law Infirmaries. He enlarged on the "Association of Queen's Nurses" as exemplifying the "nursing ideal."

CORRESPONDENCE.

TUBERCULOSIS AND FOOD.

From Dr. C. R. GIBSON.

Dear Sir,—Having read with much enjoyment and benefit the article on Tuberculosis by Professor Collis in your February number, may I be permitted to offer a criticism on one point?

Professor Collis makes the deduction that possibly the increased consumption of milk may have been a factor in the reduction of tuberculosis, and proffers two alternative explanations, of which he appears to prefer the one which credits this beneficial action to increased resisting power against tubercle due to the fat-soluble vitamin A supplied in the milk.

This deduction rests on the statement that milk and butter are the only two articles of diet the consumption of which, as shown by the table given, has increased step by step with the decrease in tuberculosis. But, unfortunately for the thesis, the consumption of calories seems also to have increased with equal steadiness to the decline in tuberculosis; calculated from the figures in the table (but making the arbitrary apportionment of the "meat and bacon" as nine parts meat to one part bacon) the average calories consumed daily per head were, in 1860, 2,096; in 1880, 2,395; and in 1909-13, 2,588. It would surely be difficult to deny, if there has been, as the table denotes, a steady improvement in the metabolism of the people, that this would be reflected generally in an increase of the public health, and particularly in a lessening of the deaths from tuberculosis, in which disease under-feeding, as Professor Collis himself points out, is of accepted importance.

It is almost an act of impiety to lay hands on the fast-accumulating laurels of the victorious vitamin, but let us, like the epic-writers of old, not bring in the gods unless the characters of the piece themselves are unable to carry on the story.

C. R. GIBSON, M.A., M.B., D.P.H.
Guisborough.

DENTAL DEFECTS.

From Mr. C. DOSWELL WALLIS.

Dear Sir,—I fear, from a perusal of Dr. Laird's letter in your issue for April, that I must have failed to make one of my principal points in connection with above as clear as I could have wished, and, therefore, ask your indulgence in sending this further letter.

The knowledge and study of preventive dentistry and dentistry for children has advanced very greatly indeed since 1907, when but little was known upon these subjects, and hardly any experience of the working of schemes of school dentistry existed.

In a properly organised scheme, run on up-to-date lines, that has been in existence for several years, the school dentist should never be confronted with "a mass of caries in both dentitions." Indeed, the entrants, when they first

come under his care, seldom have any permanent teeth erupted at all.

My point is that by concentrating upon these young children, and by giving the correct care to their temporary teeth, the permanent dentition should hardly ever be affected by caries; and that, therefore, the question of their treatment does not arise.

For example, in this county (West Sussex), out of some 2,500 children treated every year, the average number of fillings in permanent teeth does not exceed 1,100 in all, and the number of extractions of permanent teeth is about 300 only.

These figures include children of all ages, from five to fifteen years, and "special" cases (which latter usually come up for toothache or some serious lesion).

Nevertheless, more than 80 per cent. of the children leaving school, who have received systematic dental attention throughout their whole school life, have full sets of sound, normal second teeth, in accordance with their ages.

Of the remaining 20 per cent., the majority present only few and slight defects or deficiencies in their permanent dentitions (indeed, none have more than four defective teeth), which defects can usually be remedied by appropriate treatment.

I think that this shows conclusively that minute care for the temporary dentition from the earliest age possible is the surest means of the prevention of caries in the permanent dentition.

C. DOSWELL WALLIS, L.D.S., R.C.S., Eng.
Worthing, Sussex.

CO-OPERATION.

From Dr. A. G. WILKINS.

Dear Sir,—I was pleased to see on p. 188 "P.H." once again that "blessed" and much overworked phrase, "The spirit of co-operation," followed by the words, "There is evident need for sympathetic understanding and toleration between all ranks of the whole-time medical services and the practitioners of curative medicine." Unfortunately we are not told how to obtain this understanding. May I suggest one step in this desirable direction? M.O.H.'s should make a point of attending all clinical and medico political meetings in their area under the auspices of the B.M.A., and spare no trouble to establish personal relations of a cordial and informal character with the general practitioners over the walnuts and the wine. Time for these meetings might often be gained by delegation of detail to subordinates.

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County Offices,
Stafford.

Public Health

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Editorial.

DISTRICT NURSES AS HEALTH VISITORS.

Development in public health administration appears to progress along well recognised paths. In the early days most medical officers of health held part-time appointments, and even now a large number of such appointments exist, although there is a tendency on the part of the public to secure whole-time officers, as it is becoming more and more realised that public health work is highly specialised and that it is in the interests of the community and is really economical to employ officers devoting the whole of their time to this particular work. When the medical inspection of school children was introduced the work was in a large number of areas apportioned amongst practitioners who were employed part-time. Experience showed, however, that such methods were subject to serious disadvantages, and at the present time such appointments are becoming more and more rare every year. This tendency to start all new work by means of part-time services appears to have had its origin in a natural desire on the part of local authorities to divide up any public money which they propose to spend amongst those members of the profession practising in their area, combined with a fear of committing themselves definitely to any continuing expenditure until events have proved the wisdom of so doing. They know, moreover, that this suggestion will meet with the approval of the practitioners concerned, and that the new work will be introduced with less opposition and more general support than would otherwise be the case.

The advent during the war in many Government Departments of "amateurs," paid and unpaid, resulted in many reactionary suggestions, and the present cry for public economy has given reactionaries of all kinds the opportunity of their lives. There are in various parts of the country suggestions now being made that whole-time appointments should be substituted by part-time

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appointments, and this is particularly the case in connection with the subject of health visiting. Every little voluntary nursing association in the country is feeling the pinch through the decrease of subscriptions and the increase in costs, and all such associations are crying out for public assistance. They know that there are in existence whole-time health visitors, and they seize on their work and salary as being something which they might divide up amongst them and so still further save voluntary subscriptions. Local subscribers are particularly emphatic in making these demands, and it is possible that in some areas this reactionary step may be taken and the public good sacrificed to the meanness of the local subscribers to voluntary associations. It is notoriously an easy matter for a medical officer of health to persuade his council to spend much larger sums on part-time health visiting (or in other words in subscriptions to district nursing associations) than on whole-time officers working under the council's own control, and in this way large sums of money are being spent without satisfactory results and without adequate public control.

The evidence in favour of whole-time health visitors as distinguished from the employment of district nurses as health visitors is overwhelming: the joint report issued by the Society of Medical Officers of Health and the Royal Sanitary Institute contains emphatic evidence on this point. It states that, "The employment of district nurses as health visitors is unsatisfactory and involves wasteful expenditure," and again, "It is acknowledged everywhere that there is an admittedly unsatisfactory type of health visitor working in those areas where the Local Authority uses the district nursing association for the work."

In many County areas a large and wasteful expenditure upon this work would meet with no opposition so long as such expenditure were being divided up amongst the numerous small voluntary associations, because, in such a case, everyone would be receiving a share of the expenditure and so all would be satisfied.

The whole of the public health service is emphatic in its expression of opinion that a sanitary inspector employed by a small district council consisting mainly of local owners of small property is usually in a hopeless position with regard to effecting improvements. This position is just the same as that of a district nurse who is trying to do health visiting. She is appointed by a local committee and she is usually absolutely at their mercy with regard to salary and dismissal.

If she is given public health work to do she has to do it in accordance with the views of her local committee, and the result is that her work is, as a rule, utterly ineffective. The medical officer of health, who is of course responsible for her work as health visitor, has simply to reduce his standard to that of the local nursing association. Those medical officers who have tried both systems are usually emphatic in their opinion that the only way to get satisfactory work done by health visitors is by the employment of whole-time officers. Of course in many counties the county medical officer is handicapped by the fact that he knows his council is anxious to carry out as much work as possible on the old-fashioned lines of employing part-time officers and so pleasing as many people as possible, and some officers are practically compelled to give way on this point and they have to make the best they can of such arrangements. They have, at the same time, the comforting assurance that, however ineffective their system may be, and however costly it may prove, nobody is likely to grumble because every small area is receiving public money and so can reduce private subscriptions. The standard of work, however, in such areas is vastly different from the standard which obtains in those areas which employ whole-time officers. No district nurse dare take any stand against local opinion in a village, because she is entirely at the mercy of the local committee, while a whole-time health visitor, on the other hand, is not handicapped by these restrictions and can do her duty without hesitation.

NATIONAL BABY WEEK.

The National Baby Week Council is appealing to all medical officers of health to initiate some form of maternity and child welfare propaganda this year. It is, of course, recognised that in many districts it may not be found convenient to hold a "Baby Week" during the first week in July, the date fixed for the national celebration, but it is hoped that, in such areas, some other week will be selected for the concentration of local propaganda. The Secretary to the Council, Miss Norah March, B.Sc., 117, Piccadilly, W.1, hopes to receive from all medical officers details of their proposed programmes, and will be pleased to forward the suggestions of the Council on application. Owing to the strong reactionary tendencies that exist at the present time, it is particularly desirable that medical officers should take this opportunity to arouse public enthusiasm in the cause of public health.

COUNTY SALARIES.

Every member of the Society of Medical Officers of Health will read with interest the remarks of "County M.O.H." in his letter which is published in our Correspondence columns. The situation is certainly critical and extraordinary. The fact that three County appointments should have been filled in this way constitutes a very grave handicap against all our work in the future on behalf of the salaries scale. The success of the Society's efforts at Manchester makes the present unsatisfactory situation concerning County appointments all the more inexplicable.

We are informed that the explanation of this most regrettable appointment in Staffordshire is that the present arrangements with the B.M.A. are in practice proving to be unworkable on account of the antiquated and unsatisfactory nature of the B.M.A. procedure by which the central office of the B.M.A. is at present bound. Representations were made some months ago by the M.O.H. Society to the B.M.A. on the subject of the Staffordshire vacancy, and we understand that requests were sent from headquarters to the local B.M.A. Division to consider the matter and to start the opposition with the necessary resolution. For some mysterious reason the local Division did not respond, and although frequent reminders were sent, and although representatives of the M.O.H. Society offered to go to Stafford to confer with the B.M.A. Division, no reply was received at all until after the appointment had been made. It will be necessary for the M.O.H. Society to consider at a very early date what action it must take in these extraordinary situations. The first thing is to try to persuade the B.M.A. to alter their procedure so that the B.M.A. Headquarters can initiate opposition without waiting for such action to be initiated by a division or branch. It is obvious that the M.O.H. campaign cannot be sacrificed because of the unworkable machinery of the B.M.A., and we feel sure that most of the members of the M.O.H. Society will be of the opinion that in cases of this kind in future it will be necessary for the M.O.H. Society to proceed alone rather than to let such appointments be made in future without vigorous opposition and protest. At the present time the M.O.H. Society is doing everything possible to co-operate with the B.M.A., and immediate information is sent there concerning cases likely to lead to difficulty, but in spite of these precautions the arrangements are proving to be thoroughly unworkable.

In view of these facts it is particularly satisfactory to note that at the last meeting of the Council of the M.O.H. Society an invitation was received from the B.M.A. to send representatives to a Joint Committee to consider the relationship between the Association and the Society, and the whole question of the best methods of co-operation between the two bodies. We trust that this Committee will be able to solve the present difficulties and will produce a definite plan whereby any attempts to secure medical officers at rates of remuneration below those laid down in the scale will be resisted with the full strength of both bodies. If this can be accomplished there will be every reason to believe that satisfactory results will soon be obtained.

The essential fact for the British Medical Association to realise is that at the present time any Local Authority can obtain for £500 per annum, with the full consent of the British Medical Association and the Society of Medical Officers of Health, the whole-time services of a fully qualified medical man who has, after qualification, devoted a considerable amount of time to further study and has obtained additional qualifications. Such a state of affairs constitutes a continuous danger to the whole profession and this standing menace must be removed at all costs.

MILTON AND SITTINGBOURNE.

At the time of going to press our attention has been called to an advertisement which has been published in "The Lancet," inviting applications for the post of Medical Officer of Health for Milton and Sittingbourne Combined Districts. The remuneration offered is £620 per annum, the officer finding his own travelling expenses, clerical assistance, and office. The acceptance of such an advertisement by any professional Journal amounts to a serious blow to the whole of the medical profession, and unless such attempts are resisted with the whole force of the profession there will inevitably result a general lowering of professional incomes everywhere. Is it likely that local insurance committees will be content to continue to pay salaries of one or two thousand pounds a year for part-time services, with unrestricted private practice, when they can secure the acceptance by professional journals, such as "The Lancet," of advertisements which endeavour to secure whole-time services of men with a considerable amount of post-graduate training at a net salary of about £450 or less?

SECURITY OF TENURE.

The problem of security of tenure which has agitated the public health service for many years and which we fondly imagined had been given to County Medical Officers of Health by the Housing, Town Planning, Etc., Act, 1909, and had been conferred by the Public Health (Officers) Act, 1921, upon all Medical Officers who give their whole time to public duties, seems to be as far as ever from satisfactory solution. The public health service has imagined that security of tenure was obtained when the appointment of medical officer of health could not be terminated without the consent of the Ministry of Health. Facts are unfortunately proving otherwise. There is no real security of tenure unless any variations in the conditions of the appointment are obtainable only by termination of that appointment; otherwise it would be within the power of any local authority to reduce the salary attached to the office indefinitely. Cases are occurring at the present time where salaries are being reduced without any reference to the Minister and the Ministry in taking no action. Appeals to the Ministry by individuals affected have led to unsatisfactory results, and the Public Health Service must now consider the possibility of the whole situation being unsafe and unsound.

Every medical officer should belong to a Medical Defence Union and should at once communicate with that union when any notice is received concerning a reduction of salary. We believe that it is the intention of the Medical Defence Union to resist all such demands, and to insist upon a proper termination of the appointment before any reduction of salary can be accepted. When this is secured and notice of a termination of the appointment is received it will be necessary to approach the Ministry of Health and to see whether the alleged security conferred by the Housing, Town Planning, Etc., Act, and the Public Health (Officers) Act is worth the paper upon which it is printed.

SUPERANNUATION.
A HOSTILE MINISTRY.

The Bill for the establishment of a superannuation scheme for the employees of local authorities has been before a Standing Committee of the House of Commons this week. A Labour Party amendment, which aimed at making the Bill compulsory for all local authorities, was rejected, after Sir Alfred Mond had opposed it on the score of expense. It is therefore purely an optional measure, which each local authority is free either

to adopt or to let alone. The opponents of the Bill made an attempt to wreck it by an amendment providing that it should not be put into force by any authority until its adoption had been approved by a majority of the electors. Sir Alfred Mond did not accept this amendment; but he suggested instead that one hundred electors should have the right to requisition a poll within one month after the adoption of the Act. We fear that, if this proposal is accepted, it will, in the present state of opinion, result in reducing the Act to a dead letter in the great majority of areas. The general arguments against the widespread use of the referendum cannot be stated here; but this particular proposal appears to us to be one to which the method of the referendum is peculiarly unsuitable. It might almost as well be suggested that municipal wage rates and conditions of labour should be settled by vote of the whole of the electors. We have little hope for any Bill of this sort which is not on a compulsory basis applying to the whole country; we shall have none at all if each case is to be put to the electors in the form of a question as to their willingness to agree to a rise in the rates. That, however, is the effect of the proposed amendment.

The introduction of this Bill afforded the Ministry an opportunity to increase the efficiency and add to the contentment of the local government service throughout the country, but it has now been impressed upon every local government officer that this opportunity is being used not to improve the Bill but to make it as difficult as possible to carry out, and that the Ministry of Health, who should be the champion of the local government officers, was less favourable to this Bill than the Standing Committee of the House was as a whole.

THE MANCHESTER VACANCY.

The news from Manchester continues to be satisfactory. A recommendation from the Town Hall Committee that the post should be advertised at a commencing salary of £1,500, rising after two years to £1,750 and again after two years to £2,000, was referred back with a definite suggestion that the recommendation should come up again on the terms which had been suggested by the B.M.A. and the M.O.H. Society, namely, a commencing salary of £1,700 rising by three annual increments to £2,000. There is every reason to believe that when this recommendation is presented to the Manchester City Council it will receive unanimous support.

PUBLIC HEALTH SALARIES AND
PANEL INCOMES.

In connection with the subject of salaries in the Public Health Service a study of the reports of the various insurance committees through the country will prove interesting. The recent report of the Essex County Insurance Committee for last year shows that two panel practitioners, partners in one practice, received £3,000 last year, while two other panel practitioners received £2,800 and £2,700 respectively. These handsome sums represent part-time services only, and there is no limit to the amount that each of these men might earn by private practice. Similar figures are being received from other insurance areas, and it is not to be wondered at that there is a growing demand for a variation in the terms of service. Most of the persons serving on these insurance committees know quite well that the whole-time services of fully qualified men, possessing the extra advantage of a considerable amount of post-graduate study, education, and experience, can be secured with the full consent of the British Medical Association and the Society of Medical Officers of Health for a salary of £500 per annum. Is it likely, therefore, that these people will consent much longer to pay these very large sums for part-time services?

At the Annual Conference of the National Union of Distributive and Allied Workers' Approved Societies recently a resolution was passed expressing the opinion that the present panel system of medical service is insufficient to meet the demands of the times and calling upon the Ministry of Health to institute a State medical service, the object of which shall not be only the cure but the prevention of disease. We believe that the public as a whole much prefers whole-time officers to part-time services, and we believe that the public is now largely desirous of a whole-time State medical service even if the cost of the two systems were equal. Inasmuch, however, as it is obvious that the cost of the whole-time State medical service would be, on account of the sweating which is permitted in the present whole-time service, very much cheaper than the part-time services now employed there is no doubt that before long there will be a strong agitation in favour of the former.

Similar evidence is forthcoming from the resolutions passed by the delegates of the National Deposit Friendly Society at their meeting recently. This conference representing 500,000 people passed resolutions in favour of payment for medical services on the basis of services rendered and not by a capitation fee.

THE MINISTER OF HEALTH.

No useful purpose would be served by pretending that the present relations between the Ministry of Health and the public health services are satisfactory. In connection with nearly all the needs of the service, including salaries, security of tenure and superannuation the Minister appears to be hostile to the very reasonable aims and requirements of the service. We have referred previously to incidents where the influence of the Minister has been used against the payment of adequate salaries, and this evidence appears to be accumulating with ominous rapidity. In connection with salaries of sanitary inspectors, for example, the Minister defended the niggardly action of the Bridgnorth District Council in offering a salary of £150 per annum for a sanitary inspector, and said that he could not require local authorities to pay salaries in excess of what they themselves considered necessary and what enables them to obtain a qualified officer. Unfortunately the same freedom of action does not seem to be permissible, in Sir Alfred Mond's view, when a district council decides to offer a more adequate salary in the hope of getting a better qualified man. The Rotham (Kent) Council proposed to appoint a sanitary inspector at a salary of £200 per annum, rising in three years to £250, but was informed by the Minister that the remuneration was too high. Apparently, therefore, those who desire to sweat the public health service are to have a free hand to do as they like, while those authorities who prefer to pay a reasonable wage are to be advised by the Minister to reduce their offers. The position is thoroughly unsatisfactory.

HEREFORDSHIRE VACANCY.

In moving the report of the Public Health Committee at the recent meeting of the Herefordshire County Council the Chairman stated that five candidates for the appointment of Medical Officer of Health had been interviewed, but the Committee were unable to submit three names to the Council as those applicants who were considered suitable, other than Dr. Lowe, had declined to accept the appointment at the salary offered. They, therefore, recommended that Dr. Lowe, the present Tuberculosis Officer, be appointed at the salary of £700 per annum. An amendment was moved and seconded that the appointment should be deferred in order that a man with wider experience might be secured, but this was defeated.

It therefore appears that the Herefordshire County Council have had in practice, no choice at all for their inadequate offer of £700 per annum.

CORRESPONDENCE.

(Continued from page 255).

SALARIES IN COUNTY AREAS.

Dear Sir,—The salaries question in County areas appears to be of more immediate urgency and importance than in the general public health service, and it is difficult to understand the continued silence of *Public Health* and the M.O.H. Society on this subject. Perhaps, however, when County Medical Officers and their staffs consider the following facts they will be moved to take vigorous action and will press their views upon the M.O.H. Society and procure some improvement. About twelve months ago the large and wealthy County of Surrey was allowed to appoint a County Medical Officer at the inadequate salary of £1,200 per annum, without any opposition from the M.O.H. Society or the British Medical Association. According to the scale of the M.O.H. Society this post should have been advertised at a commencing salary of £2,000. The extraordinary inertia and lassitude of the M.O.H. Society while this important post was being held up is a matter that should be inquired into by all members of the M.O.H. Society who are interested. This year we are suffering from the direct result of our lack of action in Surrey, and the County services have now sustained two still more severe blows in the Counties of Herefordshire and Staffordshire.

In Herefordshire the County Medical Officer should be paid, according to the scale of the M.O.H. Society, £1,500 per annum. Herefordshire County Council was allowed to advertise the post at £700 and to find candidates willing to accept such a sum. It is true that most of the selected candidates decided at the last moment not to touch the job, and the County Council have received pretty strong proof that they have not had anything like a reasonable choice of candidates, but the fact remains that they have secured a County Medical Officer at a salary of less than one-half of the M.O.H. Society's scale, and this is the only thing that such a Council cares about. This unfortunate happening, as I am informed, due entirely to the fact that the local B.M.A. Branch or Division was apathetic on the subject, and that those local members of the M.O.H. Society who should have been ready and willing to stir up the local B.M.A. activities took the extraordinary view that the thing had better be passed in silence. Presumably they did not like the idea of a row in their area, and the nett result was another blow, with permanent damage, to the hopes of the M.O.H. Society and its scale.

The third instance is equally overwhelming.

The County Council of Staffordshire have been allowed without opposition and without any public competition or advertisement to fill the important post of County Medical Officer to a large and wealthy County at the salary of £1,000 per annum, as compared with the M.O.H. Society's scale salary of £2,000. It is a public scandal that a post of this kind should be filled without open competition, and it adds to the offence that it has been filled at such a grossly inadequate salary. Here again local B.M.A. inactivity is given as the excuse, and it is evident that the M.O.H. Society has no member in Staffordshire who has sufficiently developed a sense of duty to the public health service and to the Society to cause him to stir up the B.M.A. activity to the necessary striking point. I am informed that, as a matter of fact, the influence of some of our members has been in the opposite direction, and that here again local members of the public health service recommended abject and complete surrender to the policy of a continuation of the present grossly inadequate salaries.

It is now rather late in the day to try to make good, and the ground which has been lost can never be recovered, but the above matters should be considered very seriously by every Branch of the M.O.H. Society, and men should be sent to the Council only after giving a definite pledge as to their determination to use every possible means to secure the general acceptance of the scale of salaries of the M.O.H. Society. Three County appointments in succession have been filled up at salaries which amount almost exactly to one-half of what the total salaries should be according to the M.O.H. Society scale. In each instance the salary offered in these post-war conditions, with an enormously reduced value in money, is either the same as or less than the actual pre-war salary paid to the previous holder of the post, so that there is relatively an enormous fall in the value of the remuneration paid. In the case of Staffordshire the comparison is still worse, because the previous medical officer did not devote his whole time to the work.

Before the war County posts were comparatively well paid and, as a general rule, a vacancy in any large County was severely contested by the eligible holders of similar posts in large towns. Now the situation is completely changed, and no M.O.H. of a large town would consider for one moment the salary paid to the average County Medical Officer of Health. In all non-County work salaries have increased roughly in proportion to the cost of living, but in Counties the salaries have either remained stationary or actually fallen. When will the County Medical Officers wake up? COUNTY M.O.H.

SOME OBSERVATIONS UPON THE DIFFERENTIAL DIAGNOSIS OF PULMONARY TUBERCULOSIS.*

BY

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I do not intend this afternoon to attempt to discuss fully the differential diagnosis in connection with pulmonary tuberculosis, which is an almost inexhaustible subject; I will speak in the first place of some of the methods by which differential diagnosis may be facilitated, and then discuss certain of the conditions in which difficulty may arise.

RESPONSIBILITY FOR DIAGNOSIS.

The differential diagnosis between pulmonary tuberculosis and those other conditions with which it may be confused, is a subject of extensive range; it concerns, either directly or indirectly, all who are engaged in the practice of medicine in whatever capacity, but none more vitally than the tuberculosis officer.

He is the specialist in tuberculosis for the Public Health services, he acts as referee for the Pensions Authorities when an expert opinion is required in doubtful and difficult cases, his advice is sought by the medical officers of the Education Authority, and by practitioners in every variety of practice, and he has been called upon recently to act as referee for the Commonwealth of Australia in connection with those cases of tuberculosis who desire to emigrate to that country.

It is obvious then that the responsibility for making or refuting a diagnosis of pulmonary tuberculosis rests largely, and, I trust, not lightly, or without a due sense of responsibility, upon the shoulders of those exclusively engaged in tuberculosis work, and it is important for each of us to realise that the onus of proof in every case rests with the individual making the diagnosis, who should be able to produce demonstrable evidence in support of his findings. When this suggestion is acted upon strictly, the value of the opinion expressed will be enhanced.

I fear that at times we take too limited a view of our clinical responsibility, we may not always investigate with the object of making a definite diagnosis of the patients' ailments, we are apt, unless care is exercised, to content ourselves with a diagnosis of tuberculosis or of its absence, and

* Being the Presidential address delivered to the Midland Tuberculosis Sub-Group of the Society of Medical Officers of Health.

as a result may merely classify the patients we examine into the "tuberculous" or the "non-tuberculous," without attempting to go any further in the case of those who we consider are "non-tuberculous." This tendency, when it exists, does not increase our clinical knowledge nor does it make us more capable as diagnosticians.

Unless proper care is observed in dealing extensively with cases of pulmonary disease, we may become mere searchers after abnormal physical signs, or of any condition which differs from our conception of the normal, without always arriving at a correct diagnosis, unless we carefully analyse the possible causes of the condition found in a detailed and exhaustive manner, making use of every available diagnostic method, not giving to any a fictitious value, and reviewing the completed investigation without bias, in the light of our clinical and pathological knowledge.

The failure to succeed in the differential diagnosis of pulmonary tuberculosis is not always the fault of the tuberculosis officer; too often the requisite facilities for conducting a complete clinical, bacteriological or other special investigations are withheld, and if laboratory facilities, an X-ray equipment, and a sufficient number of observation beds are not available, the reliance which can be placed upon the diagnosis made under such conditions will be considerably lessened.

PHYSICAL EXAMINATION.

A careful physical examination of the lungs is obviously of the utmost importance, it is essential that nothing which it reveals should be missed, and it is even more important that the findings should be given a proper value by faithful interpretation.

Before we can recognise and appraise the significance of the abnormal, we must be familiar with the normal, and should have sufficient clinical experience to appreciate that wide variations from the normal do occur, and may exist apart from any definite active disease. Occasionally these variations are found associated with quite good health and in no sense invariably indicate the necessity for treatment.

In this connection let me mention the conditions frequently found at the right apex apart from any pathological condition, where tactile vocal fremitus is increased, the percussion note is less resonant, expiration is frequently prolonged and higher pitched than at the left apex—a combination of physical signs frequently mistaken by the unwary for pulmonary tuberculosis!

Adventitious sounds, too, when present, do not always indicate disease; there are certain transient atelectatic rales which occur at the apices and are occasionally mistaken for the rales heard as a result of tuberculous infiltration; the former, however, tend to disappear after forced respirations, and the latter are usually sub-crepitant in character, and persist.

Transient rales are heard also in regions corresponding to the margins of the lobes, most commonly in the anterior axillary lines; these have been assigned to various causes, and are not usually of pathological importance.

Errors frequently arise from faulty percussion, and in percussion over the pulmonary area it is very useful to percuss from below upwards. Light percussion is of most benefit over the apices and heavy percussion at the bases. Much useful information is frequently lost by a careless percussion, or omission to percuss the axilla systematically, the upper region of which is too frequently neglected both in auscultation and percussion. In percussing the axilla, as in other areas of the chest, the interspaces should be carefully followed and compared, if the assistance of tactile sensation, in addition to resonance effects, is desired.

Auscultation may usefully be practised from below upwards too, after standardising one's impression of vesicular breathing by reference to and a comparison with the axillary regions.

Any mention of the methods of physical examination which may help in differentiating between tuberculosis and other pulmonary disease would be incomplete without some allusion to the method of palpation described by Pottinger, by which are detected both the reflex spasm of portions of various muscles and the regional atrophy of skin, subcutaneous tissue, and muscle covering the thorax.

Spasm, or reflex hypertonicity may be the result of an intra-thoracic inflammatory process, and may be confused at times with occupational hypertrophy, atrophy may result from reflex trophic changes or may be caused by lessened use. When the hypertonicity exists as a reflex it is said to be indicative of an earlier, more active and acute lesion, than is the atrophic reflex condition which is usually significant of a chronic, quiescent, or healed lesion.

The muscles which show these reflexes most readily are the sterno-mastoids, pectorals, scaleni, trapezius and diaphragm. These conditions do exist and are demonstrable; the explanation of their causes may be correct, but that they are

pathognomonic of tubercle is open to question; they do not always receive corroborative support from an X-Ray examination, from sputum findings, or from tuberculin tests.

Valuable information in differential diagnosis may be obtained from

SPUTUM EXAMINATIONS.

In every case of pulmonary disease which presents sputum, its microscopical examination is a necessity which it would be imprudent to omit; unfortunately, however, this is a view which is not universally accepted, as in reading an annual report upon the working of a tuberculosis dispensary, I saw it stated that the sputum of obvious cases of pulmonary tuberculosis was not examined for tubercle bacilli.

In determining the cause of pulmonary infections two common errors are frequently made, the first is the acceptance of a single negative sputum examination as conclusive evidence of the absence of tuberculosis, but here it should be remembered that a majority of the incipient cases of pulmonary tuberculosis do not present tubercle bacilli in the sputum, and in cases with more extensive signs bacilli may only be demonstrated intermittently; the second error is the omission to carefully examine the sputum of the so-called obvious cases.

As a rule, one negative examination of the sputum is not only valueless, it may be misleading, and the search for tubercle bacilli should be repeated whenever the physical signs and symptoms are suggestive of tuberculosis; if we omit the systematic examination of sputa some cases which are diagnosed as suffering from tuberculosis will undoubtedly be the result of other infections.

In some cases of streptothricosis, for instance, the symptoms and physical signs closely resemble tuberculosis; consolidation of the lung and cavitation, accompanied by cough, haemoptysis and pyrexia occur in both diseases, and without sputum examinations it would be quite impossible to make a differential diagnosis. On the other hand, when tubercle bacilli are persistently absent from the sputa of those with strong evidence of other than early tuberculosis, a diagnosis of that disease is inadmissible and untenable, and it is prudent to search for some other cause of infection.

It is important for accuracy of results in the examination of sputum for tubercle bacilli to use a concentration process such as that of Ellerman and Erlandsen or the Antiformin method;

without such assistance too-much reliance cannot be placed upon negative results.

I have used the Ellerman and Erlandsen method extensively, and in one series of 945 sputa, all of which were negative for tubercle bacilli after staining once by the Ziehl-Neelsen method, 205 or 21 per cent. of positive results were obtained by this means, and of the 205 positive results thus obtained, 146 or 71 per cent. were evident after the first concentration.

The bacilli were not demonstrated in thirty-six instances until five specimens had been treated. In the examination of sputum, by any method, if a possible error is to be eliminated, the same slide should not be used more than once.

In the Birmingham tuberculosis scheme we now have records of between eight and ten thousand examinations by the method of Ellerman and Erlandsen, and the results are from 18 per cent. to 24 per cent. better than what were obtained by staining alone.

X-RAY EXAMINATION.

For the purpose of differential diagnosis in pulmonary disease great assistance is obtained from an X-Ray examination of the thorax, and the dictum to screen for function and plate for structure is a sound one.

It is desirable to screen every case in which tubercle bacilli are absent from the sputum, not that I consider it possible to arrive at a correct diagnosis by this method of examination alone, but by using it the cause of physical signs similar to those found in pulmonary tuberculosis may be conclusively demonstrated. It reveals the existence of fragments of shrapnel, aneurysm, new growths, cysts, hydro-pneumo-thorax, enlarged glands, and many other conditions concerning which we may or may not have been suspicious. It shows, too, at a glance, any difference in function, and in those cases where tuberculosis is present, we are able to ascertain with more accuracy than by physical examination the extent of the disease.

In addition, it has the merit of being a means by which we can check and corroborate our physical findings, and when used with this end in view, it undoubtedly makes us more accurate and careful in our clinical examinations, and if for no other reason it is of great value.

In the diagnosis of early tuberculosis, radiological examination alone cannot be regarded as infallible, but when stethoscopic and radioscopy findings are similar, the probability of the existence of disease becomes converted almost into a certainty.

In radioscopic work, as in physical examinations, it is essential to remember that wide variations from our conception of the normal may be present without the existence of signs or symptoms of disease, and are not in themselves indicative of the necessity for treatment.

APICAL LESIONS.

Although, in many instances, a tuberculous lesion is an apical lesion at the onset, it would be unwise to regard all such as being tuberculous in character.

Apical lesions, apart from tuberculosis, occur with greater frequency than is generally acknowledged. Pulmonary collapse and induration which occurs in mouth-breathers is frequently found at the right apex, and the physical signs may readily be mistaken for those of tuberculosis, including, as they do, loss of resonance, harsh or bronchial breath sounds, the presence of crepitations, accompanied at times by blood-stained sputum, and a slight evening pyrexia. Tachycardia, and digestive disturbances are, as a rule, absent, the general health is usually good, the body weight is maintained and the sputum is consistently negative for tubercle bacilli. A systematic examination of the nose and nasopharynx will generally reveal the cause of obstruction, and the necessity for such an examination in patients suspected of pulmonary tuberculosis is obvious, and so I think is the un wisdom of diagnosing intra-thoracic tuberculosis in children or others suffering from the effects of enlarged tonsils and adenoids, to commit oneself to such a diagnosis, without first observing the results of surgical interference, would be to court disaster.

The pulmonary signs associated with mitral valvular disease are frequently apical, and are often confused with the physical signs of tuberculosis. When more or less confined to the apex, they are usually the result of an induration, and give rise to an altered percussion note, altered breath sounds and rales; they are accompanied by dyspnoea at times, by cough, and blood-stained sputum, and are frequently present quite apart from signs of failing compensation. The diffuse signs of pulmonary congestion, secondary to a failing compensation in valvular disease, are sufficiently obvious as to give rise to no trouble in arriving at a diagnosis.

It has been stated that the combination of pulmonary tuberculosis and mitral disease is uncommon, but such a statement is not in accordance with my own experience. With Dr. Campbell, I investigated three thousand cases of pulmonary tuberculosis all of whom had a positive

sputum, and we found 165 or 05.9 per cent. who presented a definite cardiac bruit, and symptoms of cardiac disease, associated in every instance with a history of rheumatism, chorea, or other disease of which valvular disease is a sequela.

From statistics published by the Ministry of National Service I saw that in one area 160,545 men of military age were examined, of this number 12,562 or 7.8 per cent. were found to be suffering from valvular heart disease in such a degree as to be either unfit for service, or fit only for the least exacting forms of physical exertion, and of the same total 5,238 or only 3.1 per cent. were found to be suffering from tuberculosis. It would appear from a rough estimate such as this that there is not a large difference between the incidence of valvular disease amongst the tuberculosis and the adult male population.

The association of pulmonary tuberculosis and left-sided valvular disease is less uncommon than is usually taught, and most cases of valvular disease present, at times, physical signs in the lungs that resemble those due to tuberculosis, but the utmost care should be observed in making a diagnosis of pulmonary tuberculosis in association with valvular disease: my own feeling is that no evidence of tuberculosis should be accepted in these cases other than the presence of tubercle bacilli in the sputum.

CHRONIC BRONCHITIS.

Chronic bronchitis is a disease which we frequently meet, and is one in which we are, perhaps, most frequently called upon to make a differential diagnosis from tuberculosis, and this is exceedingly difficult at times. Both diseases present similar symptoms, such as cough, blood-stained sputum, and occasionally slight pyrexia. The physical signs may also be very similar; in both diseases we may find crepitations and rhonchi.

A consideration of the history is important in arriving at a diagnosis; the bronchitic has usually a history of long chronicity, perhaps extending over years, his condition being worse during the colder and wetter months. Chronicity, however, is not exclusively an attribute of bronchitis, it is common in tuberculosis, but the latter disease, as a rule, if active, and giving rise to troublesome symptoms, is progressive as well as chronic; and the pathological conditions of increasing infiltration and caseation, as shown clinically by the physical signs of consolidation and cavitation, will be present.

The clinical evidence of an accompanying

emphysema is more apparent in cases of long-standing bronchitis than it is in tuberculosis, in fact, clinical signs of extensive or general emphysema are not common in association with tuberculosis, unless we are dealing with a fairly extensive tuberculosis lesion which has completely fibrosed and reduced considerably the functioning power of the lung.

The site of the lesion is also important and may help considerably in arriving at a correct diagnosis; this is particularly the case where the tuberculosis commences in an upper lobe; there is not so much assistance to be obtained when the tuberculosis has its origin in the hilus, as some cases of the latter type show little more in the way of physical signs than a few rhonchi, and are readily confused with bronchitis, if a physical examination alone is relied upon.

Bronchitis confined to the upper lobes is exceedingly rare, but may be present in association with aneurysm and new growths. In chronic bronchitis the percussion note is usually unaltered, or, if altered, is often hyper-resonant, according to the amount of emphysema present.

Occasionally, however, with extensive bronchitis and profuse secretion, there may be some impairment over one or both lower lobes; an impairment, confined to an upper lobe, should always raise the suspicion of a tuberculous involvement.

The breath sounds seldom show such marked alterations in bronchitis as in tuberculosis, a slight diminution of the intensity of the respiratory murmur, or some prolongation of expiration, being the most common alterations met with in bronchitis.

The adventitious sounds present in bronchitis are usually mixed rales, both large and small; small moist rales being common at the bases.

Chronic bronchitis—if we accept the term "chronic" in its true sense—is rare amongst the young; it is frequently met with in middle and advanced life, and in those patients, is often associated with a faulty circulation, a chronic renal lesion, or it may be secondary to some other chronic pulmonary trouble such as asthma and emphysema.

A systematic and repeated examination of the sputum should always be undertaken in any case in which there is doubt as to whether we are dealing with bronchitis or tuberculosis, and I confess to having been misled by physical signs which seemed typically those of a chronic bronchitis, where, after ten, twelve or even more sputum examinations, tubercle bacilli were finally demonstrated.

Useful information is to be obtained from an X-Ray examination in differentiating between tuberculosis and chronic bronchitis, and, what invariably strikes one in the radioscopic examination of the chronic bronchitic, are the slight modifications met with when compared with the profusion of the auscultatory signs; the general clearness of the picture, in reality, is little changed.

The hilus shadow is usually more pronounced, being enlarged and elongated, particularly towards the base of the lungs. The lines radiating from it are often more accentuated, being broader and darker; particularly is this the case when secretion is profuse, as indicated by numerous basal rales of the small moist variety. The matrix of the bases themselves, however, presents a definite clearness; the contour and movements of the diaphragm shew little or no alteration or restriction, and the costo-diaphragmatic angle is unaltered. In chronic bronchitis, the appearance of the apices is variable, if emphysema is marked, they may be clearer than usual; when the bronchitis is extensive and of long duration, and sclerotic changes have taken place, there is a definite grayness, which is usually equal upon the two sides. Any definite lack of translucency or opacity at one apex alone, which fails to clear on cough, should suggest something other than a simple bronchitis.

In screening patients suffering from chronic bronchitis, some of the hilus group of the intra-thoracic glands are occasionally evident, and the fact that they are discernible is perhaps too frequently regarded as definite evidence of tuberculosis. That enlarged glands at the hilus are frequently tuberculous in origin must not be doubted, but to regard every visible hilus or intra-thoracic gland as tuberculous, would be a mistake.

Less serious conditions than tuberculosis cause enlargement of the hilar glands; in fact, any inflammatory disease which is associated with an infection of the bronchial tract, and possibly of other parts of the lung, may cause enlargement of the hilar glands.

In children they are met with in association with measles and whooping-cough, and in adults, with bronchitis, bronchiectasis and influenza—and, at times, are visible after an attack of pneumonia.

TUBERCULIN.

Any account of differential diagnosis in pulmonary tuberculosis would be incomplete without some mention of tuberculin as a diagnostic agent, and I now refer to its use subcutaneously.

Tuberculin is undoubtedly useful as a diagnostic agent, and gives definite information as to a tuberculous infection; when a focal reaction occurs, we obtain further information as to the site of the lesion, but, unfortunately, it gives us no reliable indication as to whether the lesion requires treatment or not, or, in other words, whether we are dealing with an active or quiescent lesion.

Necessity for the use of tuberculin as a diagnostic agent will arise from time to time, but the better the clinician the less frequent should be the occasions.

The practice of giving large doses subcutaneously and depending upon the result of the reaction before arriving at a decision as to the necessity for treatment, cannot be too strongly deprecated. Most infected persons, if a sufficiently large dose be given, will react, in many cases, when the lesion is clinically quiescent, and to condemn a patient to submit to a long course of treatment, with all its attendant disabilities, merely because he reacts to tuberculin, and apart from a considered survey of his physical signs and symptoms, is, to my mind, clinically unsound.

The question as to activity and the need for treatment can only be decided after a careful consideration of the symptoms, physical signs, and history of the case.

CO-OPERATION FOR THE SAFEGUARDING OF PUBLIC HEALTH INTERESTS OF BOTH THE CIVIL POPULATION AND THE ARMED FORCES IN PEACE AND DURING WAR.*

BY

R. J. MACKEOWN, O.B.E., M.B., B.Ch.,
D.P.H. (Surgeon-Commander, R.N.),
Naval Health Officer, Portsmouth.

Gentlemen,—

I am proud to have been elected to be President of the Southern Branch of the Society of Medical Officers of Health for the ensuing year, and I wish to thank you for the honour you have done me.

I believe I am the first Naval Officer on the active list to hold that position, and I am glad our first meeting of this session is being held at Portsmouth, the premier naval port in the world, and where the work of public health

* Presidential Address at meeting of Southern Branch.

and preventive medicine, which we, as Medical Officers of Health, endeavour to advance, is so ably carried on by Dr. Mearns Fraser; his stalwart forward policy to reduce the incidence of venereal diseases is well known and widely accepted, and it is a high tribute to him, to the Health Committee, and to all concerned in Public Health administration in the borough, that not a single death was recorded from enteric fever among the civil population of Portsmouth during the year 1919; the population being about 230,000.

Portsmouth is a town where one may obtain valuable hints in improving the health of the people.

I venture to address to you some observations on what I consider to be a matter of very considerable importance, and that is, the closer co-operation between all Health Officers, Civil, Naval, Military, and Air Force, with a view to safeguarding the health of the civil, naval and military populations in times of peace, and to preserve a high standard of health among the armed forces when mobilised in any national emergency.

I do not propose to do more than outline a scheme how this co-operation should be brought about, as I am fully aware, and appreciate, that many of you here assembled have been carrying on this work during the period of war, so I hope my remarks may draw forth a good discussion, and that members may express their own experiences.

We all know how unprepared this country was to meet the crisis which began in August, 1914, and the slow steps, accompanied by many mistakes, by which success was finally achieved. The experience gained in the war should not be lost sight of, but placed on record, and an organisation be produced to prevent such errors recurring.

The valuable lessons learnt during the war to maintain health and fitness of the armed forces must never be forgotten—we must start with them as a nucleus, keeping them under constant supervision, and adding to them as further beneficial results are obtained.

Let me draw attention to what work is being done in this respect since the armistice, viz.:—

1. A Ministry of Health has been established, and I think we all agree that this is a step in the right direction—and of prime importance; it exercises a maternal control in all matters relating to the health of the entire population, investigating the causes and spread

of outbreaks of disease, and supplies valuable information, but leaving to a great extent, executive action in the hands of the Local Authorities.

2. The Admiralty has not been backward—the welfare of the sailor is now always in the foreground; in 1918, after the armistice, they appointed Naval Medical Officers who had studied public health, and possessed diplomas in this subject to all the large naval ports on the South Coast, viz., Portsmouth, Chatham, and Devonport, and Rosyth was added later.

They are called Naval Health Officers, and are on the staff of the respective commanders-in-chief; their duties are “to ensure the health of the naval population, to investigate all outbreaks of disease, to assist the Principal Medical Officers of the ports, and, after consultation with them, to recommend measures to prevent the spread of disease in the commands.”

I hope you will pardon me if I enlarge on the magnitude and importance of this work, quoting my own experience as holding the appointment of Naval Health Officer of the Portsmouth Command.

The command embraces Hampshire, Dorset, West Sussex, the Isle of Wight, and the Channel Islands—the duties may be summed up as those of a County Medical Officer, Medical Officer of a Port Sanitary Authority, and a Military Special Sanitary Officer—and, of course, it includes the rendering of an annual report.

I wish to place on record the co-operation which has been built up between the Civil and Military Medical Officers of Health in the Portsmouth Command, and myself; their help has greatly assisted me in forming the present organisation of Naval Health Control.

In every case where information was requested it was promptly given.

The chain of supervision and prevention is such that, although six limited outbreaks of smallpox occurred in the command during the years 1919 and 1920, only one case occurred among the naval population, which was contracted in Portugal, by a member of a drifter's crew, homeward bound, and was landed at Portland.

An all-round general improvement is taking place in naval hygiene; fresh air is delivered into the living and working spaces in ships, the temperature of the air being maintained between 56 deg. and 62 deg. F. in cold weather;

the superficial area and lighting in ships, barracks, and offices have received attention; certain classes of ships proceeding on foreign service are rendered mosquito-proof; traversing electric table fans are provided, and many other aids to health and comfort are fitted.

Much yet remains to be done for the sailor-man in the Royal and Mercantile Navies.

3. The War Office is taking the matter up in a most energetic and thorough fashion, having already established Directorates of Hygiene and Pathology.

The object of this new organisation is to collect all information that will benefit the future health and welfare of the Army, and thereby improve its physical efficiency; by such measures, it is hoped that the appalling cost to the nation expended on transport, hospital treatment, invaliding, and pensions, for an enormous sick list, may be greatly reduced in future wars.

Military Schools of Hygiene are now being established at Netley for the Southern Command, at York for the Northern Command, and at Carrickfergus for the Irish Command. At these schools, officers and a certain proportion of N.C.O.'s and privates, of all branches of the Army are to receive a practical course of instruction extending over three weeks in personal hygiene, camp sanitation, and prevention of disease.

It is easy to foresee what a beneficial effect such information must have on the health of our armies at home and overseas, in the days to come.

4. The Air Force has begun a campaign against venereal diseases that promises success, and is worthy of attention, and

5. Within the fold of the Society of Medical Officers of Health, is a branch entitled “Naval, Military, and Air Force Hygiene Group,” including the Territorial Force, which is giving this subject their close attention, and it is hoped that the Society may help to make it an established organisation. Colonel Kenwood, the Group President, takes a very active interest in the scheme.

To Define the Nature of the Desired Co-operation.

The groundwork of such a scheme should include:—

1. All departments and authorities concerned, central and local, as it is in the interests of all to raise the standard of health, and

as the cost entailed comes from the taxpayer, whether paid out from Treasury funds or local rates, it is evident that official recognition by, and approval of the scheme, should embrace the following, viz.:—

Ministry of Health.

Admiralty.

War Office.

Territorial Force.

Air Force Ministry, and what is most important, the willing assistance of county, borough, rural, port, and other Local Authorities.

The persons whose assistance should be most consulted are:—

The President of the Health Committee.

Medical Officer of Health, and the Sanitary Inspectors.

We all belong to one great nation, and if a breakdown takes place in one department, the whole must suffer to a greater or less extent.

2. The scheme to be formulated on a county basis—a county to be a unit; the tendency of late for County Councils is to undertake the direction of affairs as regards public health into its own hands—making it a more central organisation, and thereby relieving the small urban and rural authorities.

If the County Councils took up the question of a County Sanitary Survey, with a view to Military purposes, it would be most advantageous.

To apply this principle to one disease alone—in each county there should be set apart a well-equipped and suitably placed hospital, ready for the immediate reception of cases of, and under observation for, smallpox; where all cases occurring in the county, whether civil, naval, military, or in ships on arrival from overseas, would be received.

Such a measure would relieve Local Authorities of the necessity for providing accommodation, as is now done by extempore measures, or by having small hospitals of sorts dotted about over the country. The hospital to be under the authority of the County Medical Officer, to whom application is to be made for the admission of a case. The extension of such a hospital should be arranged for, and accommodation provided near the hospital for “close contacts,” and for those contacts in which re-vaccination has been carried out so late as to modify, but not preclude, the disease.

Local knowledge is invaluable, and much consideration should be given to it.

I would urge that a Sanitary Survey be held of each county in England by a combined Medical Intelligence Department, to include up-to-date information concerning the following, viz.:—

- (a) *Camp Sites.*
- (b) *Billets.*
- (c) *Water Supplies.*—Not only those already in existence, but those projected, and all other sources to be noted.
- (d) *Drainage and Conservancy Arrangements.*
- (e) Centres where disinfection of men and clothing and other equipment can be done—its nature and capacity.
- (f) Accommodation available for reception and treatment of infectious diseases and contacts—where situated, number of beds, means of transport, etc.
- (g) *Laboratories*, where early and prompt bacteriological and other examinations, can be carried out.
- (h) *Ablution Rooms*, and arrangements made whereby the greatest use can be made of them.

To obtain such information the help of the local Medical Officers of Health would be invaluable, and an organisation should be available, whereby headquarters staff, in any national emergency or in peace manœuvres, could at once obtain the advice and guidance of such officers in matters relating to the concentration of large bodies of men in any county.

After the County Sanitary Survey comes the definition of the desired co-operation, viz.:—

- (a) The reciprocal notification of communicable diseases, and mutual assistance for dealing promptly with the same, when they occur.
 1. Notification to be prompt—time being a most important factor, to apply not only locally, *i.e.*, in the neighbourhood, district, and county, but even more remote—in fact, to any place where Service men may be proceeding on leave, or have been on leave, etc.
 2. What diseases should be notified. It is never to be forgotten that special precautions must always be taken where the fighting forces are concerned, as they are practically always on a war footing, to sail or to march at short notice, and no delay should

take place through any lack of forethought—therefore all.

- 1a. Communicable diseases should be notified, including measles, rubella, malaria, dysentery, and enteric.
- 2a. Diseases, such as poisoning by shellfish, food, milk, and industrial poisoning occurring in a district, that are putting the general public in that district at risk.
- 3a. Influenza and allied catarrhs.
- 4a. Undue mortality among rats, and
- 5a. The prevalence and nature of venereal diseases.
- (b) That bacteriological examination may be made available in as many local centres as practicable, to eliminate or, at least, reduce delay through the post.
- (c) All disinfecting plant, irrespective of authority and situation, be available, whenever necessary.

I was much struck at the condition of the personnel when conscripted for service afloat; the lack of cleanliness, the extremely unhealthy condition of their gums and teeth, and nearly everyone had some condition, for which he had received medical treatment before entry into the Service.

There are certain signs of the times which must be taken into consideration before pressing our campaign of public health too strongly at present; the heavy taxation, high rates, general increase in salaries and wages, and the continued high cost of food, clothing, and material, have alarmed Local Authorities to no small extent, so it behoves us to go forward warily, and ask only for essentials, until more prosperous times follow.

In my opinion, our greatest danger now and in future, as the increasing population of Great Britain—it is far too great when we consider the number of unfit and diseased contained in the total. In 1801, 120 years ago, it was under 9 millions; this year it is just under 43 millions, nearly five times as many. This danger of the ever-increasing multitude is that it is going ahead of the means available to supply house accommodation, sanitation, etc., and it *retards in no small measure* the advance of sanitary science, keeps the public health at a *lower ebb* than it would otherwise be.

There are two diseases that we cannot parley with, these are smallpox and venereal, and they call for immediate and continued action

in their prevention—the former is an ever present menace in this country, where so many persons are unprotected by vaccination. Here the danger lies, not so much in the disease itself, but in it not being recognised in time, and nipped in the bud. Our armamentaria are excellent when limited outbreaks occur. If smallpox gets a start, great expense must follow in stamping it out, *therefore*, early recognition and prompt measures are alone to be relied on; the latter have such a hold on our nation, the young manhood, including those in the public services, continue to be incapacitated, so all endeavours should be made to *combat* and prevent them spreading.

Many complaints are now recognised as having been caused by venereal disease, which were formerly thought to have had a different origin, *therefore*, we may boldly proclaim that if these were conquered, a material improvement in the health of the nation would follow.

We, as doctors, should attack venereal diseases as infectious diseases are dealt with and prevented, leaving the religious side of the problem to the clergy, irrespective of our own individual and personal beliefs and views.

There is a great hope that in the years to come, if the existence of our Empire is threatened, as occurred within recent memory, *that* by improved organisation of the whole forces of research, treatment and co-operation, the civil and armed forces will have the benefit of the highest medical skill, and the latest medical scientific successes.

It is in this way that sanitary science and preventive medicine may become active forces in the production of individual fitness, for those called upon to undertake the defence of their country abroad, at home, and at sea.

Discussion was invited, and a good one followed. Among those taking part were:—

Surgeon Rear-Admiral W. Bett, M.V.O., R.N. Hospital, Haslar, Dr. W. A. Lethem, Lieut.-Col. C. W. Holden, D.A.D.H., Southern Area, Lieut.-Col. J. G. McNaught, Dr. R. W. Meller, Major H. St. A. Agate, R.A.M.C. (T.), M.C., Surgeon Captain A. R. Bankart, C.V.O., H.M. Yacht "Victoria and Albert," and Major J. Hingston, R.A.M.C., O/C School of Hygiene, Southern Command.

With the consent of the Richmond (Surrey) Borough Council, Dr. C. S. Brebner, M.O.H., has also been appointed Medical Officer of Health for the adjoining Ham urban district.

YORKSHIRE MEDICAL OFFICERS OF HEALTH.*

BY

J. MITCHELL WILSON, M.D., D.P.H., Consulting Medical Officer of Health, East Riding (Yorks) County Council.

The formation of the Association of Yorkshire Medical Officers of Health, which afterwards became the Yorkshire Branch of the Society of Medical Officers of Health, was the suggestion of Dr. North, at that time M.O.H. to the City of York. The first meeting was held in York in September, 1875; 16 medical officers of health were present from all the three Ridings.

It was decided to form an Association for Yorkshire. It is interesting to know that one who was present at that meeting is still on our list of member—I refer to Dr. Hicks of Easingwold. I think the new Association was specially fortunate in securing two exceptionally able and well-qualified men to be President and Secretary, who were well fitted to guide its early progress. Dr. North was a strong personality who could be *saue* or forcible as the occasion required; he made a most excellent Chairman. He was a wise counsellor, and often reminded members that they and the members of the Sanitary Authorities were working for one object, viz., "to promote the health of the community," and, therefore, there ought to be a cordial co-operation in all their work." Under his enthusiastic guidance the Association did its full share in advancing the administration of public health work on wise and progressive lines. Dr. Franklin Parsons was the first Hon. Secretary; he was M.O.H. to the Goole and Selby combined sanitary districts; he was more than an able sanitary official. He soon acquired an extensive knowledge of the geology of Yorkshire, and his several papers on the New Redstone and the Chalk formations as sources of water supplies are still valued as trustworthy guides. But in his ordinary reports to the sanitary authorities or to the Local Government Board, or in papers on some scientific subject, or in his Presidential address to the Microscopical Society, and to the Pathological Societies of London; or in recording the minutes of the Association, the result was always a clear and concise statement of all the essential parts of the subject then being dealt with. Of him we may say truly: "*Nil tetigit sed ornavit.*" He was appointed to the staff of the Local Government

* Notes of a speech at the Annual Meeting of the Yorkshire Branch, February, 1922.

Board in 1879. Dr. Barry, M.O.H. of the Skipton combined sanitary districts, was made Secretary, but only held that office for a very short time as he was selected as Sanitary Commissioner to the Island of Cyprus. After his appointment to the staff of the Local Government Board, we knew him more intimately through his work in Yorkshire. I need only remind you of his exhaustive report upon the outbreak of Small-pox in Sheffield in 1888, and that on the outbreak of Enteric Fever in the Tees Valley in 1893. Both these men passed away in the midst of their labours; and we are thus reminded of another lost friend and worker for the Society, Dr. Spottiswoode Cameron; in January, 1879, he read a paper on "The Working of the Huddersfield Act of 1876," which provided for the compulsory notification of certain infectious diseases. From that paper we gathered that there was a good deal of opposition among the medical profession and the general public to the Act, but by his usual patience and tact Dr. Cameron was able to overcome that opposition and so the way was paved for several future Acts which quickly followed, ending in compulsory notification everywhere. We knew him more intimately when he came as M.O.H. for Leeds; and we all deeply regretted his long illness and sad death.

There are two others of the old group who are still members I should like to refer to. The one is Dr. Bruce Low. He was Treasurer for some years, he also was called to the Local Government Board, from which post he has only recently resigned. He read several papers in the early years of the Society, which specially dealt with the sanitary requirements of country districts; these papers were very helpful to rural M.O.H. The great need for additional sanitary powers in such districts was strongly felt; at the second meeting of the Association it was determined to petition Parliament, "To give local authorities powers to enforce the provision of water supplies in rural districts." Whether the efforts of the young society were appreciated or not, in 1878 the Public Health (Water) Act was passed.

The other old member I should like to recall is Dr. Wright Mason, of Hull. I sometimes wonder if M.O.'s of Health, and the Sanitary Authorities of Yorkshire do ever sufficiently realise how much they are indebted to him as guardian of the public health at Hull. For it is by his vigilance and perfected system of dealing with actual and suspected cases of infectious disease found on board ships, that epidemics of foreign origin are successfully hindered from obtaining an entrance into this county.

There is one feature of the work of the Association in its early years that may not generally be remembered, that is the frequent meetings with members of other Societies. Such combined meetings with the North-Western Association, and with the Northern Counties Association were frequently held during the years from 1878 to 1882. Would it not be helpful if such meetings were revived?

It has been interesting to look through the first minute book of the Association, and see the subjects discussed at the several meetings. To many of the members the work was comparatively new; yet they apparently were quick to note many conditions which were hindering their efforts in safeguarding the health of the community. First a Committee was appointed "To collect information and to report upon the conditions which were thought to contribute to the high mortality among children." Papers were read "On the evil results which were associated with the privy midden system in towns." "The urgent need for hospitals for the isolation of cases of infectious disease." "On outbreaks of enteric fever traced to contaminated well waters." That was some of their work as pioneers, in preparing the way for their more fortunate successors.

If in all I have said, I have shown the proverbial weakness of those who are not young, by recalling only the doings of the past, I can assure you it is not that I am indifferent or forgetful of the work that has been successfully accomplished in this country in more recent years; but there is not the same need for me to recall the great, almost revolutionary changes that have been brought about during the last 40 years, for the work of every M.O.H. has contributed towards reducing the death rate from 21.4, during the 10 years 1871-1880, to 14.4 during the years 1911 to 1920; and the average infant mortality from 149 per 1,000 births in the earlier ten years, to 100 for the later period. The average yearly number of deaths from typhus fever in the early years was 1,400, in 1919 there was only one such death; from enteric fever there were nearly 8,000 annually in 1871-80 as compared with 577 in 1919. As to small-pox, it is not quite blotted out, but the real remedy is in the hands of everyone who cares to accept it.

Some other member will at another meeting tell the fuller story of these great results; but there is still much to be done, but may I encourage you with words of Browning: "The best is yet to be." Also with the ideas of a French philosopher of the eighteenth century who with

prophetic vision wrote: "It is clear that conservative or public medicine must in the long run banish transmissible and contagious diseases, as well as maladies due to diet, climate and occupation; nay, the hope of relief may be extended to all other diseases whose remote causes may probably yet be recognised. Now is it absurd to assume that the perfectibility of man will go on indefinitely through endless ages?"

BOVINE TUBERCULOSIS.

BY

S. LYLE CUMMINS, C.B., C.M.G., etc., David Davies Professor of Tuberculosis, Welsh National School of Medicine, Cardiff.

Bovine tuberculosis is responsible for only about 1.7 per cent. of pulmonary, but for 18 per cent. of tuberculous meningitis, 16 per cent. of general tuberculosis other than meningitis, 21 per cent. of bone and joint, 51 per cent. of abdominal and 50 per cent. of cervical adenitis. Pulmonary tuberculosis, which is practically always human, is responsible for about 80 per cent. of the total death rate from this disease. It is clear from these figures that it is the human type of bacillus that constitutes the gravest part of the problem. Still the amount of morbidity, and indeed the mortality also, due to the bovine type is considerable, and every effort is needed to diminish this morbidity *provided that the effort does not entail worse evils in some other direction*. As to the relative virulence of human and bovine for man, the evidence is not conclusive. We know that the more important factor underlying the varying clinical phenomena resulting from these two types is the path of entry, and that this makes it difficult to estimate the relative virulence. It is safe to say that if the human type were habitually swallowed in milk instead of inhaled with the breathed air, it would give rise to a preponderance of abdominal and cervical glandular infections, while if the bovine type were usually inhaled, bovine pulmonary tuberculosis would be common in man. Andrewes reports 25 per cent. of London milk to contain bovine bacilli. This is herd milk, and the bacilli are probably very dilute in most cases. It seems certain that the ingestion of bovine bacilli does lead to a considerable degree of immunity to subsequent infection with the human type, and it is significant that where the cows are relatively free from infection the clinical type of the human disease tends to be acute and severe. But while this relative immunity is something to the good, the wide pre-

valence of tuberculous morbidity due to the bovine strain is all to the bad, and must be dealt with. We cannot at present control the dose of tubercle bacilli in cow's milk with any degree of accuracy, and so our only line of action is to make every possible effort to reduce the degree of infection of our milk supplies. This should be accomplished if possible by some method that does not involve boiling the milk. Better control of the herds, better testing of cattle, better hygiene of dairies, and a much greater mixing of milk are all measures to be advocated, and pasteurization of the milk renders it safe without spoiling it as a food. Any measure tending to unduly raise the price of milk is likely to be more harmful than beneficial, as milk is of such importance as a food that it *must* be brought within the means of the poorer classes. We want well-controlled and extensive experiments as to the value of different types of dried milk as to food value so that the great expense and risk of contamination involved in the transport of this bulky fluid may be reduced if this is found to be possible without loss of nutritive value. A great deal of caution ought to be observed in recommending the boiling of milk for children. This may be justifiable at times of epidemic diarrhoea, but it is not justifiable merely for the limitation of tuberculosis, as there is reason to think that rickets and infantile scurvy may be powerful aids to the development of bony tuberculosis. The soundest plan is to improve the herds, to better the methods of milking, the collection and distribution of milk, and to encourage research on methods of preservation.

THE RETAIL DISTRIBUTION OF MILK.

BY

L. W. POLE, M.B., D.P.H., M.O.H. for Llanelli.

The retail sale of milk is one of the most important factors in connection with the health of the community. The distribution of food stuffs in general, bread, vegetables, etc., is carried on in a very casual manner with very little regard to ordinary ideas of cleanliness, and this applies very specially to milk. Those individuals, whether shopkeepers or milk vendors who expose for sale, or who are responsible for the distribution of, food and milk, would appear to be in entire ignorance of the dangers to which they are exposing their customers. In the case of milk the risk of

* Paper read before Welsh Branch, Soc. M.O.H., Carmarthen, 19th November, 1921.

contamination is particularly dangerous, as it is generally warm when it is delivered, and in this state it forms an excellent medium for the development of bacteria added at the same time as the more gross impurities.

Milk is one of the staple foods of the community and its distribution should be regulated in such a way that the public are not compelled to purchase milk containing a greater or less amount of street dust, horse and other manure, etc.

The trade of purveyor of milk may be carried on by the dairy farmer or by a person who obtains his supply from the dairy farm. This may involve a short journey from the farm or a long journey by road or rail. In both cases the arrangements for the storage of the milk are frequently unsatisfactory and this is especially so in the case of the small farm and the purveyor of relatively small quantities of milk. The premises have not in the first instance been adapted for the purpose of storing milk under satisfactory conditions, and efficient means are not always in existence for cleaning and sterilising milk containers used for the storage and distribution of milk. In the case of milk purveyors it is sometimes stated that no storage room is required as all the milk is sold on the round soon after delivery from the dairy farm, and that the milk is simply transferred from the farm churns to milk receptacles belonging to the milk purveyor. It may be quite true that the milk supplied by the dairy farmer is all sold on the milk round, but in any case the arrangements for the transference of the milk are not likely to be such as to free the milk from the risk of pollution.

It is unfortunate that in the present state of the law it is only necessary to register the person and not the premises which are to be used for the purposes of the milk purveyor. There are certain penalties which may be imposed if the premises are not kept clean, or efficient ventilation not provided, etc., but it is most essential that, as soon as possible, the suitability of the premises for the purpose of engaging in the sale of milk, should be the chief condition on which the granting of registration depended. The Milk and Dairies (Consolidation) Act, 1915, empowers the Ministry of Health to make Orders for the registration of dairy premises—up till the passing of this Act it was only necessary for the person who proposed to sell milk to register his intention of doing so. It is, however, specially provided that this Act shall not come into force until some date, to be fixed by Order, not later than one year after the termination of the War.

Further time must elapse after the date on which the Act becomes operative before the necessary Orders regulating the production and distribution of milk can be issued. The War officially terminated on 31st August last, so that the date on which the Act comes into force may be postponed until 1st September, 1922. There can be no good reason for such a delay as this. The provisions of this Act confer greater protection upon the general public in regard to the milk supply than it has enjoyed in the past, and it is inconceivable that the War should be allowed to affect the public indefinitely. Besides the public the dairy trade would be benefited by the additional powers. It would be possible to eliminate the milk purveyor who refused to conform to the statutory requirements for the clean handling of milk, and it would induce others to raise their standards of cleanliness, both as regards production and distribution. Whether it would pay dairy farmers and milk purveyors, in all cases, to provide the requisite premises and means for the storage and sale of milk is doubtful, but the disappearance of these names from the register would be no great loss to the community.

The conditions as to the actual delivery of milk are now extremely unsatisfactory, and so long as milk is supplied to the customer, in bulk, by measure, no more can be expected. Delivery generally takes place in the open street or at the house doors, and the milk is in consequence exposed to pollution from street dust and other impurities. It is a common practice to see milk carried about in the streets from customer to customer without any covering to the milk can, unless it be the milk measure which is placed in the mouth of the can. Thus no protection, or only the slightest, is provided for the milk in the can. The measure is, however, just as often carried in a very casual manner, and it gathers a fresh supply of impurities after each time of using as the result of rubbing against the clothes of the milk vendor, or from contact with his, usually, unclean hands, or in consequence of a fall on the ground. The practice of transferring milk from one churn to another in the open street or other exposed situation is also to be condemned. This complete disregard of elementary ideas of cleanliness shows that either the milk vendors do not realise their responsibility to their customers, or, knowing it, they deliberately put it on one side as not a commercial consideration. Such carelessness is practically criminal when one considers that a large proportion of the milk may be consumed in the raw or semi-raw state.

Milk is pre-eminently a substance which is easily contaminated and in which the contaminating material has every opportunity for doing harm. Germs carried into the milk with dust, etc., find an extremely suitable medium for their development. By the time the milk reaches the consumer their number, in a teaspoonful, has increased from the so-called normal of 10,000 or 20,000, to as many millions. Milk may be contaminated by the germs of infectious diseases such as scarlet fever, typhoid fever, etc., this usually occurring when members of the family of the dairy farmer or milk purveyor are suffering, or have recently suffered, from an attack of one of these diseases, but the great bulk of the germs added to milk has gained entrance with manure (cow, horse, etc.), or street dust. The dirty clothing and hands of the milk purveyor add their complement to the general impurity. In windy weather the opportunities for pollution of milk are very greatly increased.

From the purveyor's point of view milk is, primarily, a commercial article on which as much profit as possible is to be made. Expenditure is reduced as low as possible, and in consequence milk is retailed in the least expensive way, that is, in bulk. The profit thus made is largely at the expense of the health of the consumer who is often in ignorance of the dangers which may lurk in the milk supplied to him, or is careless of his own or his dependents' safety. Dirty particles at the bottom of the jug are looked upon as something incidental to the purchase of milk. Straining the milk to get rid of the dirt is usually regarded as all that is required before the milk is consumed by any of the family, and it is considered to be just as suitable for the infant as for the adult. Milk from which the dirt has been strained is considered to be perfectly clean.

To obviate the dangers of contamination the milk should pass through as few hands as possible. After milking, which should be done with the most stringent precautions in regard to cleanliness of cow-sheds, cows, milkers, and milk vessels, no further handling of the milk should be allowed. This can only be made possible by bottling the milk after it has been efficiently strained and cooled. This should be done at the place where the cows are milked immediately after the milking of each cow. Short of this the milk should be collected, after straining and cooling, from a number of farms and conveyed to a convenient centre where the bottling might be carried out. This method is greatly inferior to the method of bottling at the farm as the inter-

mediate processes are liable to introduce contaminating material. Pasteurisation may be employed at the centre with a view to purifying the milk, but as pasteurisation is generally practised no considerable reliance can be placed on this process. The methods employed and the temperatures used in heating the milk are not such as to warrant us in believing milk to be safe after the entrance of impurities.

An objection which may be raised to the bottling of milk is the expense which would be entailed in providing bottles. This difficulty would be especially experienced by the "small" milk dealer, as it might not be possible for him to continue to carry on a profitable trade. The only answer to that is that the business of the small purveyor could very well be dispensed with as he is not, with the profit he wishes to make on small quantities, likely to be able to safeguard the interests of those individuals whom he supplies with milk.

The protection of milk from contamination, from the time of milking until it is delivered to the customer, is absolutely indispensable. Only in this way will the public, and especially the infant population, be safe from diseases which should never be spread by means of this absolutely essential article of food. Under present conditions as to storage in houses the possibility of home contamination of milk is very great, but this would be greatly lessened if milk were supplied properly cooled and bottled.

Following is an extract from the Report submitted to the Medical Research Committee by Dr. Lane-Clayton on "Milk and its Hygienic Relations."

"A bacterial standard of 10,000 per c.c. is impracticable for the general milk supply, but there is no doubt that a standard of some tens of thousands only per c.c. could easily be attained if reasonable precautions were taken. It is, of course, possible to kill the bacteria by various methods, and it is advisable that all milk used should be heated before use, but this in no way alters the need for obtaining a reasonably low initial bacterial standard. So long, however, as the public continues to be satisfied with a milk containing an immense number of micro-organisms, so long, presumably, will the dairy farmer continue his out-of-date and dirty methods. If the public realised that the number of bacteria present in the average sample of market milk is so great that, were the milk transparent, it would be cloudy as the result of the presence of these organisms,

more efforts might be directed to the production of a milk having a low bacterial standard. The heating of milk, which kills this vast number of organisms, does not remove the dead bodies of the bacteria which have been present, nor does it destroy any harmful chemical substances which may have been formed by them."

NATIONAL BABY WEEK COUNCIL.

At a meeting of the National Baby Week Council held on May 9th at Carnegie House, 117, Piccadilly, London, W.1, Dr. Eric Pritchard, Chairman of the Executive Committee, who presided, gave a report of the work of the Executive Committee and outlined the scheme of the propaganda campaign this year. Following the usual custom of the Council, the Executive Committee had decided, besides dealing with the general aspects of maternity and child welfare work, to give special attention to the questions of the economic values of maternity and child welfare work and of the relation of atmospheric pollution to infant mortality. In regard to the more specialised avenues of influence, the health and medical Press, meetings of professional workers, and so forth, the Council was drawing special attention, in addition to the above aspects, to the importance of securing better notification and treatment of Ophthalmia Neonatorum and also to the antenatal encouragement of lactation. To the housing question in relation to maternity and child welfare, the Council had always given, and would continue to give, great attention. There were signs that the National Baby Week Council's work was as much needed as ever. Daily enquiries were being received at the office on the organisation of the many forms of local propaganda work. In these days of economic strain it must be clearly put before the public that expenditure on maternity and child welfare is an economic measure, and the fact that the Geddes Committee proposed no reduction of expenditure in this direction as compared with such expenditure last year was, in itself, an enormous testimonial to the value of maternity and child welfare work.

SIR ARTHUR NEWSHOLME.

Sir Arthur Newsholme addressed the Council on the subject of "Mortality in the first month after birth and possibilities of reducing it." The subject of early mortality, he said, ought to be considered in relation to other branches of infant mortality. The curve of the birth-rate of England and Wales since registration began was practically stationary until about 1876. Since then it had gone down steadily. As regards infant mor-

talidity, a similar diagram would shew that there was no decline in the 19th century, except for fluctuations according to whether there were hot or cold years, epidemics of measles and other ailments. On the whole, the curve of infant mortality was practically horizontal and showed no decline until about 1900; since then the death-rate has steadily gone down save for small fluctuations. Infant mortality did not begin to decline until some 25 years after the decline of the birth-rate. There can be no reasonable doubt that the decline during the present century was caused largely by the study of the health conscience, by the training and education of mothers and expectant mothers in infant diet and hygiene, by the development of health centres for the greater facilities for diagnosis and treatment. The death-rate in the four years of life from 1-5 had been declining from 1876 or 1880 onwards, so that the death-rate in those four years of life seems to have been influenced by circumstances which do not produce any marked influence on infant mortality. This advance he held to be chiefly owing to the greater control of infectious diseases, such as diphtheria, scarlet fever, tuberculosis, while in the first year of life, apart from deaths from diarrhoea and pneumonia, mortality is chiefly concerned with living or personal habits. The infant mortality rate had declined something like 40 or 50 per cent. in the last nine months of the first year of life, but had only declined from 2 to 5 per cent. in the first month of life after birth. A regional investigation into mortality in the first month after birth showed a great variation in the country—57 per 1,000 births in Dewsbury, whereas in Penge (London) and the central crowded district of Holborn only 28 per 1,000 births died. In the areas where there was better care of mothers before, at, and immediately after birth, the infant mortality in the first month of life was lower than in the areas where these conditions do not obtain.

As regards the dangers of the actual confinement, there is a great need for stricter asepticism on the part of both medical men and of nurses, and it is important to realise that there is reason to believe that some of the still-births are never notified. One of the most fruitful lines on which public health work can be run is in the direction of greater study and investigation into the causes of still-births and their prevention, and among these causes he recognised particularly ante-natal syphilis.

THE MILK QUESTION.

Dr. Janet Claypon said, in regard to infancy, she held that the milk question should resolve itself into propaganda for breast feeding. In the

cantons in Switzerland, which country she had just been visiting, she thought that where there had been a great reduction in infant mortality, there was a correspondingly large increase of babies who were breast fed. If a baby is to be fed artificially on cow's milk, it should be given, in her opinion, milk that has been heated and is not raw. She then proceeded to differentiate and to define the three main types of heating milk, i.e., sterilization—a method used in and for laboratory practice only, ordinary boiling such as the housewife means when milk is put into an open pan and just allowed "to come to the boil," and the third method known as pasteurisation. In regard to the question as to whether milk was damaged from a nutritional point of view by heating, she held that it had not yet been proved that there was any serious detriment arising from the ordinary boiling of milk or from pasteurisation, as there was no definite evidence that the vitamine content was thereby reduced. There was, on the other hand, definite evidence that microbes of milk-born infectious diseases—tuberculosis, diphtheria, sore throat, scarlet fever—were destroyed by simple boiling and by pasteurisation.

While she proclaimed herself a strong advocate of heating and pasteurising of milk *once*, there is a great deal of evidence, she said, to show that milk ought not to be pasteurised *twice*. On the question of dried milk, there was no experimental or practical evidence to show that dried milk is harmful to children, and she thought it was for individuals to decide whether to use pasteurised milk or dried milk.

Dr. Claypon concluded with a word of warning that while milk is a useful food for individuals in early and adult life, we should ask ourselves whether we are not pressing its value beyond what it can really bear.

CORRESPONDENCE.

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

TUBERCULOSIS AND FOOD.

From Prof. COLLIS.

Dear Sir,—I desire to thank Dr. C. R. Gibson for his letter which appeared in your Journal for May, and for pointing out that the average calories consumed daily by the population has increased during the past sixty years with equal steadiness to the decline in tuberculosis. Something is surely gained if agreement is come to

that tuberculosis is primarily a disease of under-feeding. Then the campaign for preventing the disease can be concentrated on the food of the people and not dissipated on secondary influences such as housing, overcrowding, disinfection, and the like. Indeed, the post-war period, during which the prevalence of the disease fell rapidly, while housing was manifestly inadequate and overcrowding was rife, throws considerable doubt upon the importance of some of these influences. On the other hand, at this very time the food supply and means for purchasing it suddenly improved.

The criticism Dr. Gibson makes is just, that the evidence does not yet justify ascribing the decline to the victorious vitamin. Nevertheless, apart from the increased consumption of butter and milk during the past sixty years, the special scarcity of fat during the war period when tuberculosis rose, and the presence of vitamin A in those substances, such as codliver oil, long recognised to be of value in the "pre-tubercular" stage, are at least suggestive.

The need as I see it is first and foremost to recognise the importance of food and to concentrate on this point. If at the same time any particular constituent article of food, such as animal fats, can be shown to possess any specific value, then the attack can be even more concentrated. Personally at this stage I shall be well content if the profession accepts the primary importance of food, and in this matter shows a united front and speaks with no uncertain voice.

HEALTH OF THE WORKER.

A Workers' Health Bureau has been founded in the United States for the purpose of safeguarding the health of the worker and his family. It is organised and supported by the trades unions as a non-profit-making co-operative undertaking.

It is suggested that each union should organise its own health work and control this work with the advice and co-operation of the Workers' Health Bureau. The advisory committee of the Bureau includes a specialist in the medical profession. The objects of the Bureau are as follows:—

- (1) To conduct a scientific industrial study of the health needs of any trade union.
- (2) To recommend a complete health programme for that trade union based on such a study.
- (3) To recommend an educational programme completely covering the subject of workers' health.
- (4) To establish health departments within trade union locals, such departments to specialise in preventive work, including thorough medical and dental examinations.
- (5) To train workers' health committees to carry out the health programme in the workshop.
- (6) To select with scrupulous care trained doctors, nurses and teachers required in conducting the union health work.

SOCIETY OF MEDICAL OFFICERS OF HEALTH. NOTICES.

SUBSCRIPTIONS.

More than five hundred Fellows, Members and Associates have not yet paid their subscriptions for the Session 1921-22. They are urged to do so at their early convenience. In these days of heavy printing charges, the collection of subscriptions is an expensive matter when it is necessary to send several notices, to say nothing of the work involved for the clerical staff of the Society. The subscriptions now in force are: *For Fellows and Members*: Whole-time medical officers, £1 11s. 6d.; part-time or retired medical officers, £1 1s. *For Associates*: £1 1s. Cheques should be made payable to the Society and crossed "& Co."

SCHOOL GROUP.

The Annual Meeting of the School Medical Group of the Society will be held at the house of the Society on Saturday, the 24th June, at 3 p.m. The following items on the agenda will be considered: (1) Minutes; (2) Correspondence; (3) Election of President, Representative Council and Officers; (4) Proposed alteration of the Constitution of the Society; (5) Any other matter.

N.W. BRANCH.

The Annual Meeting of the North-Western Branch will be held at Blackpool on June 10th. The Mayor has invited the members to luncheon at the Town Hall at 1 p.m., and they will be entertained later at tea by Dr. J. W. Talent, president of the Branch.

N.M. AND A.F. GROUP.

A Meeting of the Naval, Military and Air Force Hygiene Group will be held at 1, Upper Montague Street, Russell Square, London W.C., on Friday, the 9th June, 1922, at 4.45 p.m., when a paper will be read by Surg.-Commander S. F. Dudley, O.B.E., R.N., on "The Carrier Problem." A discussion will follow. It is hoped that all members of the Group will make a special effort to be present.

COUNCIL AND ANNUAL MEETING.

The next Meeting of the Council of the Society will be held at Bournemouth on July 28th. The

Annual Provincial Meeting will be held at the same place on the same day. The usual Notice and Agenda paper will be posted with the July issue of *Public Health*.

NOTES FROM BRANCHES AND GROUPS.

NORTH-WESTERN BRANCH.

BOROUGH OF CREWE.

At a meeting of the Crewe Town Council the following resolution was passed by a large majority: "That the resolution passed at a special meeting on the 22nd March, 1922, accepting the offer of the local Medical Practitioners to undertake the work of School Medical Inspection and attendance at the Infant Welfare Centres at the St. John's Institute and the Railway Company's old Hospital for a period of 12 months, on payment of the sum of £300 for their services, be rescinded, and in lieu thereof, that advertisements be forthwith inserted inviting applications for the appointment of a female Assistant School Medical Officer at a salary of £500 per annum."

MILK PROSECUTION.

Fines totalling £20 plus costs were imposed at Manchester on the 3rd inst. upon John Mason, Prestbury, near Macclesfield, for consigning milk to a dealer which on analysis in one instance showed a deficiency in fat of 10 per cent. and 17.65 per cent. added water, and in the other instance a deficiency in fat of 12.62 per cent. and 17.89 per cent. of added water.

SALARIES. MANCHESTER MEDICAL OFFICER OF HEALTH.

At a meeting of the Council the recommendation of the Manchester Town Hall Committee that the salary of the Medical Officer of Health should be fixed at £1,500 rising to £1,750 after two years' service and £2,000 after four years' service, was referred back to the Committee for further consideration. It was pointed out that a commencing salary of £1,500 would not be accepted by the British Medical Association.

PORT MEDICAL OFFICER, MANCHESTER.

The Medical Officer to the Manchester Port Sanitary Authority submitted an application for the revision and stabilisation of his salary and bonus, pointing out that advertisements were appearing for Assistant Medical Officers at salaries higher than his and that Manchester was the third port in the country. It was decided that the time was inopportune for making any increases.

PANEL INCOMES.

It is reported that the 65 panel doctors at Hull (population 291,800) will draw an average of £840 each from the insurance funds for their work last year. This income is, of course, exclusive of their earnings in private practice.

CARLISLE.

At a special meeting of the Council a resolution was passed that the salaries of the senior officials be reduced by 10 per cent. An amendment to include the teachers in public elementary schools was lost by one vote. The Health Committee have also recommended that a vacancy caused by the resignation of a school nurse be not filled and that the staff of health visitors be reduced to two when an opportunity arises.

ANNUAL MEETING.

The Annual Meeting of the North-Western Branch will be held at Blackpool on Saturday, June 10th.

A short business meeting at noon in the Town Hall will be followed by lunch at 1 p.m. at the invitation of the Mayor of Blackpool. Facilities will be offered for members to visit any of the institutions of the Health Department, or the amusements on the beach if they so desire during the afternoon, and tea will be provided at 5 p.m. by the President (Dr. J. W. Talent).

Dr. C. L. Sutherland, a district tuberculosis officer under the West Riding (Yorks) County Council, has been appointed Assistant Medical Officer of Health for Stockport.

The will of the late Dr. Edward Sergeant, Wrea Green, Kirkham, Preston, formerly Medical Officer of Health for the County of Lancaster, has been proved at £34,281.

Dr. H. Osborne has been appointed Medical Officer of Health for Salford at a salary of £900 per annum, rising to a maximum of £1,200 exclusive of Civil Service bonus amounting at present to £302 annually.

WEST OF ENGLAND BRANCH.

A V.D. HOSTEL FOR WOMEN AND GIRLS.

Dr. Middleton Martin, C.M.O. for Gloucestershire, states that the Hostel established a few years ago at Charlton Kings, Cheltenham, has recently been taken over as an annexe of the Cheltenham General Hospital under the name of "The Medical Home," and is now maintained as part of the Hospital. The charge for patients is £3 a week, and patients from other areas can be admitted if beds are available. Pregnancy is not a bar to admission, although the charges in such a case would be slightly increased. The above arrangements have received the approval of

the Ministry of Health. It is to be hoped that full use will be made of the valuable facilities now offered. The Sister-in-Charge will be glad to give further information.

SCHOOL MEDICAL WORK AT BRISTOL.

In a 50-page Report Dr. Askins gives a large amount of interesting information about the School Medical Department during 1921. The chief developments during the year were the new School Clinic for East Bristol and the starting of an X-Ray Clinic for Ringworm.

Dr. Askins is optimistic about the possibility of carrying on to vanishing point the reduction which has taken place in recent years in the number of cases of Pediculosis. He emphasises the plea of the aural surgeon that the removal of adenoids should not be left, as so often happens in these days, until symptoms have been present for a considerable time. There is certainly need at present for clear thinking and the expression of definite views on this subject.

The facilities for the treatment of school children in Bristol might well be the envy and the despair of S.M.O.'s in smaller areas. On the other hand it may be that the debt which a large city community owes to its children (so many of whom are compelled to live under unsuitable hygienic conditions) is much greater than that for which country districts can be held responsible.

DEATHS AND APPOINTMENTS.

We regret very much to have to announce the death, after a long illness, of Dr. T. W. Widger Bovey, a Fellow of the Society and a member of the West of England Branch. Dr. Bovey was an old Bristol student and an ex-H.S. and H.P. of the Bristol Royal Infirmary. He was in practice at Bampton, North Devon, and was Medical Officer of Health to the Bampton U.D.C.

The death is also announced of Dr. Edwin Denning, of Stow-on-the-Wold, Gloucestershire. Dr. Denning, who was about 66 years of age, had been Medical Officer of Health to the Urban District for over 37 years, and had been in practice in the district since 1879.

Dr. Peter Low, Deputy C.M.O. for Herefordshire, has recently been appointed as C.M.O. in succession to the late Dr. Dryburgh Gold.

Dr. A. Serrell Cooke has been appointed Medical Officer of Health to the Frome Urban District Council in place of the late Dr. A. Seddon.

THE MAY MEETING.

The Branch President, Dr. Dunlop, presided over an interesting and successful meeting at the Devon County Sanatorium at Torquay on

May 5th. A number of important points in connection with the policy of the Society were considered, and Dr. McCallum, Deputy Medical Officer of Health for Torquay, opened a discussion on "Some Public Health Problems." Tea was kindly provided and was followed by an inspection of the Sanatorium and by a meeting of the Tuberculosis Sub-group. Further reference will be made to some of the questions raised.

THE NEXT MEETING.

The Annual Branch Meeting is fixed to take place on Saturday, July 8th. In addition to the election of officers for the ensuing session several other important matters are likely to come up for discussion. It is hoped, therefore, that Branch Members will endeavour to keep the date free so that they may attend. Full particulars will be posted in due course.

THE HOME COUNTIES BRANCH.

THE MAY MEETING.

At a meeting of the Home Counties Branch, held on Thursday, the 4th May, at the house of the Society, Dr. Ball exhibited a series of photographs of a curious eruption occurring on the face and legs. The peculiarities were described, and it appeared from the history that the eruption was dependent on the administration of bromide of potassium.

Miss Neville then gave a demonstration on "The Teaching of the Deaf," outlining the general principles underlying the methods adopted and the receiving mechanism and the relationship between reading print and facial movements. The psychological aspect, with special reference to the significance of speech as against language, and also the fact that language preceeds speech, was emphasised, and the understanding between a mother and her child was quoted as an example. The heavy handicap of the deaf and the necessary psycholological reactions as regards temper, etc., were described. The lecturer dwelt on the fact that the mental condition of any child is largely a balance between rate of gain and loss, and that in instances where deafness has been acquired, between the third and fifth year, unless attempts are made to retain speech, the art is lost. She estimated that the time taken to teach the child speech is ten years, and if not taught by sixteen, it is hopeless. She concluded an interesting address with an appeal that children should be sent as early as possible, a recommendation which seems to be neglected mainly by the more well-to-do portion of the population, rather

than by the very poor. A demonstration then followed of actual cases, showing children in the various stages of their education. Many interesting experiments and tests were shown, demonstrating the manner in which the hearing of these children had been replaced by lip reading.

DR. LAWRENCE.

Dr. Lawrence wishes it to be stated that he is not the candidate for the Northern Universities (whatever that term may include), but for the combined English Universities.

Inquiries relative to accommodation during the Conference of the Royal Sanitary Institute at Bournemouth (July 24th—29th) should be addressed to Dr. S. Lawrence, "Peterfield," 106, Richmond Park Road, Bournemouth.

COMMITTEE RE LONDON GOVERNMENT.

There also seems to be some misunderstanding relative to the committee appointed by the Society, to consider problems concerning the question of London Government. The Secretary of this Committee is the Medical Officer of Health for Barking, to whom all communications should be addressed.

WATFORD M.O.H.

Dr. William J. Cox, formerly M.O.H. of the Borough of Chelmsford, has now been appointed Medical Officer of Health for the Urban District of Watford.

THE METROPOLITAN BRANCH.

BRANCH MEETING.

A Meeting of this Branch was held at the Society's house in London, on Friday, 28th April, 1922, the President (Dr. W. H. Hamer) occupying the chair; 24 other members were present.

The President reported that he had taken the chair at the inaugural meeting of the newly-formed Maternity and Child Welfare Sub-group in connection with the Metropolitan and the Home Counties Branches.

The Branch decided to support the candidature of Dr. Eustace Hill for the Presidency of the Society for the Session 1922-23.

Discussion of the new by-laws of the London County Council as to houses-let-in-lodgings, was postponed until the next meeting of the branch in order that members might have an opportunity of sending in to the Hon. Secretary a note of any points desired to be made.

Dr. G. E. Oates, Medical Officer of Health, Bethnal Green, received a cordial vote of thanks

for an interesting paper on "Diphtheria Carriers and their connection with Clinical Diphtheria," which was followed by a keen discussion in which many of the members took part.

THE EASTERN BRANCH.

THE BRANCH.

This Branch has hitherto met only once a year, but efforts will be made to revise interest in the affairs of the Society. The area is large and poorly served for locomotion (train services), and so it is difficult to secure a large attendance at any individual place, but by having regular monthly meetings it might be made possible for all members to get to at least three or four meetings a year.

Now that several School Medical Officers, Tuberculosis Officers, Dentists, etc., have become members it may be possible to secure a larger attendance if meetings are held on Saturdays. With a view to test this a meeting will be held shortly, and the President will invite members to partake of tea at the close of the meeting.

SALARIES.

Attempts have been made in some Sanitary Districts and Unions to lower the salaries of officials, including District M.O.H. or Poor-law M.O. In some instances such reductions have been accepted without comment; in others refused or reasons asked for—the only reason given being the need for national economy!

NAVAL, MILITARY AND AIR FORCE GROUP.

THE APRIL MEETING.

A Meeting of this Group was held at 1, Upper Montague Street, Russell Square, on the 7th April, 1922, at which a paper on "Tuberculosis as a Disease of the Services" was read by Professor S. Lyle Cummins, C.B., C.M.G., M.B. The paper, which was of great interest and value, was followed by a short discussion. Major-General Sir W. G. Macpherson, K.C.M.G., C.B., A.M.S., took the chair.

TUBERCULOSIS IN THE SERVICES.

The following is a summary of the paper by Professor S. Lyle Cummins, C.B., C.M.G., M.B., on "Tuberculosis as a Disease of the Services."

Charts were exhibited which showed a steady decline of the tuberculosis mortality and invaliding rate in the Services to almost vanishing point. This raises the question:—

Is Tuberculosis a disease which need not be worried about in the Services? The answer is "No!" for it must not be forgotten that although it produces little effect upon the Services Health figures during Peace yet during War, and as an aftermath of War it is a really great factor. In this relation it is well to bear in mind two facts, firstly, that our Regular Forces are but the skeleton of our War Army, the bulk of the latter coming from the factory, the mines, etc., on the outbreak of hostilities, and coincident general mobilisation; secondly, that as a result of the stress and strain of active service, and perhaps no less also the reaction of subsequent Peace, some 60,000 pensions have already been granted for this disease.

The next fundamental question for consideration is:—

Is Tuberculosis in the Services "caused by" the conditions of the life, or "awakened" by them?

The Lecturer considered that it is "awakened," and he cited the authority of Fishburg, whom he quoted as having written: "Phthisis is a disease occurring in persons who have been infected with Tubercle Bacilli many years before the outbreak of the disease"—: of Opie, who found Tuberculous Abdominal glands in 27 per cent. of P.M. cases of death from causes other than Tb. in British soldiers: of himself who found 75 per cent. of soldiers clinically free from Tb., positive to the Von Pirquet test with 5 per cent. Old Tuberculin, supporting this finding with the findings of Baldwin and Zinsser that the tuberculin test, when positive, proves actual infection with the tubercle bacillus.

With reference to special conditions, which may appertain to life in the Services, it was pointed out that modern views consider that trauma of the chest such as penetrating wounds (unless the missile happens actually to pass through a tuberculous focus), or gas wounds have little or no effect re Tb, but that extensive contusions are very mischievous; that climate, *per se*, has no specific effect, and that it only affects the incidence as it affects that of many other diseases.

Summing up we must consider:—

1. That Tuberculosis in the Services calls for most careful control, though it is not, generally speaking, acquired during life in the Services.

2. That although the bulk of our recruits are from industrial areas many individuals are from rural communities. These latter providing relatively virgin soil with consequent absence of acquired immunity.

3. Careful preliminary examination can, and does, weed out diagnosable cases, *i.e.* cases in the "open" dangerous condition.

4. That acute and mass infection is absent from the Services.

5. That hygienic conditions of life in the Services are good.

The Lecturer suggested that more general research was required, and advocated the training and employment of a few Specialist Tuberculosis Medical Officers, though deprecating any suggestion of Service Sanatoria.

Major-General W. W. O. Beveridge, C.B., C.B.E., D.S.O., Lieut.-Colonel Sylvester Bradley, Dr. Nankivell joined in the discussion which followed, and Major-General Sir W. G. Macpherson, K.C.M.G., C.B., summed up from the chair.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

COUNCIL MEETING.

A Meeting of the Council was held at the house of the Society on Friday, May 19th, 1922. The President (Dr. W. J. Howarth) was in the chair, and there were present: Professors Kenwood and Kerr, Lieut.-Cols. Herbert Jones, F. E. Fremantle, M.P., and Caldwell Smith, Drs. G. F. Buchan, Charles Porter, Snell, J. J. Buchan, Kirkhope, Duncan Forbes, Joseph, Wheatley, Clements, Peyton, Pearce, Eustace Hill, Auden, Nash, Gibbons Ward, Stocks, McMaster, Wilshaw, Sanders, Evans, Ewart and Veitch Clark.

The minutes of the last meeting having been approved and signed, letters of apology were read from Dr. Edmund Smith and Dr. J. F. Blackett.

Correspondence.—(1) From the British Medical Association suggesting a conference to discuss the relationship between the Association and the Society and the whole question of the best methods of co-operation between the two bodies: the B.M.A. representatives to be the officers of the Association, namely, the President, the Chairman of Council, the Chairman of Representative Meetings, and the Treasurer, together with the Chairmen of the Public Health, Medico-Political, Insurance Acts and Organisation Committee. *Resolved* that the suggested conference be approved and that the Society of Medical Officers of Health be represented by Drs. Howarth, Eustace Hill, Herbert Jones, Snell, G. F. Buchan, Veitch Clark, Lyster, and Kirkhope.

(2) From the British Medical Association regarding (a) vaccinations by unqualified persons during the small-pox epidemic in Glasgow, (b) the fees paid to general practitioners in Glasgow for visits required by the M.O.H. *Resolved* that the letter be referred to the Scottish Branch of the Society for their observations.

(3) From the B.M.A. in reference to the decision of a Local Authority that their Medical Officer of Health should report to the Coroner deaths from diphtheria where there had been negligent delay on the part of parents or doctors. The President reported that he had discussed the letter with the M.O.H. concerned, and was satisfied that his connection with the above decision was strictly regular, and that he could be relied upon to act with intelligence and discretion in giving effect to the decision.

(d) From a Medical Officer of Health regarding the requirement of his Local Authority that reports of the Health Department should be submitted to the Town Clerk. It was agreed that the Yorkshire Branch of the Society be asked to submit their observations on special local circumstances referred to in the letter.

(5) From a School Medical Officer suggesting further action in regard to the memorandum recently circulated by the Association of Directors of Education referring to school medical work. It was agreed that the letter be referred to the School Medical Group for their observations and recommendations.

(6) From the British Medical Association in reference to Tuberculosis appointments in a N.W. county, and asking for a definition by the Society of the status of an Assistant Tuberculosis Officer. The letter was referred to the Salaries Committee.

(7) From the National Milk Publicity Council inviting the Society to elect a representative to serve on the executive of that body: *Resolved* that Dr. Wheatley be elected.

(8) From the National Association for the Prevention of Infant Mortality asking the Society to nominate representatives to join a deputation to the Minister of Health to ask for the promotion of legislation called for in the final report of the Smoke Abatement Committee, and for the enforcement of the present law with regard to smoke. *Resolved* that Drs. Sanders and Ewart be elected to represent the Society.

B.M.A. Annual Meeting.—It was agreed that Dr. A. K. Chalmers (President of the Public Health Section), Dr. R. J. Reece, C.B., and Prof. Harold Kerr, O.B.E. (Vice-Presidents, P.A.

Section), be nominated to represent the Society at the Glasgow meeting of the B.M.A.

Reductions of Salaries.—On a recommendation of the Non-County Group, Dr. Herbert Jones urged that some representation should be made to the Representative Meeting of the B.M.A. in July regarding the unfair and unreasonable reductions of medical salaries now being proposed by Local Authorities in all parts of England, Scotland and Wales. It was agreed that Dr. Jones should bring this urgent matter to the notice of the P.H. Committee of the B.M.A. on May 26th with a request for action.

The Constitution of the Society.—The following report was submitted by the Committee of Officers of the Society:

Your Committee report that at the last conference between the Officers of the Society and representatives of the Groups, held on 17th March, 1922, the following proposals were adopted as likely to satisfy reasonable persons who consider that the constitution of the Society must be modified to meet developments in the Public Health Service.

- (a) That the Society shall consist only of Hon. Fellows, Fellows and Associates.
- (b) That all those members of the Society at present ranking as Fellows and Members shall be merged in one class as Fellows with equal voting rights in all the affairs of the Society and its Branches.
- (c) That all candidates who under existing conditions would be elected as Members, should henceforth be eligible for election as Fellows, with full voting rights.
- (d) That the Council of the Society should consist of:
 - (1) The President, Ex-President, three Vice-Presidents, Hon. Editor and Hon. Treasurer, *ex-officio*.
 - (2) One direct representative elected by each Group.
 - (3) One M.O.H. elected by the out-going Council for each direct Group representative. (It was agreed that this suggestion was a fair set-off against the direct representation granted to Groups.)
 - (4) One direct representative for each Branch, with an additional representative for each completed 75 members after the first 75.

(NOTE.—The Branch Secretary would no longer be *ex-officio* a member of Council.)
Your Committee recommend that the above proposals be adopted by the Council and submitted for the approval of the Branches.

The report was received and approved for circulation to the Branches for their early consideration.

Nomination of President.—The Branches having submitted the names of Dr. T. Eustace Hill, Dr. Ridley Bailey, and Dr. R. A. Lyster, Dr. Hill was chosen by ballot for nomination as President of the Society for the Session 1922-23. Dr. Hill briefly thanked the Council for recom-

mending his election.

Election of Vice-Presidents.—Dr. T. W. H. Garstang, Lieut.-Col. Herbert Jones, and Lieut.-Col. F. E. Fremantle, M.P., were elected Vice-Presidents of the Society for the Session 1922-23.

Re-elections.—Dr. R. A. Lyster and Dr. G. F. Buchan were re-elected as Hon. Editor and Hon. Treasurer respectively for the Session 1922-23.

Next Meeting.—It was agreed that the next meeting of the Council should be held at Bournemouth on July 28th, and that the Annual Provincial Meeting of the Society should be held on the same occasion.

The meeting then adjourned.

ORDINARY MEETING.

An Ordinary Meeting was held at the house of the Society on Friday, May 19th, 1922, the President (Dr. W. J. Howarth) in the chair. The minutes of the last meeting having been approved and signed, the following candidates were elected to the Society:—

Glover, Vincent Joseph, M.D., Liv. M.B., Ch.B., Vict. D.P.H.; Johnstone, Alexander, M.C., M.A., M.B., Ch.B., Aberd., D.P.H.; Latchmore (Mrs.), Jane Alice Craig, M.D., Ch.B., Edin.; May, Mabel E., M.B., Ch.B. Vict.; May-Atkinson (Mrs.) Kate King, M.B., Ch.B., Vict.; Narbeth, Christopher Wesley, M.B., B.S., Lond., M.R.C.S., L.R.C.P., D.P.H.; Rose, Edmund Frederick, L.S.A., L.M.S., S.A.; Waterworth, Francis Wm., M.B., Ch.B., Ed., D.P.H.

Nominations for election at the next meeting were submitted by the Executive Secretary and duly received.

The President reported the recommendation of the Council that Dr. T. Eustace Hill, O.B.E., Medical Officer of Health for the County of Durham, be elected President of the Society for the Session 1922-23, and moved accordingly. The proposal was seconded by Dr. Sanders and carried by acclamation.

Dr. C. M. Wilson, Dean of the Medical School, St. Mary's Hospital, then read a paper on "The Position of Poor Law Infirmarys in Future Medical developments." An excellent discussion followed, those taking part including Dr. Veitch Clark, Dr. Sanders, Dr. Thomas Evans, Dr. Duncan Forbes, and Dr. Oates. On the proposal of the President a very hearty vote of thanks was accorded to Dr. Wilson for a paper of great interest.

NORTH-WESTERN BRANCH.

Proceedings of a meeting held in Manchester on Friday, 12th May, 1922.

Present (19): Drs. J. W. Talent (President), in the chair, Drs. Cox, Rees Jones, W. Allan Daléy,

Beckett, Hauxwell, Wilkinson, J. Wood, Gilmour, Milligan, Spence, Scholefield, Sharpe, Paul, Moffatt, Whitehead, Mulholland, Ferguson and Joseph (Hon. Secretary).

Dr. James Wood (M.O.H., Chadderton) introduced a discussion on "Small-pox," and after briefly referring to the course of the normal case he dwelt upon the appearances met with in more than 50 recent cases of a typical form. The one reliable factor in the diagnosis of practically all the cases was the distribution of the rash. Although recently in certain quarters there has been an attempt to give this mild form of Small-pox a special name, he considered that we must always keep before us the fact that it is Small-pox and no alteration of name will change it, but a change in nomenclature may cause considerable difficulty to the administrative staff who have to deal with outbreaks of Infectious Disease.

In the subsequent discussion the President (Dr. Talent), who had had an experience of 40 cases of this form of disease, also considered that it was Small-pox. He pointed out that in the early stages it much resembled Influenza.

Dr. Wilkinson was also of opinion that the use of the term Alastrim was ill-advised; the disease was a form—a very modified form—of Small-pox. It was certainly not the ordinary Mild Small-pox, of which in 1904 in Oldham they had 600 or 700 cases without a single death. In the recent type the spots abated much quicker and ran a more varied course, tending to come out in crops sometimes for several days.

The protection of vaccination appeared to last longer against this form than against ordinary Small-pox. He put forward for discussion the question as to whether as there was apparently no danger to life from this form and necessarily a great expense in dealing with all the cases in hospital, it would not be better to leave all cases at home and let everyone contract it. We would thus obtain a high immunity amongst the population against the serious form without the expense of vaccination.

At the same time, any individual who did not wish to contract this mild disease could always have himself vaccinated and thus avoid it.

Dr. Gilmour (Hindley) described his experience of epidemics of Amaas in South Africa in 1902. He was sure the present outbreak was not similar to Amaas.

Dr. Rees Jones (Blackpool) asked whether members were satisfied that the incubation period of Small-pox was limited to 12 days and whether it was therefore safe to relax quarantine of con-

tacts after that time. He also questioned the possibility of infection during the pre-eruptive stage.

Dr. Wood, in replying to a vote of thanks, emphasised the importance of the distribution of the rash, and pointed out that he did not think that successful vaccination was possible after the second day of the rash.

NORTHERN BRANCH.

Meeting held in the Medical Institute, Newcastle-upon-Tyne, 12th May, 1912, 11 members present.

The President, Dr. T. Eustace Hill, thanked the members for their kind expressions of sympathy with regard to his recent bereavement.

The Hon. Secretary reported that the Tuberculosis Group had decided to regard the above Society as the Tuberculosis Sub-Group of the Northern Branch.

The Hon. Secretary informed the meeting that Dr. J. W. Smith had resigned his appointment as Medical Officer of Health to the Ryton U.D. Council. Dr. Hislop moved, and Dr. G. R. Bruce seconded, and it was agreed unanimously "That the members of the Northern Branch regret that Dr. J. W. Smith, by his resignation of the post of Medical Officer of Health to the Ryton U.D. Council, has ceased to take an active part in the Public Health Service, but hope that he will still continue his keen interest in the proceedings of the Branch."

Summer Meeting.—It was decided to hold the Summer Meeting on a Saturday, the date and place to be arranged by the President and the Hon. Secretary.

The following took part in the discussion on Dr. Bruce's paper, "The present position of isolation hospitals in preventive medicine," which he read at the previous meeting:—The President (Dr. T. Eustace Hill), Drs. J. A. Hislop, A. T. Paterson, and H. Kerr.

Dr. Bruce briefly replied, and received a hearty vote of thanks for his interesting paper.

Dr. James Bates Wilkinson, Medical Officer of Health for Oldham, has been appointed a Knight of Grace of the Order of St. John of Jerusalem in England.

In recognition of valuable services during the War, Class V. of the Serbian Order of St. Sava has been bestowed on Dr. G. Kessick Bowes, assistant county Medical Officer of Health for Wiltshire.

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Editorial.

THE B.M.A. AND SALARIES.

The resumption of negotiations between the B.M.A. and the M.O.H. Society concerning joint action by the two Societies in connection with scales of salaries, and other matters, is a most hopeful sign that progress is about to be made, notwithstanding the fact that the history of past efforts is not encouraging. About three years ago the M.O.H. Society drew up its scale of salaries, and, with infinite patience, tact and perseverance, made every effort to secure the whole-hearted support of the British Medical Association. Direct communications of a somewhat prolonged nature were established between the central bodies, and conferences held, and medical officers of health all over the country made it their business to attend the meetings of branches and divisions of the B.M.A. in order to secure support through the representatives at the representative meeting of the B.M.A. The results of the divisional meetings were uniformly satisfactory. Support for the scale was also forthcoming from the central committees and the Council of the B.M.A., and a large number of branches and divisions passed resolutions instructing their representatives to support the scale. In fact, every effort was made to conform with the existing machinery of the British Medical Association and to use such machinery to the greatest possible extent. Everything seemed favourable, and a satisfactory result was confidently anticipated. Unfortunately, unexpected hostility was shown at the representative meeting made by certain representatives, and the result was very disappointing. During the past two years the position has not been improved upon, but the re-establishment of conferences again awakens

hope that the whole-hearted support of the British Medical Association will be forthcoming.

It would do no harm, and would at the same time relieve some of the tension that exists at present, if the B.M.A. could see its way to issuing a special circular to those of its members who are members of local authorities advising them as to their action as regards salaries of medical officers. In particular, it might deal with that medical councillor who recently assured a local authority that the B.M.A. would be willing to reduce its present minimum of £500 per annum for assistant medical officers, and who supported the reduction of an unfortunate officer's salary below that sum.

THE MILK PROBLEM.

The Rural District Council of Walsingham have set an example to the Ministry of Health of the way to deal with the milk problem. Instead of inducing milk producers and vendors to put a decent and safe article upon the market by offering them an unduly high price for it, and thereby putting an additional penalty upon poverty, they have, we are informed, drawn up stringent regulations fixing a maximum to the number of bacilli that can be contained in a cubic centimetre of milk, and severe penalties are imposed for any infraction.

This is a common-sense and practical way of dealing with the milk problem and one that corresponds precisely with public health methods in other directions. Producers of vitally important foods should not be persuaded to vend a decent and safe article by the promise of excessive profits but they should be reminded of their public duties in this respect and should be severely punished if they attempt to sell to an ignorant public an article which is dangerous to health.

Fortunately there seems to be no hesitation on the part of the Public Health Service concerning its opinion upon this important matter. Dr. George Reid, one of the recognised leaders of the Service, in an address recently given in Staffordshire, said that he looked forward to a clean milk supply being the standard of the

future, and he thought that this could be accomplished best without resort to "grading"—an unwise step to take because it "admitted there was such a thing as permissible dirty milk graded according to the price paid." He suggested that greater strictures should be exercised in the inspection of cattle to find out if they were affected with tuberculosis and that local part-time inspectors were completely unsatisfactory for this purpose.

Valuable support is forthcoming from Dr. W. J. Howarth, Medical Officer of Health of the City of London, who points out in his recent report that one in every four samples of milk taken in the City of London was found to be tuberculous. Dr. Howarth, after discussing this extraordinary and most alarming situation, says, "In my opinion little permanent improvement can be expected until the responsibility of ensuring that milk is free from tubercule is made the direct obligation of the farmer."

The present situation is farcical and is a slur upon the whole of the public health administration in this country. The position is undoubtedly due to the extraordinary power and influence possessed by the farming industry upon political affairs. By the exercise of this influence the sale of milk has established a privileged position which is accorded to no other food or public necessity. Milk vendors are allowed to sell as "new milk" material of any composition whatever so long as it can be proved that it has been squeezed from the udder of a cow; and there may be added to it manurial and other filthy material without the producer of such disgusting and dangerous "food" becoming liable at law. According to rumour the only solution that the Ministry of Health has to offer to this extraordinary position is to "grade" milk according to quality with a natural corollary that the higher grade milks, which alone can be regarded as even reasonably fit for human consumption will be sold at a prohibitive price and will be completely beyond the reach of the poorer classes. The grading of milk constitutes in fact an added penalty to poverty and the suggestion should be resisted by all public health officers and all health authorities as being against the public interest.

The only satisfactory solution is to prohibit the sale of milk having a food value below a certain minimum and containing any evidence of manurial or other dangerous pollution. Any man selling material which infringes this regulation should be liable to penalties similar to those which may be imposed upon vendors of other foods sold or exposed for sale in a condition unfit for human consumption. There is no reason at all why the milk producer should be kept any longer in his present astonishingly privileged position.

There is no need for the proposed Milk and Dairies Amendment Bill. There is already on the Statute Book the Milk Act of 1915, which was suspended on account of the war. It is said that this is considered by the Ministry too expensive a measure to administer at the present time: in other words, an expenditure upon health which would amount to a tiny fraction of the expenditure upon roads and education is considered too costly for the nation, and so a makeshift measure is presumably to be produced which will still further endow the farming community at the expense of the nation's health. The Tuberculosis Order of 1913 was also repealed when war broke out. Under this Order tuberculosis in cattle was made a notifiable disease and provision was made to compensate farmers for beasts that had to be destroyed. When the Order first came out the Government set aside a sum of money for compensation, but only a fraction of this amount was spent in the first twelve months. If the Milk Act of 1915 and the Tuberculosis Order of 1913 were again put into force there would be great possibilities of reform, although even then the position would not be at all satisfactory with regard to the maintenance of a reasonable food value in milk.

ISLE OF WIGHT COUNTY COUNCIL.

The Isle of Wight County Council have an unsavoury reputation on account of the way in which, some years ago, they persisted in filling the post of County Medical Officer at a grossly inadequate salary in spite of the fact that there was only one applicant, and in the face of combined opposition from the British Medical As-

sociation and the Society of Medical Officers of Health, and they are adding to that reputation by the way in which they are at the present time treating their Medical Officer. A letter from the Medical Defence Union has reminded this extraordinary County Council that even Medical Officers of Health have certain legal rights, and has caused them to give up their attempt to decrease the salary of the Medical Officer without first terminating his present engagement by due notice. They have now decided to give notice of the termination of the appointment and to apply to the Ministry of Health for their sanction to this proceeding. This will afford an excellent test as to whether the alleged security of tenure conferred upon County Medical Officers by the Housing, Town Planning, etc., Act is worth anything at all in practice.

Evidently it is desirable that all offers emanating from such a Council should be scrutinised carefully, and no application should, in any circumstances, be made to them without communicating first with the Secretary to the Society of Medical Officers of Health.

"SUMMER TIME" ENDANGERED.

Public health workers all over the country have learned with alarm the threatened danger to "Summer time." Here again the farming industry has shown its immense political influence. No wonder the "Daily Express" says, "Who would not be a British farmer? True, he has his ups and downs—during the war and immediately after most 'ups,' and now, perhaps, most 'downs.' But think of the compensations! In prosperity, as in adversity, his political power remains unique. A single movement of his hayfork, apparently, is more potent than manifold brandishings of Britannia's trident. The vast majority of the British public are in favour of 'Summer time.' What boots it? The farmer dislikes 'Summer time' and it shrinks."

It is to be hoped that Mr. Shortt will not yield to the clamour raised for the shortening of this health-giving adaptation of working hours which secures the maximum enjoyment of the hours of sunshine. To a relatively small

section of the community it may possess some minor disadvantages, but the fact remains that to the vast majority of the British public it has proved to be a boon and a health-giving measure.

BABY WEEK CELEBRATIONS.

Preparations for National Baby Week are going on apace, and many local authorities are holding "Baby Week" celebrations, or propaganda campaigns for some shorter period. In other cases, the economic strain under which the country is labouring—is being reflected in the fact that "Health Week" and "Baby Week" are being combined by holding a joint celebration at a time found most convenient to the district, not necessarily National Baby Week itself. Even where the local Baby Week celebrations are being kept distinct, these are not, in some areas, taking place during National Baby Week, but are being celebrated during the summer, while many have already been held during May and June.

Another effect of the economic strain upon Baby Week celebrations is seen, in that the propaganda is frequently being carried out on lines which involve the least expenditure. In this connection it is particularly useful to secure the interest of the local press for maternity and child welfare.

Several local authorities are choosing some other week for their Baby Week, rather than National Baby Week, because they are sending delegates to the National Baby Week conferences. These are being held at 117, Piccadilly, London, W.1, from July 3rd to 5th. Of particular interest to medical officers of health are the questions of block grants, medical care of children from 1 to 5 years of age, resident homes and day nurseries, the qualifications of a successful health visitor, the position of the district nurses and midwife in relation to Public Health Services in rural areas, and the relation of voluntary organisations and workers to maternity and child welfare schemes. In connection with these conferences, we would draw attention to the provision which the Ministry of Health has made, namely, that the expenses of one delegate sent by local authori-

ties to these conferences will be eligible for grant. In view of the restrictions which have been imposed in the direction of delegates' expenses during the present year, this provision by the Ministry of Health carries special significance of the value of Maternity and Child Welfare work.

THE ECONOMICS OF MATERNITY AND CHILD WELFARE WORK.

In an interesting article on the above subject Miss Norah March, B.Sc., Editor of "National Health," and Secretary of the National Baby Week Council, has published some interesting statistical information which may be found useful by those engaged in Baby Week activities during the present month. The striking coincidence between the increase in the number of health visitors and the decrease in infant mortality is shown in the following figures:—

Year.	No. of Health Visitors.	No. of Infant Welfare Centres.	Infant Mortality.
1914	600	250	105
1918	1250	1150	97
1920	1550	1780	85
1921	1737	1954	83

The incidence of the disease diarrhoea, which is particularly fatal to children under two years of age, throws great light upon the value of maternity and child welfare, and of public health activities. The year 1911 and the year 1921 are especially interesting for comparison, both being characterised by hot, dry summers, and were therefore likely to be visited by a severe epidemic of diarrhoea.

In 1911 out of every 1,000 infants born, 130 died under one year.

In 1921 out of every 1,000 infants born, 83 died under one year.

In actual numbers, in 1911, 88,138 babies were born, and 31,900 died under twelve months of age from diarrhoea, while in 1921, which had a longer and hotter summer, and in which the births numbered 849,045, only 11,705 babies died from this disease, that is to say, that for every 1,000 babies born, 36 died from diarrhoea in 1911, and only 14 in 1921—an indication that our work for the welfare of mothers and babies and for public health generally is bearing fruit.

Our specialised expenditure on maternity and child welfare work—inaugurated in 1914—mostly out of rates and taxes, has increased year by year, as shown in the following table:

In 1914-15	£83,000	was spent.
In 1915-16	£136,000	" "
In 1916-17	£245,000	" "
In 1917-18	£438,000	" "
In 1918-19	£730,000	" "
In 1919-20	£1,345,000	" "
In 1920-21	£1,864,000	" "
In 1921-22	£1,900,000	" "

(approximately).

PANEL INCOMES AND M.O.H. SALARIES.

The reports issued by insurance committees in various parts of the country continue to show large panel incomes being earned by insurance practitioners. Incomes of considerably over £2,000 per annum are numerous, excluding the amount earned by private practice. This means that a panel practitioner working whole time receives a total income of between £2,000 and £3,000 a year, and it also means that panel practitioners receiving less than this sum are working only part of their time, but are probably being paid at the rate of about £2,500 a year for the time they are actually occupied. In other words, the position is this. A newly-fledged medical practitioner, on the present scale of panel payments, has the opportunity of starting in panel practice with a certainty of being paid at the rate of about £2,500 a year for any work that he does, i.e., if he works half-time he will earn about £1,250, and if he works quarter-time he will earn about £600. On the other hand, if this newly-fledged practitioner decides to do some hard post-graduate work and to obtain an additional registrable qualification he will make himself eligible for a whole time post at a salary of £500 per annum. Looked at in this way the grotesque disparity between the two scales must be evident to everyone, and particularly it must eventually become obvious to those who decide the scale of payments for insurance medical work. Before this takes place, however, we hope that the British Medical Association will be alive to this danger

which threatens to lower professional remuneration generally, and will remove the source of weakness. When it is fully realised by the public that they can secure the whole time medical services of fully qualified practitioners with additional post-graduate qualifications for £500 a year they will not be content much longer to pay panel practitioners at the rate of about £2,500 a year for the work that they do.

WATER CERTIFICATES IN RURAL AREAS.

Many of the difficulties of public health administration in rural areas arise directly or indirectly from the "water certificate." Section six of the Public Health (Water) Act, 1878, forbids the occupation of a new dwelling house unless and until there is provided within reasonable distance of the house such an available supply of wholesome water as to appear to such Authority on the report of their Inspector of Nuisances, or of their Medical Officer of Health, to be sufficient for the consumption and use for domestic purposes of the inmates of the house. One of the difficulties that cropped up was the liability for the expense of an analysis of the water, and in this connection the Local Government Board decided that the owner of the house could not be charged with this.

Recently an interesting case in this connection occurred in the Rural District of Petersfield, where the owner of a bungalow had allowed it to be occupied without a water certificate. The bungalow was supplied with water from a well some 300 feet distant, and this had in part been used by the occupants of a neighbouring bungalow belonging to the same owner for some twelve months. The question of the distance of the water supply from the house was not raised. The local surveyor in correspondence pressed the owner to have the water analysed. The owner paid the analyst's fee, under protest, and without waiting for the result of the analysis, or for a water certificate, allowed the bungalow to be occupied. The case came before the local justices, who decided that a technical offence had been committed, and fined the owner £2, but so far as can be judged from the perusal of a report of the case,

it appears desirable that the question of liability for the expense of an analysis of the proposed water supply should be again dealt with definitely by the Ministry of Health in order that local authorities may be prevented from putting unjustifiable pressure on an owner to pay for an analyst's certificate.

SIR GEORGE NEWMAN'S SALARY.

If any additional proof had been required in order to prove the urgent necessity for an educational campaign to re-adjust public opinions about official medical salaries it would be afforded by the report of the Select Committee on the estimates of the Board of Education. This report specially refers to the increased salary of £2,500 (the income of a successful panel practitioner) now given to Sir George Newman, Chief Medical Officer of the Board of Education, and also Chief Medical Officer of the Ministry of Health. One would imagine that the most important and the most highly remunerated officer in a ministry of health would necessarily be the chief medical officer, but this is not the case. The first Secretary of the Ministry now receives £3,000 and the second Secretary £2,500, but the salary of Sir George Newman, whose ability and energy none can call into question, and who could certainly have been expected to earn at least three or four times his present salary if he had taken up one of the clinical branches of medicine, is the only one which is called into question by the Select Committee.

TUBERCULOSIS NOTIFICATIONS.

A considerable amount of uneasiness pervades the Public Health Service with regard to the extent to which medical practitioners are carrying out the 1912 Regulations. The feeling in many areas is very well expressed in a report recently made by the Public Health Committee of the Deptford Borough Council.

The committee state that in a report by the medical officer of health the fact is brought out that in the year 1921 forty-three deaths were registered from tuberculosis which had never been notified to the Council, and of the exist-

ence of which the medical officer was, therefore, quite ignorant. "It appears undeniable," add the committee, "that in many instances the medical men do not carry out the provisions of the tuberculosis regulations of 1912, requiring them to notify every case of tuberculosis within forty-eight hours of the same coming to their knowledge. The only penalty under these regulations is for wilful violation of any regulation, and it would seem to be difficult to prove this in the case of failure to notify in the present circumstances." They therefore recommend that communications be addressed to the Ministry of Health and the London County Council and the representatives of this borough on that body, pointing out that a penalty should be provided for failure to notify cases of tuberculosis, as in the case of infectious diseases under the Public Health (London) Act, 1891.

THE MANCHESTER VACANCY.

The Manchester City Council have, as was anticipated, decided to accept the terms agreed to by the Society of Medical Officers and the British Medical Association, and are advertising the post at a commencing salary of £1,700 a year, rising to £2,000 by annual increments of £100. This is a satisfactory result, but there seems to be a tendency in some B.M.A. quarters to regard this as a great triumph for the Public Health Service. If it may be considered to be a triumph to secure a salary of £1,700 for one of the biggest and most important posts in the country, then surely the Public Health Service must be in a woeful condition and its scale of remuneration must constitute an ever-present danger to professional incomes generally. Far larger incomes are being received by hundreds of panel practitioners, who are not necessarily giving their whole time to their panel patients.

The sane way to regard this result is that matters might have been worse, and that the rate of remuneration which has been secured at Manchester might have been still more inadequate had it not been for the combined efforts of the M.O.H. Society and the B.M.A. At the present time the City of Liverpool is advertising for a Town Clerk at a commencing salary of £3,300.

PREVENTION OF DECAY IN TEETH: THE MOST IMPORTANT PROBLEM IN PUBLIC HEALTH.*

BY

JAMES WHEATLEY, M.D., D.P.H., County Medical Officer of Health, Shropshire.

I feel very diffident in addressing a meeting where most of my audience have a much deeper knowledge of the subject than I have myself. I do, however, take a very great interest in what I call the radical prevention of disease, and have for many years, stimulated by the work of Dr. Sim Wallace, taken a very special interest in the prevention of dental caries.

With respect to the administrative measures which are desirable and possible, I perhaps can speak with some authority. Since your Secretary asked me to read a paper before this Group, as you know, a Committee has been appointed to inquire into the cause of decay. I am very pleased that this step has been taken, for I have advocated it publicly and privately for the last twelve years. Let us hope that it will have results proportionate to the importance of the subject.

As this inquiry will deal fully with the causes of dental caries, I do not propose to dwell in detail on this branch of the subject, nor to restate the evidence that I have previously published, gathered from the systematic examination of school children.

My principal object in reading this paper is to insist on the enormous importance of the problem to the health of the nation; to emphasize the main points of agreement and to show that a real scheme of prevention may be built up on them. In particular I want to show you, who are acting as school dentists, that you have a great power and consequently great duties to the public, apart from the treatment of individual children, and to urge you to do everything possible by educating the public, and by influencing your authority to make this work of prevention a real thing.

I take it that the object of this Group individually and collectively is to diminish the amount of dental disease amongst children, and do it in such a way that it will have the greatest effect upon their health and development. It is true that your energies are mostly absorbed by treatment at present, but meetings of this kind show that you mean to take a wide view of your duties, and that you will give your influence and, so far as time permits, your energy and work to any

scheme of prevention that may be devised and approved.

At the outset I should like to say, that in this work of prevention we ought to seek out and concentrate upon the matters on which we are in practical agreement, rather than concentrate on our differences.

As we are so apt to be absorbed in the study of disease and to forget that there is such a thing as health as a positive and not merely a negative condition, it will be helpful to consider shortly what are the prime factors governing health? The first is food, including the way it is eaten; the second is exercise under fresh air conditions; and the third is infection. Most other factors governing health will generally be found on investigation to be secondary to these. The acute infections to which we are almost all susceptible must be looked upon as accidents to be guarded against. Apart from these, health is mostly determined by food, exercise and the chronic infections which are in the main harboured in the mouth, gastro-intestinal tract, and upper air passages. Food and exercise in the open air are responsible for the proper growth of the body, the development of normal function of the organs, an efficient heart, a free moveable chest, good abdominal development, a well-developed masticatory apparatus, a good appetite, prompt ridance of waste products, and healthy conditions of the mucous membranes and skin. Failing or disordered function of the organs, on which is very frequently superadded a chronic infection, is probably the early history of most diseases.

There are, of course, other minor causes, but these will usually be found to be secondary to the main causes, or only acting powerfully where the main causes are also in operation.

The origin of a disease is often very complex, some of the causes dating back to a very distant period. It is for this reason that I think the principal good, from a national standpoint, from the study of disease will always be the light it throws on the laws of healthy living.

It is quite possible for a person to be free from disease and yet be a puny, ill-developed individual. Our endeavours as public health workers should be to produce a well-developed and virile race, and this will never be done by treatment of disease alone, but will in the main be accomplished by attention to the fundamental laws of health. It should be our constant endeavour, therefore, to discover what these really are.

The mode of prevention of a disease is often of more importance than the actual prevention. Let

* Paper read before Dental Group of the Society of Medical Officers of Health.

me illustrate this with one or two familiar examples.

Typhoid fever has been almost stamped out in the country by improving our water supplies, our drainage, our methods of disposal of excreta, and our method of safeguarding our food supplies, particularly shell fish and milk. Our improvements in these directions have been to a great extent due to typhoid fever. It is possible that if we had had our present knowledge fifty years ago, we might have proceeded by means of compulsory vaccination and perhaps reduced the disease to an equal extent. The real result would have to be entirely different. The same with tuberculosis—this disease has been reduced by about 60 per cent. during the last fifty years, principally by improvement in condition of living and by general education. It is possible here, too, that a similar reduction might have been made by protective inoculation, but the resulting effect on the general health of the people would have been very different. Tuberculosis has been a great incentive to the improvement of general environment. It has always seemed to me that the indirect benefit derived from these diseases has outweighed the direct loss. Certainly this is so with regard to typhoid fever.

These remarks appear to me to have a very special bearing upon the prevention of dental caries. The mode of prevention is probably as important or possibly more so than the actual prevention. Dental caries must of necessity be a product of some wrong method of living, a product that is visible and easily recognised. This, I think, we must take for granted, otherwise it would be an inherent defect of the race, which we know it is not. It is most unlikely that caries is the only harmful result of this wrong method of living; in fact, every indication points in the direction that these faulty habits are the starting point of much disease.

The question then arises—are we to leave undisturbed these habits that have caused the condition, and apply some artificial remedy if one can be found, or are we to aim at finding out the cause and removing it? The two things are as different to my mind in the benefit they would produce, as the difference between the prevention of typhoid fever or tuberculosis by inoculation and the prevention by the improvement of surroundings and methods of living. When I say that the prevention of dental caries is the greatest problem in preventive medicine, I refer to the natural prevention and not to prevention by artificial cleansing or by early treatment. Both these are no

doubt necessary as helps in our great fight against the universal disease, but to reap the real reward, we must proceed mainly on physiological lines, and look forward to the time when these means alone will be sufficient to bring the disease down to the amount prevalent in less civilised communities or in this country, say, 100 years ago. I think if we arrive at this position, we shall have improved the public health otherwise to such an extent, that as in typhoid fever the benefits conferred by the disease in directing our efforts will have outweighed the harm done by it.

I do not propose to enter into controversial details as to the causes of dental caries, but I would like to indicate some of the matters on which most or all of us must be in practical agreement.

(1) The commencement of caries, unless there is a defect of the enamel, always consists of the solution of enamel by lactic acid formed from the food.

(2) Vigorous exercise of the jaws is necessary for the proper development of the jaws and consequently for the regular arrangement of the teeth.

(3) Vigorous mastication and a good flow of normal saliva are essential for the proper cleansing of the teeth, or neutralizations of the acid formed.

(4) Illness during the formative period of the teeth may lead to mal-development and predispose to decay.

(5) The present universal prevalence is not due to inherited defects, it having developed during the last four or five generations.

(6) It is therefore due to change in environment arising during the last few generations. The only changes that have been suggested are changes in the food and the way it is eaten. Here the agreement ceases and we have the suggestion of Professor Mellanby that it is the defective feeding of the mother and young child that causes defective development of the enamel and that this is the main cause of early decay. We have the suggestion that the principal change is the gradual elimination of hard fibrous food which by enforcing mastication should produce a good spacious jaw, regular teeth, and leave the teeth clean. We have the suggestion that the principal defect in our foods is their inability to create a good flow of normal saliva, which acts as a natural cleanser and protector of the teeth.

And again, dental caries has been attributed to derangement of the functions of the ductless glands, particularly the thyroid, interfering with calcium metabolism; and by some to an actual shortage of calcium in the food.

I am not going to discuss these different theories as to causations, they will no doubt be thoroughly investigated by the Government Committee, but what I do want to point out most strongly is that we need not wait for any such investigation and pronouncement, although no doubt the report of the Committee when it comes will be a great help in directing our efforts to better advantage, and by giving greater authority to the movement.

It is possible to build up a scheme of prevention on the facts that are almost universally accepted.

In order to make the teaching of prevention as definite as possible, I have condensed it into a few simple rules contained in the leaflet before you. This leaflet teaches the necessity for training the child in good habits of mastication; the separation of food from drink; the danger of eating between meals, and particularly sweets; the desirability of finishing meals with a cleansing food; the special danger of giving certain food the last thing just before sleep; and the dangers of mouth breathing. All these matters appear to me to be of great importance to the general health apart from dental caries, but perhaps the most important are cultivation of good habits of mastication by giving suitable food and the separation of food from drink.

There can be no doubt that mastication has decreased enormously in amount and vigour during the last few generations. This may be inferred from the coarser character of the food of by-gone times or proved by the worn condition of the teeth in skulls a hundred or two years old. (Specimen produced.)

The force exerted in mastication properly performed with good healthy jaws is about 100-lbs., whereas the force exerted in mastication by a considerable section of the population is extremely small. This has been brought about in the first instance by soft feeding and drinking at meal times, and is intensified by caries, irregularities and inflamed condition of the gums.

Now I would ask the question—is it possible for an important function like mastication, which should involve vigorous and prolonged exercise of muscles in close relationship with extremely important structures, to be neglected without serious results?

We know the effect of exercise on muscles and to some extent on growing bones, but exact information appears to be wanting with respect to its effect on adjacent mucous membranes, glandular tissues, etc. There can, however, be little doubt that vigorous mastication must have a con-

siderable effect upon the adjacent structures—the tonsils, salivary glands, Eustachian tubes, and the mucous membranes of the mouth and nasopharynx—increasing their vitality, maintaining their normal function and consequently their resistance to infection.

It is, I think, fairly generally accepted that the development of the jaws, particularly their breadth and consequently the room for the eruption of teeth, is dependent to a considerable extent upon the amount of mastication during the development period. It follows from this that the posterior nares must also be correspondingly widened. Dr. Harry Campbell is of opinion that certain muscles of mastication have a direct effect in widening the posterior nares and that their width depends greatly on mastication. Freely open nasal passages are not so easily blocked by swelling of the mucous membrane or by adenoids and are more fully exposed to the stimulating effect of fresh air. The observations of Leonard Hill show that the stimulation by cool dry air promotes a healthy condition of the nasal mucous membrane. When one considers that the mouth, throat and nasal passages are the great seats of infection, it will readily be conceived how important is any function that tends to keep their vitality normal. Unfortunately in tracing the origin of a disease it is generally felt to be sufficient to establish the focus of infection without enquiring into the antecedent conditions that have pre-disposed to this infection.

I believe that complete insalivation of food, that is complete mixture with salivary and mouth secretions, is an extremely important matter, not only in the prevention of dental caries, but also in preserving general health. The amount of saliva and probably its normal constitution is determined, not only by the flavour and taste of the food, but by the amount of mastication and the absence of fluid with the food. The influence of mastication on the amount of salivary secretion can easily be tested by anyone. If persons accustomed to drinking freely at meal times give this up, there is at first some difficulty in sufficiently moistening the food with saliva, but if dry meals be persisted in, and food requiring vigorous mastication taken, the flow of saliva soon becomes so copious that food is easily moistened sufficiently and there is no desire for liquid.

It is estimated that the secretion of the salivary glands in men in 24 hours is over one litre. Allowing that the ordinary amount of liquid taken is about three pints, this means that 58 per cent. of the whole liquid intake passes through the

salivary glands. As the secretion of saliva should take place principally during eating there should obviously be no necessity for mixing food with drink, where the salivary glands are in a healthy condition and receive the normal stimulation from food and mastication.

The time at which liquids should principally be taken seems to me to be a matter of great importance and one that could with great advantage receive more attention from physiologists. If a good drink of water is taken on an empty stomach, the pylorus opens almost at once and lets the water into the duodenum, and little or no absorption takes place in the stomach. If a pint of water is taken half an hour before a meal, I think it may be assumed that it has all passed through the stomach some time before the meal. As a result of the above considerations I would put forward the suggestion which I think will be accepted as the probable truth that the whole of the liquid required to moisten food should ordinarily pass through the salivary and mouth glands, and that liquid should be taken principally on an empty stomach, probably half an hour to an hour before the next meal.

If the food is properly masticated, insalivated and lubricated it passes into the stomach in such a form that salivary digestion will go on for twenty minutes to half an hour and, generally speaking, the whole of the starch will have been converted into sugar. This is the natural process and it is no answer to say that in different circumstances the digestion would take passage of infection into the intestines.

By presenting the food to the stomach in the proper form we encourage normal digestion and the development of a healthy stomach, of good contractile power and with normal secretion. Such a stomach is also a safeguard against the passage of infection into the intestines.

On the other hand if a full meal is regularly washed down in a half-masticated condition with a pint or two of liquid one can readily understand the gradual development of a weak and disordered stomach and other derangement of functions.

We are apt to look somewhat lightly upon these disturbances of the stomach, but probably they are the cause of much illness and inefficiency in later life. They are primary disturbances and are certainly contributory to more fatal diseases in other organs.

Efficient mastication also produces economy in food where there is a shortage, and it is also a safeguard to some extent against over-eating, as

there can be no doubt that the appetite is satisfied with less food if thoroughly masticated than if half-chewed and washed down with copious draughts.

To bring about efficient mastication and a good flow of saliva, one should train the child from early age with a certain proportion of food requiring vigorous mastication, and allow no drinking at meal times with the exception of milk. As milk is given up, the meals should become altogether dry. Although the adult may find this a hardship the child will not.

The next point I should like to bring before you is the very large consumption of sugar and the eating of sweets between meals. It has taken a great many years to prove what many have long suspected that a fresh food is better than a stale food; that it is not safe to eliminate portions of foods; that a natural fat like butter is superior to an artificial mixture like margarine. Even now it is usually assumed that refined sugar is a good food and that it can be taken with advantage in large quantities. We are told as evidence of this that children instinctively like it, and demand it in quantity, and also that it yields energy cheaply and rapidly. What is the significance of the instinctive liking for sugar? Surely simply that under natural conditions, when sugar could be obtained only through fruits and sweet grasses, and as honey, such a liking was necessary in order that sufficient of these should be eaten. Under these circumstances the amount of sugar that could be obtained would only be a very small fraction of what is now eaten. The burden of proof that this enormous consumption of sugar in a highly artificial form is harmless should, I think, rest with those who make this assertion. The same remark applies to all departures from natural living.

It seems, too, that the only safe assumption is that sugar in large quantities is harmful to the system as a whole. It is also the particular food that is taken so much between meals. The amount of harm done by eating between meals is a matter for study by physiologists. It is probably a very real danger.

One of the means advocated for the prevention of dental caries is the lessening of the consumption of sugar and particularly the eating of sweets between meals, and if this could be brought about I am confident that apart from dental caries we should produce a marked improvement in health.

You will see from the foregoing that in my opinion the prevention of dental caries by physiological means will produce results of a far-reach-

ing description. None of these results would be produced by prevention of caries by artificial means.

The sceptical may say there is no absolute proof that these conditions do result from insufficient mastication and insalivation of food. In reply I would ask, is there any other function so important and yet so universally neglected as that of mastication? and would again call attention to the fact that we know the primary causes of comparatively few diseases and yet we know that most diseases must be due to faulty habits and environment of one kind or another.

So far we have only considered the harmful results arising along with caries and produced by the same causes. It is not my intention to enumerate the diseases and disturbances that are attributed to caries. These are all set out in text books on dental surgery and are probably better known to you than to me. It appears to me, after studying the evidence brought forward, that it is overwhelming with regard to many very serious diseases and that there is very strong presumption that in an even greater number of diseases dental sepsis is one of the primary factors.

What strikes one most forcibly is the large amount, not the small amount, of evidence there is of the production of disease by dental sepsis, considering the complexity of the causation of disease in general and the persistence of much disease even when the original cause has been removed. One has to bear in mind that strength of resistance is as important as infection; that primary infections are almost always complicated with secondary infections; that partial removal of the original focus is likely to be of little use; that in a larger number of cases that come under treatment considerable permanent damage has already been done and possibly secondary foci of infection established.

The Departmental Committee appointed to inquire into "the extent and gravity of the Evils of Dental Practice by Persons not qualified under the Dentists Act" came to the following conclusion:—

"In conclusion we wish to state very strongly that, in our opinion, the State cannot afford to allow the health of the workers of the nation to be continually undermined by dental neglect. Steps should be taken without delay to recognise dentistry as one of the chief, if not the chief, means of preventing ill-health."

The same opinion is held by many eminent medical men. Sir William Osler said that if he were asked to say whether more physical deterioration were produced by alcohol or defective teeth, he should unhesitatingly say defective teeth.

Dr. William Hunter in an address to the British Medical Association in 1904 said:—

"The point I am here concerned to bring out is this—that if oral sepsis could be successfully excluded, the other channels by which 'medical sepsis' gains entrance into the body might also be ignored. Sepsis as an important and prevalent cause of disease in medicine would almost cease to exist, instead of being, as in my judgment it is at the present time, a more important and prevalent cause of disease in the domain of medicine than it is in that of surgery."

Dr. Truby King has said—

that "Decay of the teeth is not a mere chance unfortunate disability of the day. It is the most urgent and gravest of all diseases of our time, a more serious national scourge than cancer or consumption, and is the main precursor and cause of unfitness and disease in general."

One form of proof of the harm done by dental sepsis is within the knowledge of all practising dentists. I refer to the improvement of health that very frequently follows the removal of the offending teeth. Patients suffering from mal-nutritious, lack of energy, anaemia, sallow skins, often with acne frequently improve in a remarkable way, all these symptoms disappearing within a few weeks of treatment.

This was particularly noticed, I understand, in the treatment given to recruits in the Army during the war, but I believe it is even more noticeable amongst young women whose teeth have been neglected and who have not been able to afford dental treatment.

This definite evidence of poisoning by dental sepsis is alone, to my mind, sufficient proof of the enormous amount of harm done. Who can doubt that a continuance of this poisoning will in many cases result in the long run in serious disease?

A very large proportion of all disease is undoubtedly due to chronic infection, and amongst the sources of chronic infection it appears almost certain that dental sepsis bears by far the most important position; and, moreover, there is much reason to think that many of the other sources are often secondary to it. For instance, the most likely source of origin of the majority of the septic foci (except the coli infection) of the

alimentary tract is a septic mouth, and there is evidence that septic teeth are sometimes the origin and sometimes aggravate septic conditions of the throat and nose.

It must be also remembered that every disease is liable to be aggravated by dental sepsis, and it is particularly when the defences of the body are weakened by other diseases that dental sepsis is so damaging.

When one takes into account the ill effects of lack of mastication in almost the whole population from infancy onwards, the universal prevalence of dental caries from a comparatively early age, the very large amount of illness arising directly and almost certainly indirectly from caries, we must admit that this is probably the greatest problem in preventive medicine at the present time, particularly as we must recognise that from its very nature it is a preventable condition.

It is unnecessary here to labour the question of prevalence of dental caries. It is certainly correct to say that, except at an early age, it is practically universal and that the teeth of the majority of persons of 30 years of age and upwards, who have had no dental treatment, are so destroyed by caries as to be of little or no use. This is proved to be true in my county, where the average number of teeth decayed or lost amongst 121 consecutive candidates for nursing training was 17.7.

It is this universal prevalence, taken along with the fact that any one diseased tooth may be a source of grave illness, that makes this problem overwhelmingly important.

Administrative Measures for Prevention.

I come now to a branch of the subject upon which I can speak with more authority, viz., the administrative measures necessary for the prevention of dental caries. I have been able to form some idea of the relative value of different methods of working. It is only during the last two years that we have had a school dental service, and so far the dentists have been so fully engaged with treatment that they have not been able to give the time and attention to prevention that I should like. They are, however, fully in sympathy with the scheme of prevention and they take every opportunity of forwarding it.

The first essential for the success of a scheme is that the importance of the object be fully recognised and that the person directing it should be really enthusiastic. Work of this kind, unlike routine treatment, is apt to lapse unless it is supported from within, and also from without by a body of public opinion. This should be created.

This work of prevention is essentially educa-

tional, and we have to consider what means there is for educating the public. Those who have a first hand knowledge of this subject and are available for this preventive work are the members of the medical and dental professions who are on the staff of public health authorities. They can by means of public lectures do something to create an intelligent public opinion, but they can do little more with regard to the education of the public. They should devote their attention to training Health Visitors and District Nurses, who can carry this teaching into the homes of the people. It is by means of well-educated and well-trained Health Visitors, and in the rural districts of well-trained district nurses acting as Health Visitors, that our public health propaganda work will mostly have to be carried out. In addition, school teachers should be given lectures on this subject, so that they will be able to give simple practical instruction to the children under their charge, and the School Dentists should take every opportunity of interesting teachers in this work of prevention. I am convinced that school teaching does to some extent make the child's mind more receptive than it otherwise would be, but I am also certain that the real effective teaching is that which is given by the Health Visitors to the mother in the home, at the time when there are children to whom the teaching should be applied. We endeavour to make this teaching of the prevention of dental caries one of the principal works of the Health Visitor. The Health Visitor explains and leaves a leaflet (copies distributed) with the mother, and it is part of her duty to do all she can to insist at each visit that the directions are carried out. If we had more highly educated and trained Health Visitors, I feel that much more could be done, but I have reason to believe that progress is being made. At schools I have tried, with some success, to get teachers to utilise the midday meal, where children stay at school for it, as a practical means of teaching children. They see that there is no drinking during the meal. A crust of bread thrown away may be made the subject of a school talk.

The Child Welfare Centres are also used for spreading this knowledge both by individual talks to mothers and by collective teaching. What one wants in addition to make this work really successful is a national movement such as we have had with regard to child welfare, and the prevention of tuberculosis; a national movement with government authority behind it. Such a movement has been instituted in New Zealand, where a special department has been formed for

the prevention of dental sepsis. If we could get something of the same kind here, and if we could enlist the great body of medical practitioners in this work, much more rapid progress might be made.

Although progress hitherto has been slow, I am quite optimistic with regard to the future. I think I am justified in saying that there has been very evident improvement in my county, and I am greatly encouraged by what educational propaganda has done for child welfare and the prevention of tuberculosis.

I remember twenty years ago the big railway companies in Shropshire would not listen to my suggestion that notices prohibiting spitting should be put up in the railway carriages. Now spitting in railway carriages and public rooms is almost unknown. The management of infants has undergone a wonderful improvement, and it is precisely the fact that parents will do for their children what they will not do for themselves, that is so encouraging. Habits created in early childhood are very likely to persist.

Artificial Methods of Preventing Caries.

I cannot speak with any authority on the artificial methods of preventing caries and general oral sepsis—the use of the tooth-brush, silking and periodic cleansing by the dentist. I am not satisfied myself that the tooth-brush will prevent caries to any considerable extent, but by all means let us advocate its use so long as it is not allowed to replace in the least degree real physiological prevention. The use of the tooth-brush obviously will not produce a good development of jaws and consequently regular teeth, nor will it get rid of the other evil effects of lack of mastication of food.

It may be that the use of the tooth-brush is more effective than I imagine, or it may be that its principal use is in stimulating the gums and preventing pyorrhœa.

Treatment.

So far I have not spoken about treatment because it looms before the public, the profession and the Government somewhat to the exclusion of prevention. I regard dental treatment, however, as by far the most efficient form of early treatment of disease, and for obvious reasons—the disease can be detected at the very outset, and with absolute certainty, and much of the treatment is of a truly preventive character. Satisfactory dental treatment ought to be available for every person in this country; instead of which I estimate it is only available for about one-tenth part of the population, and yet the dentists are

on the whole fully employed. In my county we have a scheme similar to that recently outlined by Dr. Barwise for Derbyshire. We have two dentists and four dental dressers, the treatment being carried out at permanently equipped clinics, at rooms temporarily equipped for the purpose, and at the schools themselves. The last method, viz., treatment at the schools in one of the rooms, is the only available plan for isolated country districts. By means of a Ford motor-car a dentist takes with him two dressers, two dental chairs, and the corresponding equipment. Those of you who have only worked in towns will hardly appreciate the difficulties of school dental work in remote country schools. Time does not permit me to enter into these matters, but I would ask those who work under more ideal conditions to make allowances.

I understand there is a considerable difference of opinion amongst dentists as to the propriety of employing dental dressers. They are only employed, of course, under the direct supervision of the dentist, who sees the patient before and after treatment and says exactly what has to be done. My view is that until there are sufficient dentists to undertake the necessary treatment, the employment of dressers in the manner above described is the only possible course. There are nine-tenths of the population without any dental treatment worthy of the name, and no other method of getting treatment for them has ever been suggested. The profession must be protected, but only in such a manner that the public will not suffer. If ever the interests of the profession are put in direct conflict with the welfare of the people, the profession will suffer. When it can be shown that there are sufficient fully trained dentists to undertake the work, then will be the time for reconsideration. In the meantime the employment of dressers in the manner described by Dr. Barwise improves the position of the school dentist and enables us to cope with the problem of dental treatment of school children much more satisfactorily. There still remains the enormous problem of the treatment of the great mass of the population at all other ages. How long is this to remain unsolved?

In conclusion I should like to emphasize the object of this paper. I have carefully avoided exaggerating our differences and have tried to point out there is sufficient practical agreement on which to base at once a great national campaign.

We all agree that efficient mastication of, and complete insalivation of, food are extremely important to the development and health of the body,

and particularly of the jaws and teeth, that eating between meals must be injurious, and that certain types of food tend to leave the teeth clean and others do not, that it is most important that the nursing and expectant mother should be physiologically fed. Upon these simple facts that we practically all agree on, may be built up a scheme of prevention not only of dental caries, but of general ill-health. It is possible that there are other basal factors yet unrecognised (although I have not seen any suggested), but is that any reason why we should not work with our whole power to remedy the evils we know of?

I hope you as school dentists will take a broad view of your work and recognise that, although your ordinary work of treatment is extraordinarily important, it would be over-shadowed by the importance of prevention if we could make this really effective. I hope you will, day in, day out, teach prevention and impress upon your Medical Officer of Health and authority the necessity for great and continued effort. I am sure that when the end has been achieved and caries reduced to ordinary proportions it will be recognised that this has been one of the greatest and most important achievements of preventive medicine.

DISCUSSION.

Mr. C. E. Thomas said, with regard to question of dental dressers, that the argument that there were not enough dental surgeons would not stand, as the dental schools were crowded and the thousands of unregistered men coming on the register would release more dental surgeons for public health work. He would like to ask what would become of dental dressers? as he considered it unlikely that they would always be content to act as such. He thought that it would be very difficult to put into practice what a dresser should and should not do.

Dr. Scurfield agreed with Dr. Wheatley that the prevention of dental decay was one of the most important public health problems of the day. He thought we ought to concentrate on the points of agreement and go further than this by accepting for the sake of uniformity measures, which we might think unimportant or useless, which appeared important to others. At present if you gave advice on teeth, you were met with the statement, "Dr. — or the dentist does not agree with you." There seemed to be two schools, one which attributed importance to diet in building up good teeth, the other which considered the management of the teeth after eruption as all important. He suggested that both schools might readily combine in a propaganda programme.

The one school could conscientiously recommend the diet which was supposed to form good teeth, because such a diet was good for the child in every way; while the other school could conscientiously recommend three meals a day, and nothing in between, as being better for the child's stomach and digestion, and keeping the teeth clean from starchy or sugary matter between meals, as being a good thing for æsthetic reasons. He thought it would be a useful and feasible thing if a joint committee of all the groups interested were to draw up a programme which they could put before the public, stating authoritatively "this is the way to prevent dental decay."

Mr. T. H. Griffin stated that he was a great believer in the propaganda on the part of the school dentist, concerning the relation of diet, and the condition of the teeth.

Dr. Sim Wallace said that references had been made to the committee which had recently been appointed to investigate into the causes of dental caries, and hopes have been entertained that we may get a lead from its deliberations as to methods of prevention. It should, however, be remembered that what is essentially a committee for this purpose has been in being for the last 50 or 100 years, and the results of its deliberations are to be found in the recent editions of our modern text books. This latter committee was not elected in such a way that it might be supposed to represent the views of the most celebrated investigation the dental profession has produced. On this committee the names of Miles and Underwood, of Miller, Black, Leon Williams, Tomes, should always be remembered. Of the present day representatives of this committee he would only refer to two—Dr. James Wheatley, whose statistical inquiry into the relationship between the eating of sweets and the prevalence of dental caries and various other points must ever remain memorable; while the school dental group is most honourably represented by Mr. F. Breese, who has confirmed Dr. Wheatley's conclusion with regard to sweet eating, and in no small measure has in general corroborated the carbohydrate-stasis theory which is now almost universally recognised.

Like previous speakers, he felt that we should "get a move on" and concentrate on what is generally admitted, while we wait for the final verdict with regard to the details associated with such predisposing causes as dental hypoplasia in relation to dental caries. We can well afford to do so, especially when the temporary teeth are concerned, for only a half per cent. of these teeth are affected with caries.

Dr. Wheatley in his comprehension survey seemed to omit an important reason for condemning the free use of sugar in the dietary of children. The argument is an economic one. When children have to be brought up on a limited income it is necessary to buy the cheapest foods, as bread and other cereal foods and potatoes must form the bulk of their meals. But these foods contain an excess of carbohydrate. It is necessary, therefore, if a balanced dietary is to be secured, to add to such diet, proteid and fat, but not carbohydrate by any means; if more carbohydrate such as sugar is added instead, the badly balanced diet is only made worse; every penny spent on sugar is not only wasted, but predisposes children to diseases, such as rickets.

It is often said that people will not alter their habits and give up sweets, jam, marmalade, etc. That may be so to a certain extent, but, as has already been said, to-day parents will do for their children what they will not do for themselves. Moreover, whether people will follow our advice or not, there is no reason for the truth being withheld. Physiologists particularly should be advised to study the physiology of oral hygiene. Their words are often listened to when the words of a dentist would not be. Their authority should at once be invoked to get rid of the idea that a liberal supply of sugar is a necessity for children, or that milk is a necessity for children after they have got their 20 temporary teeth.

Rather should they point out the anatomical evidence and the physiological reasons for food that demands mastication after and even before the complete set of temporary teeth have taken up their places. Above all, they should learn that some foods leave the mouth clean, and others leave it dirty, or rather do not leave it at all until at least it is partly converted into lactic acid, and harm has been done to the enamel. The doctrine that the mouth should be left physiologically clean after each meal should be taught in every text book on physiology, instead of being kept out.

The discussion was continued by Messrs. Wilson, Keenan, Maurice, Geo. Thomson, and the Chairman, Mr. Fisk.

Dr. Wheatley, in reply, said he could not agree with Dr. Sim Wallace that school dentists could not advantageously take any part in the education propaganda. It is true that they have not much spare time for this work, but they should take every opportunity of emphasizing the importance of prevention and give their active support and approval to any scheme devised, otherwise the

public is apt to think that the dental profession does not attach importance to prevention. In addition, those who have the proper bent may, with advantage, give lectures to teachers and the public.

Mr. Wilson spoke of the necessity for educating the teaching staff—lectures on this subject have been given all over Shropshire and practically to all teachers employed at that time. Dr. Scurfield and Mr. Maurice emphasized the necessity for concentrating on our points of agreement and minimising our disagreements, and with this he was in absolute agreement. He could not agree that there would shortly be sufficient dentists to treat the people of these Islands. There would still be an enormous deficiency if the people were to get proper treatment. Dental dressers are women, and the position may be looked upon as quite sufficient in itself without leading to anything further. There is no difficulty in guarding against unsupervised, unqualified practice.

THE SALARIES QUESTION.

BY

*W. A. BRUCE YOUNG, M.D., D.P.H., M.O.H.
for City of Winchester.

It is no exaggeration to say that by far the most important problem confronting us at the present time is the "salaries question." There is abundant evidence to show that a determined onslaught on our incomes is being made or will be made by public bodies in all parts of the country. Are we going to suffer this and do nothing, or cannot something more be done than has been done hitherto?

If you refer to the *British Medical Journal* for this week you will find there a list of no less than nine public health appointments which all self-respecting men must not apply for. Such a state of things can only be described as a grave scandal. It is quite obvious that we are rapidly approaching a crisis which may work untold harm to us all both now and in the future, unless the position is frankly faced and adequately met.

Primarily, of course, this is a matter which more nearly affects the whole-time officer, but it also affects the profession as a whole as well. It requires very little reflection to convince one that what adversely affects one branch of our profession equally affects all. If in practice it does not, then so much the worse for us. On the other

* Abstract of Address given at the Meeting of the Southern Branch on June 2nd, 1922.

hand, it must not be forgotten that there is a large number of men holding part-time appointments all over the country, influential in numbers and standing, who are also beginning to feel the "economy screw," if they have not already felt it. These men are all general practitioners, and is not their welfare of interest and consequence to the rest of the large army of general practitioners which constitutes the bulk of the profession?

The chief point I want to make is that this problem is capable of a satisfactory solution, but that this is conditional. It rests entirely with the profession whether the outcome be eventually satisfactory or otherwise.

In the first instance action must be taken, perhaps even initiated, by the members of our Society. Though perhaps not quite so democratic a body as some of us would wish, ours is a democratic association, and as such can be influenced by individual members or groups of members.

The whole matter is really one for the rank and file just as every important contest is, and so the individual member—every individual member—must make it his own concern and "do his bit" whatever his present position or future prospects may be. Members must not leave the initiative or even the carrying-on of a campaign entirely to the Council of the Society. Every one of us must make it his business to influence his Branch and, through its representative, to assist and urge the Council to more energetic action and to place "salaries" in the very fore-front of its aims.

In all democratic societies or in any movements for improvement it is always the few who bring about changes and carry through reforms. In other words, it is the small group of fanatics who get things done. In this matter of salaries each member of the Society of Medical Officers of Health must make himself a fanatic if he is to work out the financial salvation of himself and his fellows.

The urgent need for action being granted and the responsibility of every one of us being fairly obvious, the next step is to consider what can be done.

Here several matters at once present themselves for consideration. In the first place every member and all the Branches must be convinced that they can depend on the goodwill, the support, and the well-directed energy of the Council, and secondly, and conversely, the Council must feel assured of the agreement and hearty backing of all of our members to plans duly considered and put into operation on their behalf, and it must feel that it can absolutely rely upon the personal loyalty of each and every member under any and

every circumstance. This can, I feel convinced, be attained by well-planned propaganda and organisation in the Branches.

In the same way there must be cultivated a spirit of generous *esprit-de-corps* among all D.P.H. men in this as in all other matters of common policy and common good. Every one of our members must subscribe to and hold to the Golden Rule.

These things are, I grant, difficult of attainment perhaps, but their attainment is possible and essential. The key to this position is to be found in the junior man. Action taken hitherto has dealt largely with senior appointments, as in the Manchester case. Our Society in this particular instance demanded, and rightly so, the support of its members, and solicited and received the support of the rest of the profession, with the result that we have every prospect of securing our point. But I venture to put forward the proposition that it is the junior man and the junior post that must be tackled just as energetically and unfailingly. Satisfactory results will follow automatically higher up in the scale once the junior appointments are dealt with and put on a more satisfactory basis. My reasons for this contention are, firstly, that junior men and junior appointments are much the more numerous, and numbers always count; secondly, junior men are much more exposed to temptation than senior ones and are probably more likely to accept lowly paid posts as a temporary measure and for the sake of gaining a foothold on the ladder; and lastly, our people must realize that Committees know these things and act accordingly. The men who influence policy among local authorities are all men of the world and look at these things from a purely business and not a professional point of view. Few Councils hesitate to drive a hard bargain when they are in a position to do so.

In addition, we must act with greater energy, for it is clear that the promotion of a salaries scale and passive measures such as taboos on the Public Health service are not sufficient. An active offensive campaign is needed on the part of the Society, and the first steps to be taken in this is to see that every man in the Public Health service is enrolled as a member of the Branch in whose area he works. This is a matter for each Branch to see to. The next one is to see that wherever action is taken with respect to any appointment it is taken promptly and not when it is too late. In this connection, early action both locally and centrally is essential. This can only be obtained by and through a special intelligence department or, as I suggest it should be called, a

Vigilance Committee. This would be a permanent body consisting of (say) the President, the Secretary, the Editor, and perhaps one other member of the Council, who would act together at headquarters. In addition, the Secretary of each Branch would be *ex-officio* member of the Committee when a case arose in his area: it would be through him and his Branch that the Vigilance Committee proper would receive information and probably assistance in correspondence in dealing with each case as it arose. Time will not permit of going into details of working, but the broad idea will probably be understood.

But for effective working each member of the Society must constitute himself a scout and on the first suspicion of any impending alteration of salaries or appointments must not fail to at once communicate with the Secretary of his Branch. The latter will thereupon automatically for the time being become a member of the Vigilance Committee and shall communicate at once with headquarters. In this way or in some similar way only can early information and prompt action be obtained.

Besides working directly through our own Association, we must also act with and through the British Medical Association. In spite of much that is said by both sides to the contrary, I am certain that it is to the advantage of both bodies that they should work together. If the British Medical Association claims to speak for the whole of the profession as it wishes to do, it must make it worth the while of our men to join, and alternatively our men must join the British Medical Association if its assistance is to be wholehearted and fruitful.

I am aware of the difficulties that exist and do not wish to minimise them, but they can and ought to be overcome. The interests of all branches of the profession are ultimately identical, and the Society of Medical Officers of Health has every right to look to the British Medical Association for wholehearted support in a salaries campaign, just as the British Medical Association has a right to expect the support of the Public Health service in the matter of (say) the remuneration and conditions of work of the panel practitioner. If the British Medical Association wishes for and expects the adhesion of Public Health men, it must attach just as much importance proportionately to their interests and work as it does to those of the general practitioner, otherwise it will not get it and both groups will lose.

Public Health men, then, must join the British Medical Association and must attend its meet-

ings; they must there urge their claims, and secure support for their reasonable demands. Here again it is the importunate neighbour who receives help.

Finally, in this connection the British Medical Association and its General Practitioner members must realise, as they do not seem to do at the present time, that men join the Public Health service with the object of making it their future permanent career, and not as temporary members of a junior branch of the profession. It is unreasonable in the extreme that the British Medical Association should not give us every support in our efforts to secure a salary and a standing worthy of members of an honourable profession.

Further, is it really unreasonable to expect the General Medical Council to do something? This august body is already planning "to raise the status" of the Public Health services by making it still more difficult and expensive to secure the D.P.H., thereby adding to the burden of the man who aspires to do preventive work. We are engaged in work of a specialist character, for we are required by Government and by Municipal Authorities to receive special training and secure a special diploma over and above that required of all. For this reason we may rightly claim to be the only true specialists, since for no other branch of civil medical work are such conditions laid down. Does the General Medical Council, which is composed of specialists of various kinds, or the British Medical Association, consider a paltry £500-£1,000 a sufficient remuneration for specialist work? And this, be it remembered, can only be obtained by whole-time service, so that no matter how well qualified a man may be or how hard he may work, there is little hope of the average officer being able to secure even this decent competence. Is there any wonder many of our people welcome even the humiliating drudgery of panel practice as a more hopeful means of providing for the future of themselves and their families?

The General Medical Council is always ready (and rightly so) to punish a man for "infamous conduct in a professional respect," but why does it not use all the influence it possesses with the powers that be to make it impossible for public bodies even to attempt to exploit the Public Health service in the infamous way that we so often witness, as, *e.g.*, in Hereford and Sittingbourne? I contend that it ought to make it its duty to protect members of the profession whom it supervises just as much as to exert disciplinary action over them. In other words, why does it not protect the profession against the public just

as much as it protects the public against black sheep in the profession? Can our Society not approach them or are they unapproachable?

I am afraid I cannot say much as regards the National Association of Local Government Officers, but I should like to ask whether all possibilities of action in connection with this body have been thoroughly considered, and what the policy of our Society is in relation to it?

The foregoing remarks are merely meant as a general survey of the problem, and indicate some lines along which its solution may be sought. Many points are controversial and I do not expect unanimity nor deprecate criticism.

Much more could be said, but, in conclusion, I should like to emphasize the point that in the last analysis it is we who must help ourselves.

Superannuation is practically moribund and the Society of Medical Officers of Health must frankly and courageously face a desperate position.

Each Branch and every member, no matter how high or how low he may stand in the service, must work for himself and his fellows in a spirit of watchfulness, loyalty and resolution. In this way only lies our salvation.

DELAYED NOTIFICATION IN TUBERCULOSIS.*

By GEORGE JESSEL, M.A., M.D.(OXON), D.P.H. (Manch.), Consultant Tuberculosis Officer, Lancashire County Council.

The early notification of patients suffering from tuberculosis is important from the point of view of the Medical Officer of Health as well as the Tuberculosis Officer. The latter is primarily concerned with diagnosis and treatment, and secondarily with prevention of infection, while the former is made responsible, under the Tuberculosis Regulations, for such measures as are necessary to prevent the spread of infection.

Early diagnosis and notification are desirable for the sake of the patient and the public, since the notification is the starting point of administrative action. Early diagnosis and notification will normally result in:—

(1) Measures to prevent the spread of infection.

(2) Treatment while the disease is capable of arrest or improvement. This may prevent the conversion of a closed into an infectious case.

(3) Examination of contacts and the detection of incipient or gross lesions.

Unfortunately, experience has shown that, in

* Read at a meeting of the N.W. Branch held in Manchester on Friday, January 13th, 1922.

a high percentage of cases, death occurs either without any notification being received by the Medical Officer of Health or within a few weeks or months of notification. This absence of or delayed notification appears to be general throughout the country. Thus, the following table gives particulars as regards four County Boroughs in 1920.

Authority.	No. of deaths from Pulmonary Tuberculosis	Not Notified.		Died within three months of Notification.	
		No.	%	No.	%
Birkenhead...	116	16	13.8	44	37.9
Blackburn ..	82	8	9.7	38	46.3
Bootle...	94	15	15.9	23	24.4
Burnley ...	76	15	19.7	25	32.8

In the administrative county of Lancashire with a population of roughly 1½ millions, an investigation has been conducted in the Public Health Department during the past few years with respect to each death from tuberculosis, and care has been taken to exclude those which do not properly belong to the county. (See annual reports of Central Tuberculosis Officer.)

Briefly, the results as regards deaths from tuberculosis of persons not previously notified are as follows:—

Year.	Pulmonary.	Non-Pulmonary.
1916 ...	270	147
1917 ...	256	141
1918 ...	303	137
1919 ...	221	104
1920 ...	177	122

Taking Pulmonary cases only, the percentages of non-notified deaths was:—

In 1916 ...	16 per cent.
In 1917 ...	16 " "
In 1918 ...	18 " "
In 1919 ...	16 " "
In 1920 ...	13 " "

Not all the non-notified deaths have occurred at private addresses. In 1920, 143 pulmonary out of 177 and 108 non-pulmonary out of 122 deaths occurred at private addresses; the remainder took place at public institutions.

Turning to patients who died within three months of notification, the percentages are as follows:—

In 1915 ...	26 per cent.
In 1916 ...	28 " "
In 1917 ...	27 " "
In 1918 ...	25 " "
In 1919 ...	27 " "
In 1920 ...	26 " "

What are the reasons for this failure to notify cases of Tuberculosis? The following extract from the Report of the Chief Medical Officer of the Ministry of Health for 1920 is of interest:—

"This failure to secure early notification may not always be due to neglect on the part of the general practitioner. There is no doubt that many cases only come under his care when the disease is already in a pronounced stage, because patients suffering from the early symptoms of pulmonary tuberculosis fail to seek medical advice at the outset. It would be idle, however, to ignore the fact that practitioners, from pressure of work or other causes, sometimes fail to recognise pulmonary tuberculosis in its early stages, and carry out, for considerable periods, symptomatic treatment of patients who on careful examination would be found to present definite signs of tuberculosis. It must be recognised that the clinical diagnosis is of tuberculosis in its early stages is a difficult matter; even for the expert it may require a period of close observation under specially favourable conditions and preferably in a residential institution. A practitioner fails in his duty if he continues to treat for long periods cases of debility or those suffering from bronchitis or recurring colds or pleurisy without having the most searching examination made to exclude tuberculosis."

In 1920 I suggested that an inquiry into the reasons why patients died unnotified might provide interesting information, and such an inquiry was made at the County Tuberculosis Department between 11th October, 1920, and 30th June, 1921. The results of inquiries respecting 105 deaths at private addresses are contained in a table on page 14 of the Report of the Central Tuberculosis Officer of Lancashire for 1920.

This Table is reproduced at head of next column.

Thus 33 or nearly one-third of the deaths were not notified because the medical practitioner attending the patients had misinterpreted the Tuberculosis Regulations. Article 5 states:—

"A Medical Practitioner shall not notify a case of tuberculosis under this Article if he has reasonable grounds for believing that the case has already been notified, either under this order or under the previous regulations or otherwise, to the Medical Officer of Health for the district within which the place of residence of the person is situate."

As Dr. Cox has pointed out in a recent article in the "Lancet," this clause, while designed

doubtless to prevent duplicate notifications, is unfortunate and might with advantage be deleted.

CIRCUMSTANCES OF NON-NOTIFICATION OF FATAL CASES.

	Pulmonary	Non-Pulmonary	Total.
Doctor in attendance shortly before death—			
1 week or less...	3	8	24
1 to 2 weeks ...	2	8	
2 to 3 weeks ...	—	3	
Misinterpretation of Tuberculosis Regulations and notification believed unnecessary—			
Cases previously notified in another area ...	5	1	16
Disease of long duration prior to compulsory notification...	1	—	
Temporary resident ...	—	1	
Cases known to Tuberculosis Officers—considerable doubt as to diagnosis in some of these cases	7	1	33
Attended by more than one doctor and notification believed to have been made by first practitioner...	9	8	
Complicated cases, presenting difficulty in diagnosis ...	6	19	
Accidental omission to notify ...	5	7	12
No apparent reason for non-notification ...	4	4	8
Information not ascertained (no reply received to inquiries) ...	3	—	3
Total ...	45	60	105

There are, however, several other reasons why non-notification and delayed notification of cases of Tuberculosis occur. The extent to which any or all of them operate is not accurately known and their relative importance doubtless varies in different areas. They are:—

I. THOSE PRIMARILY CONNECTED WITH THE PATIENT.

The ignoring of early symptoms and failure to attend doctor owing to:

- Indifference.
- Fear of Phthisis being diagnosed.
- Mistaken idea that symptoms will soon disappear.
- Gradual onset unnoticed.
- Anxiety to continue at work for financial reasons.

II. THOSE PRIMARILY CONNECTED WITH THE MEDICAL PRACTITIONER.

1. Patients not examined owing to:

- Being misled by apparently casual manner of patient.
- Pressure of work, oversight, etc.

2. Patient examined and disease not diagnosed owing to:

- Difficulty of case.
- Lack of time, opportunity or skill.

- (c) Failure to consult Tuberculosis Officer, owing to procrastination, prejudice, etc.

III. PATIENT EXAMINED AND DISEASE DIAGNOSED. Notification postponed or neglected.

- (a) Lack of conviction that notification is worth while.
- (b) Lack of appreciation of facilities available for treatment and prevention of spread of disease.
- (c) Actual lack of such facilities in some areas or long delay in provision of special treatment.
- (d) Mistaken idea that Tuberculosis can be cured at home without any special measures being taken.
- (e) Reduction in notification fee (now restored).
- (f) Fear of losing a patient, owing to mistaken idea on part of patient not infrequently shared by doctor that consumption is invariably incurable, or owing to possible removal to institution.

SUGGESTED REMEDIES FOR ALL ABOVE CAUSES.

1. Education of public (steady and persistent) in:—

- (1) Early symptoms.
- (2) Facilities provided for diagnosis and treatment.
- (3) Curability of early disease.

2. Better financial provision for patients, especially breadwinners, so that they may be more willing to leave work while disease is amenable to treatment.

3. Education of Medical Practitioners in:—

- (1) Importance of early examination of patients.
- (2) Early symptoms and signs of tuberculosis.
- (3) Necessity for close co-operation with Tuberculosis Officers.
- (4) Special facilities for treatment that are available to supplement the ordinary domiciliary treatment available prior to and since the establishment of special Tuberculosis Schemes.

4. A Tuberculosis Service where the special medical officers have the salary and status of a Consultant, so that they will stand in proper relationship to medical practitioners. This assumes a high standard of efficiency and a certain degree of permanence in personnel, realisable by improvement in salaries and prospects.

Medical Practitioners of standing cannot reasonably be expected to consult with young newly-qualified men, who are obviously not in

earnest, but using the position as a stepping-stone to a better-paid administrative position.

5. Amendment of Article V. of the Tuberculosis Regulations.

HEALTH PROPAGANDA.

A Report Prepared by the Navy, Army, and Air Force Group of the Society.

INTRODUCTORY.

Any complete scheme of co-operation between the civil population and armed forces in matters of Hygiene and Public Health must embrace an interchange of views and experiences upon educational propaganda work. This work possesses its chief importance in reference to the young; but an organised campaign by which practical instruction in Hygiene may reach adults is also necessary.

The importance of diffusing knowledge concerning health by wisely conceived educational measures is generally recognised. Indeed, substantial reforms are only possible by the people themselves becoming the reformers. The individual must be told, made to think, and led to act. A widespread and enlightened co-operation of the individual is essential. A healthy regime of life cannot be obtained by law and its administration, or by any practicable degree of supervision. It is dependent on individual practice in all the intimate circumstances of living; and that practice is dependent on the intelligent convictions of the individual. It is the business of public health propaganda to form those convictions.

That public ignorance is mainly responsible for public ill-health has been preached for generations. It is the concern of the State to remove that ignorance by providing hygienic information in the best way. In default of this we must continue to do much tinkering with the consequences of our neglect.

Among the public health problems which have received most consideration during recent years have been those of housing, infant mortality, tuberculosis and clean milk. Each illustrates and justifies the old contention that, above all, the public needs educating.

As to Housing: Decent homes cannot be secured by merely building good houses; decent tenants are essential. The value of removing slums is seriously discounted if we neglect the educational elevation of the ignorant and careless slum-dwellers. Undoubtedly the hygienic measures which were impressed upon all ranks of

the Services during the late war have made their educational influence felt in many a home. As many received their first object-lessons in decent living during the war period, it is most desirable that such a foundation shall be built upon and not allowed to crumble away.

As to Infant Mortality: The preventable loss of infant life must be attributed mainly to defective knowledge of "mothering." Good mothering protects a child against almost every handicapping circumstance; on the other hand, nothing protects a child against bad and ignorant mothering.

As to Clean Milk: Elaborate premises will secure very little without the practice of elaborate cleanliness. As it is impossible to ensure this by official supervision, we must educate those who collect and deal in milk to an enlightened concern for guarding its purity; and the public must be educated to demand clean milk, and to keep it clean after it enters the home.

As to Tuberculosis: That the prevention of tuberculosis is largely a matter of healthy living should be made the property of everybody. The training of the young to healthy habits of life, and a broadcast dissemination throughout the community of knowledge to this end, are essential to the solution of the problem of the prevention of this disease.

All diseases should be brought into the campaign of popular education.

The individual must be brought to realise that Hygiene and Sanitation are necessary for his or her benefit; that in the long run they spell economy and increased efficiency; and that they are not merely the fads of a few hygienic specialists.

In any great national emergency the regular armed forces would have to be considerably augmented by civilians; and successful health propaganda to promote the physical well-being of both, as well as their intelligent co-operation in hygienic measures, has a great national importance attaching to it.

Hitherto the Health propaganda in this country has been quite unworthy of a matter of such fundamental value. Nowhere has a deliberate and comprehensive scheme been adopted for keeping before the civil community and those in the Services the facts that must be widely known before the public health can be greatly improved, our public health problems simplified, and our public health efforts and provisions made more productive. Such continuous propaganda will still be necessary even after the time arrives when

every school child shall receive teaching and training in health matters.

GENERAL PRINCIPLES.

Publicity methods have become a science as well as an art; and if they are to be conducted with the maximum of effectiveness, experts must be consulted. The hygienist must define what it is that he wishes to convey; but the expert must be allowed to decide upon the form and method of its conveyance.

All successful propaganda must be made in the plainest of language—pictorial, written or verbal; and the matter must be kept as free from technicalities as possible.

Facts must be given, and not opinions or theories.

Any statement upon health matters should be dignified.

Statements on posters must be short, direct, clear and impressive.

A clever, well illustrated poster is very effective. In designing posters, considerable latitude can be allowed with regard to the humorous or dramatic portrayal of the subject.

In reference to propaganda work, there are four primary considerations:—

- (1) Is it to appeal to the whole or to any defined group of the population? The message must be adapted accordingly. For instance, an Air Force poster appropriately illustrates the dangers from flies by a cleverly drawn analogy to an air raid.
- (2) What shall be the method of transmitting the message?
- (3) Where can the message most tellingly be presented?
- (4) Should the message be timed to appear at any particular season or with any particular event (such as an outbreak of disease, etc.)?

For children and the Services, appropriate posters in class-rooms and barracks, etc., are to be recommended. In the class-room these should be graded to the different standards; and in schools and barracks alike the posters should be "spoken to" occasionally by the teachers and medical officers respectively. The posters must be changed from time to time with due regard to seasonal and topical considerations.

CHANNELS AND METHODS OF PROPAGANDA.

(a) The Schools.—Where Hygiene is not taught as a set subject in schools, at least occasional conversational digressions by the teachers should be utilised for the teaching and training of school children. These talks should take the form of

carefully prepared statements supplied to all the teachers, and they should, of course, be graduated in their scope, etc., to serve all the school standards and illustrated wherever possible by picture-posters and stories. Short handbills might be printed and distributed, so that the children may keep them and take them home to their parents. Especially would this be valuable during epidemic periods.

(b) The duty of disseminating health knowledge should be urged upon all medical workers, nurses, midwives, sanitary officials and social workers. Local Authorities now have a range of public health officials capable of imparting useful knowledge upon every aspect of public health work. Each and every one of these should be made to realise that he or she should act in an educational capacity and that it is not sufficient to perform statutory duties without making those concerned aware of the nature and degree of the risk which it is sought to remove and of the importance of preventing its recurrence. The talks to mothers at Maternity and Child Welfare Centres have afforded an excellent opportunity for propaganda.

(c) The General and Local Press.—Paragraphs and articles should be inserted at frequent intervals dealing with current and seasonal matters affecting health, and the health problems of each locality should be adequately dealt with in the local press. Care should be taken to forward suitable material to those publications which are known to be read by the particular section (if any) of the community which it is desired to influence. Some appropriate pictures in the illustrated papers would be a very telling means of directing attention to local provisions and to local needs.

(d) Special and General Health Leaflets and Pamphlets.—Every opportunity should be taken by public health officials to circulate suitable leaflets as well as to have talks with the people, and so to make instruction lead to the prevention of ill-health and the replacement of legal action. Special sets of leaflets at cheap rates might be placed on sale on bookstalls and in shops; and Maternity and Child Welfare Centres, etc., could be used as distributing centres.

(e) Pictures and Posters.—A child, equally with the adult, can grasp its import, and when the subject-matter is pictorially represented is more likely to remain impressed upon the memory. There are many firms which specialise on all matters pertaining to the art of making things known, and their services should be requisitioned. Good art posters designed to catch the eye and appeal to the mind by virtue of the

artist's embodiment of a message are wanted, and it might be well to invite competition for appropriate designs with the offer of a substantial reward to the most successful competitors, for special posters for exhibition in public conveyances, public lavatories, public hoardings, factories and workshops.

(f) Exhibits.—The great value of exhibits of models, etc. (stationary and travelling), for instructional purposes is understood—especially when talks are provided to those who visit them. In this connection we would draw attention to the educational value of the exhibition to the general public of any provision (such as kitchens, canteens, baths, etc., etc.) which are provided and administered on model hygienic lines, either by the civil or military authorities.

(g) The Cinema.—This is a most valuable means of education, and one which at the moment is extremely popular. Any public health film should be introduced by a short appropriate address which will direct attention to the object and lessons of the particular film. Short films dealing with unhygienic practices and insanitary conditions, and at the same time setting forth what should be the hygienic practice under sanitary conditions (especially in times of local epidemics), might be introduced with the items of current events of the week.

(h) Public Lectures.—These are not a very successful means of general education, as those who most stand in need of advice rarely attend them. But where they are provided it is of prime importance to select experienced and telling lecturers, and that the lectures should be well illustrated—where possible by lantern slides or films.

On the other hand, short talks or addresses to employees (male and female) in large factories and workshops and to parents of school children, with the co-operation of employers and education authorities respectively, is a very valuable means of spreading hygienic knowledge.

It would be an advantage to have some organisation which would act for liaison purposes between all existing agencies, civil and Service, as well as for the various voluntary associations and societies which have for their object the physical welfare of the community.

A Central Controlling Authority is necessary. The Ministry of Health attaches great importance to this work and should serve as this Authority. But a Public Health Propaganda Society as above suggested to assist local Committees, and to link them up and co-ordinate and standardise their work, is desirable.

We are of opinion that such local Committees should be the Public Health Committees, who should give this matter of Hygienic Propaganda work some prominence in their deliberations, and should realise that its value will justify the expenditure of a reasonable sum of money each year.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

NOTES FROM BRANCHES AND GROUPS.

WEST OF ENGLAND BRANCH.

THE NEXT MEETING.

The annual meeting of the Branch will be held at Taunton on Saturday afternoon, July 8th. A number of interesting and important matters are to be considered. Among these are the election of officers for 1922-23, the suggested changes in the constitution of the Society, and certain matters connected with the salaries campaign. Meetings have not previously taken place on Saturdays, at any rate in recent years, but it was thought that this day might very well be a particularly convenient one for many members. It is hoped that every effort will be made to ensure a full and representative gathering.

THE DEVON COUNTY COUNCIL.

The Torquay meeting of the Branch happened to be held at the exact time when a very disconcerting resolution of the Devon Education Authority was first made public. This was to the effect that the remuneration of School Medical Inspectors should be reduced by 15 per cent., thus bringing the commencing salary down to £425. The hope was expressed that strong and vigorous action would be taken by the Salaries Committee and full details were at once forwarded to the Executive Secretary. To what extent the Society's protests have been effective will doubtless appear elsewhere in this Journal. One point at least is clear—it is the enormous importance of every practitioner engaged in the Public Health Service being a member of our Society. An unbroken front alone can save us in these difficult times.

COLLECTIVE INVESTIGATION.

Suggestions have been made on several occasions recently that a good deal of valuable information might be obtained by correlating investigations made by various Branch members on some particular problem or problems. The matter was discussed at Torquay in May, and a definite programme will probably be drawn up. As an example of the kind of thing in view may

be mentioned Dr. Bushnell's interesting proposal that Tuberculosis Officers might each obtain careful notes on a number of cases of tuberculosis, in order to find out to what extent, if any, infection in the home had been a factor in causing the disease.

DR. HERBERT JONES.

Many Branch members will have read with interest an account of a presentation made recently to an honoured colleague. It took the form of his portrait in oils with the following explanatory inscription:—"Presented to Dr. Herbert Jones, May 15th, 1922, by members of the Hereford City Parliament in recognition of his splendid services as Speaker since the inception of the Parliament in 1908." His many friends in the Health Service will agree with one report which credits Dr. Jones with "an encyclopædic knowledge of the theory and practice of public health in this country."

It is a source of satisfaction, too, to know that Dr. Herbert Jones has been re-elected as a Vice-President of our Society for another year, a fact which incidentally and under present circumstances doubles our Branch representation on the Council.

THE SOUTHERN BRANCH.

RECENT MEETINGS.

The March Meeting was held at The Castle, Winchester, with Dr. Lockhart Livingston in the chair in the absence of the Chairman. After the ordinary business, Dr. Avent read a paper on "Rural Sanitation," and this was followed by an interesting discussion.

The April Meeting was also held at Winchester, when Dr. Bruce Young read a paper on "Epidemic Jaundice," with special relation to a recent epidemic in his own experience.

A Meeting of the Branch was held in the Library of the R.N. Hospital, Haslar (by permission of Surgeon-Rear-Admiral W. Bett, C.B., M.V.O., R.N.) on Friday, May 5th. There were present Surgeon-Commander R. J. MacKeown, O.B.E. (President), in the chair, and 40 members and visitors.

After the minutes and correspondence had been read, a short paper on "The Effect of Dietetics on Teeth" was given by Surgeon-Commander D. H. C. Given, M.D., D.P.H., R.N. A paper was then given by the President describing the local water supplies, with special reference to those at Haslar Hospital, and illustrated by maps and diagrams.

The meeting then adjourned to visit the various departments of the Hospital, and demonstrations were given in the electro and hydro-therapeutic department by Surgeon-Commander T. E. Blunt, R.N.; and in "E" Block for Genito-Urinary diseases by Surgeon-Commander J. H. L. Page, R.N. The newly-built sick berth staff mess block was also inspected. Subsequently Surgeon-Rear-Admiral W. Bett and the officers of the Royal Naval Hospital entertained members and visitors to tea in the Mess. The meeting was most successful and great appreciation of the President's arrangements was expressed.

PREVENTION OF V.D.

Members of the Southern Branch have learned with special interest of the committee of investigation recently appointed by the Ministry of Health, as the Branch has for many years identified itself with preventive measures. At a meeting held in November, 1917, it was resolved that in the opinion of the Southern Branch the M.O.H. Society should actively associate itself with every effort made to educate the public in practical preventive measures and in providing the public with the necessary outfits.

Again, in December, 1918, the following resolutions were adopted:—

(a) That the Town Council of Warrington are to be congratulated upon the excellent circular letter which they have issued to the Local Authorities throughout the country.

(b) That the proposal of the Warrington Town Council (*i.e.*, the public supply of preventive outfits) is, if carried out, more likely to cause a rapid disappearance of venereal disease than any, or even all, of the measures advocated by the National Council without such prophylactic measures.

(c) That it seems desirable that a "National Council for Preventing Venereal Diseases" should be formed at once.

(d) That the essential work of such a Council should consist of a campaign pursued with the object of (1) acquainting the public with the fact that these diseases are to a large extent preventable and that means of prevention are obtainable; and (2) organising such arrangements as may be required in order to put on sale everywhere the necessary "hygienic outfits."

NORTH-WESTERN BRANCH.

MANCHESTER.

The Manchester City Council, after a long discussion, have decided to close down the ablution centres in the city at the end of June.

Protests against the continuance of the ablution centres had been received from a number of religious and social centres in the city, and it was stated that the publication of bills giving information concerning the treatment of venereal diseases suggested that the Corporation were condoning the offence and making provision to wipe out acts of immorality. In reply the Chairman of the Health Committee stated that the interference of religious bodies from the standpoint of morality had been mischievous and had hampered the work of local authorities in the campaign against Venereal Diseases.

BLACKBURN.

An address on "Milk and Health" was given by Dr. Daley, M.O.H. to the North-East Lancashire Federation of Farmers' Associations, on May 9th.

Dr. Daley pointed out the dangers of milk from tuberculous cattle and the danger of lack of cleanliness in the production and handling of milk. He stated that the consumption of milk in Blackburn was just over one-tenth of a pint per person per day, while in New York, where milk was graded, it was over five times that amount.

The general opinion of the meeting was that grading would be advisable in view of the fact that under the present system the farmers who take no trouble and go to no expense for the purpose of producing specially clean milk obtain the same price as those whose milk is of exceptional purity.

METROPOLITAN BRANCH.

APPEAL IN UNLABELLED CREAM PROSECUTION.

In "Public Health" for November, 1921 (p. 44) details appeared of a case in which a conviction was obtained by the St. Marylebone Borough Council, under the Public Health (Milk and Cream) Regulations, 1912, Amendment Order, 1917, against a firm for delivering and depositing for sale preserved cream in a receptacle not labelled in accordance with the regulations. While admitting the facts the defendants asked for a dismissal on the ground that Article VI. of the regulations, which requires that an opportunity of offering an explanation should be given, had not properly been complied with. This view the magistrate refused to accept, agreeing with the prosecution that, as the inspector had inquired verbally of the vendors' employé why labelling had not been done and had received in explanation a reply from him that he had forgotten it, due notice in this respect had been given.

An appeal by the firm against the magistrate's decision was heard in the King's Bench Division before the Lord Chief Justice and Justices Avory and Greer, on the 17th May, 1922, and was dismissed with costs, the Court holding that the local authority, acting by their agent, the sanitary inspector, did afford an opportunity to the appellants of furnishing an explanation in the matter. This decision in particularly interesting for the reason that before the regulations came into operation the Metropolitan Branch protested to the Local Government Board against Article VI., pointing out that it sought to make the local authority not only prosecutor but judge and jury as well. Such a position is untenable, and is not one that any of the recognised courts is ever likely to approve.

M.O.H., FULHAM.

Dr. A. Middleton Hewat, late Medical Officer of Health and School Medical Officer, Borough of Nuneaton, has now taken up duty as Medical Officer of Health of the Borough of Fulham.

MALIGNANT DISEASE.

There has just come to hand the proof of a special report on "A Possible Cause and Prevention of Malignant Disease—A Suggestion," by Dr. F. W. Alexander, Medical Officer of Health of Poplar. Addressed to the Public Health and Housing Committees of the Council, the report is divided into five parts—Statistical and General; Salts of the Body; Diet, Cooking; Suggestion!! (the notes of exclamation are Dr. Alexander's), and the hope is expressed that it may be circulated among the medical practitioners of Poplar and be of interest to them. Dr. Alexander has been at pains to consult many works on the subject, and numerous extracts from these are given in the body of the report and in the appendix. Without attempting to summarise the report it may be said that reference is made to the opinion that cancer is due to a want of balance in particular salts in the body. The question of diet is dealt with at some length, especially in regard to vegetables, and great stress is laid upon the importance of a proper supply of potassium. Dr. Alexander suggests the distribution of a leaflet dealing with cancer and setting out particularly the best method of cooking potatoes and green vegetables, and stating briefly the reasons for so doing and the benefits accruing.

MATERNITY & CHILD WELFARE GROUP INFANT HOSPITAL, VINCENT SQUARE.

Dr. Eric Pritchard, M.A., M.D., whose work

in connection with infant welfare is so well-known, has been appointed Medical Director of the Infants' Hospital, Vincent Square, Westminster, S.W.1, and the work of the hospital is to be very largely developed with the special object of bringing it into close co-operation with the Welfare movement. The medical staff is being reorganised and a full use of the research laboratories is being promoted with the object of making the hospital a centre of research, in connection with infantile conditions. It is also proposed to provide specialised training classes both for nurses and for health visitors and similar workers, who require specialised classes of this nature to complete their qualification. Another special feature of the hospital will be private wards for those infant patients whose condition render such provision necessary.

BRANCH MEETINGS.

YORKSHIRE BRANCH.

An ordinary meeting of the above Branch was held in Leeds on 26th May, when there were present Dr. Buchan (President) and nine members.

The President offered the congratulations of the members to the Hon. Secretary on his recovery from his recent severe accidents.

Several matters were laid before the meeting, including the draft of the proposed new Articles of Association. It was resolved that these should be circulated among the members of the Branch, and the matter be further discussed at a subsequent meeting.

Dr. Moore showed two guinea pigs, the subject of tuberculosis, caused by being injected with sediment from contributed milk, the milk being purchased from an ordinary milk round.

Dr. Francis read a paper on "Should medical examination be required before marriage?"

NORTH-WESTERN BRANCH.

Annual meeting held at Blackpool, Saturday, June 10th, 1922. Present (13), Dr. J. W. Talent (President) and 12 members. Minutes of last annual meeting read and confirmed.

Apologies for absence were received from 46 members.

In the absence of the Hon. Treasurer his Annual Statement (copy printed in Annual Report of Proceedings) was submitted, from which it was shown that there was an adverse balance of £23 2s. 2d., being an increase of £5 3s. 8d. for the work of the past Session. Twelve new members had joined, giving a net total of 226 members at present belonging to the

Branch. Thirteen meetings had been held with an average attendance of 21 at the Ordinary Meetings.

The following, who had been nominated as Officers for the Session 1922-23 were unanimously elected on the proposition of the President (Dr. Talent), seconded by Dr. Adams:—

President, Dr. E. W. Rees Jones; Hon. Treasurer, Dr. H. H. I. Hitchon; Hon. Secretary, Dr. G. W. N. Joseph; Council Representatives, Dr. T. W. N. Barlow, O.B.E., Dr. James Wheatley, Dr. E. W. Rees Jones, and the Hon. Secretary; Committee, Drs. Daley, Lissant Cox, Morley Mathieson, and Peyton, together with the Vice-Presidents and Officers.

A suggestion that Presidents of Sub-groups should "ex-officio" become members of the Branch Committee was favourably received and referred to the Committee.

A letter was read from the West Lancashire Association for the Care of the Mentally Defective, asking the Branch to nominate a representative on the Executive Council of that body. It was resolved that Dr. Kingsford be appointed representative.

Dr. Rees Jones (President-Elect) announced the arrangements that had been made for the afternoon and was thanked by the members for his efforts on their behalf.

At the close of the business the Mayor of Blackpool (Councillor David Dickinson, J.P.) entered the Council Chamber and welcomed the members in a short speech. On the proposition of the President (Dr. J. W. Talent), seconded by Dr. W. Allen Daley, a hearty vote of thanks was accorded to the Mayor for his invitation to the Branch to meet this year in Blackpool.

After the meeting the members adjourned to the Mayor's Parlour and thence to the Clifton Hotel, where an excellent lunch was kindly provided by the Mayor.

The afternoon was spent in visiting municipal institutions or the various attractions on the beach, and the members were entertained at tea later at the Clifton Hotel by the President.

CANCER DEATH-RATE.

The Health Committee of the Corporation of Leicester, being impressed with the increasing number of deaths from Cancer, have decided to act on the same lines as have been followed by the Portsmouth Health Committee for some years, and an advertisement has been issued drawing attention to the ravages of Cancer and urging the importance of immediate resort to skilled medical advice as soon as any signs or symptoms occur

which may be regarded as being in any way suspicious of Cancer. The advertisement also mentions that a leaflet describing some of the early symptoms can be obtained on application at the Health Department.

CORRESPONDENCE.

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

TRAINING FOR THE D.P.H.

From Dr. A. PRIESTMAN.

Dear Sir,—Having served in the Public Health Service for nine years and suffered recently under the training provided for those wishing to take the "D.P.H." at Edinburgh University, I would like to make a few remarks upon the article with the above heading in the April number of *Public Health*.

The Draft Regulations mentioned therein may be drastic, but they are not so drastic as the Regulations already in operation at Edinburgh University. These diploma regulations were instituted in 1919, and so "these drastic changes" are not only foreshadowed, illumined by the far-off radiance of the Rockefeller Institute, but are already a grim reality. How far are they satisfactory? Let us keep Edinburgh in mind. The length of curriculum is one academic year; let us not grumble; there is much to be learned.

From early October to Christmas one does four hours a day of chemistry and meteorology in a laboratory, two hours in the morning and two hours in the afternoon. The work could be comfortably done in the morning in two or three hours and liberate the afternoon for work in some other subject, say bacteriology. But chemistry dribbles along all day until Christmas—the day is filled. In the evening one hardly knows what or how much to read; an examination being usually a test as to who can satisfactorily repeat, parrot-like, the wishes of the Professor; it is useless to read and memorise the ideas professed by others.

How nice and easy it all seems, this October to Christmas! and one wonders why one determined to sacrifice a job and a year's salary, and to start paying someone else for a rather idle and very stuffy existence; all Institutes for the teaching of Public Health seem to be examples of how *not* to ventilate and warm buildings! After Christmas the storms begin, those awful processes which are calculated to produce a certainly temporary and a probably permanent mental stasis. From all sides is uplifted the cry, "Quick, thy tablets, Memory!" until the poor centre, where She abides, collapses, and all the other attributes of

the brain yield submissively, without struggle, out of pity for their poor, despairing, sinking sister. Why does all education from the kindergarten to the post-graduate course assume that Memory alone of all our wits is worth the training, ignoring original thought, spontaneous action in response to stimulus, and a host of other valuable gifts with which the human brain and heart are endowed?

Truly, we must be silly that we submit so long to this perversion of the education of our children and young manhood, those whose brains were originally respectably clear. Revenons! after Christmas there is a tiring crescendo of work, "shades of the prison house begin to close," and the thought of days when we were nearing our "M.B." shines quite sweetly in comparison with the present.

One stews for three hours in an overheated "Lab."—rushes across to an hour's concentrated lecture on Sanitary Engineering with its accompaniment of flustered writing and hurried reproduction of diagrams on the board—pictures of sand-filter beds, water-towers, service-reservoirs, sludge-compressors, etc., etc. On three days a week one is asked to do Practical Bacteriology, including a preliminary lecture on the day's work, for four hours on end. In the afternoon, if one is able, one is expected to listen to an hour's lecture on Infant Welfare, with a subsequent visit to a crèche, or listen to an hour's talk on the Medical Inspection of School Children, with an occasional visit to a secondary or special school.

All these activities are proceeding, and they are very real, very earnest, because there is a class examination in each subject and 60 per cent. of available marks are expected for "a pass"; this, coupled with the dread of the impending degree examination (Part I.) in P.H. Chemistry and Bacteriology with its colossal tax on the memory, makes a weary and nerve-racking existence. It is not a little that is expected. The Professor of Chemistry thinks that we are all to become expert analytical chemists for a Local Authority, and the Professor of Bacteriology lifts up a standard of work and technique which, once accomplished, would indisputably qualify a man to carry out work in any Bacteriological Laboratory in the United Kingdom, and do it reliably. But how many will become one thing or the other? And again, an unfairness of things creeps in—the same standard is expected of all, their past work is not enquired into; one man may be chemically-minded, he may be a "B.Sc.," and his pet sub-

ject once chemistry; another may have had the privilege of being attached to a travelling or stationary laboratory in a great war and done as much bacteriology in a year as the average man is privileged to do in a lifetime. One man may be recently qualified and comparatively unworn by the hardness of life; another may have been in practice slaving away for 10 years. No matter! "He must come up to our standard"—"we cannot be bothered to find out anything about the man and his struggles—if bread and butter for himself and his wife and family depend on success, why did he go in for such a diploma?" March is over, or let us hope so, and the next three months in preparation for Part II. begin. Bang! bang! bang! Louder and louder grows the crescendo of the tune. Lectures in advanced Public Health three days a week, 30 hours in all; a long journey out to an infectious hospital with short lecture and ward-demonstrations, after one hour's lecture on Entomology and Parasitology, followed by two hours' practical work in the same subject. Lucky the man who can get his coffee and catch his tram between the two—otherwise, he may miss his coffee and catch "Dip" later in the day.

Then a long tram ride into the city and 10-20 minutes for lunch; another lecture on Sanitary Law begins at two o'clock, and at three o'clock one sets off for some remote reservoir or cowshed.

Once a week there is a lecture on Tuberculosis to be attended and digested, and once a week a lecture on Venereal Diseases.

Look ahead, comrade! and for any sake give me thy hand! What is there in front?

1. A class examination, written and practical, in Tuberculosis.
2. A class examination, written and practical, in Venereal Diseases.
3. A class examination in Advanced Public Health.
4. A class examination in Infant Welfare.
5. A class examination in School Medical Inspection.
6. Professional examination in Part II. as follows:—
 - I. Sanitation (two papers), Epidmiology, and Infectious Diseases (written and oral).
 - II. Sanitary Law and Vital Statistics (written and oral).
 - III. Entomology and Parasitology (oral and practical).
 - IV. Public Health Administrative Work, including report on dwelling, workshop, hospital, or any sanitary scheme.

In each examination the candidate must obtain 60 per cent. of available marks, and the standard of knowledge expected is high throughout all subjects. In Venereal Diseases, for example, one needs a thorough working knowledge of Harrison's smaller text-book, which contains a good deal.

The lectures on Entomology and Parasitology would fill some eight or nine note-books, and one had to be well acquainted with the microscopic appearances of some 200 objects and be able to dissect a mosquito.

The Sanitary Engineering was taught most thoroughly and gave one a good practical knowledge of the subject. All the subjects were most efficiently and most ably presented, but think of the strain of memory involved! No, my complaint is not of the want of thoroughness of the teaching in Edinburgh, but the over-burdening of the mind with a wealth of material, the storing in the memory of material, almost 70 per cent. of which is promptly to be forgotten and never put to practical usage.

The subjects of Parasitology and Entomology alone made sufficient material for three months—we might all of us have been proceeding to India in August as members of a commission for enquiry into the causation and spread of malaria—or shortly to be placed in supreme charge of a V.D. clinic or large sanatorium or made consulting sanitary engineers to a vast and quickly growing American state. Would it not be better to ascertain something of the individual's past and something of his intended future? Is he hoping, as about 95 per cent. must be, that he will become a part of our good but miserably paid Public Health Service? Does he intend to go East, and need a knowledge of insect life and the part played by insects in disease? Does he intend to take up Infant Welfare and require special knowledge in the diseases of infancy and a scientific knowledge of infant feeding, or does he intend to be an analytical chemist in the region of public health, or is his life to be spent in bacteriological research into the causes of cancer, etc.? He cannot possibly do all or even two of these things thoroughly. If he is of the 95 per cent., let him be told and shown the actual life of a medical officer of health, let him know that small section of the law which he will daily meet, and know it inside out—in fact, let him chiefly realise what is the practical meaning of the words "Medical Officer of Health"; let him see all possible systems of water-storage, drainage, sewage puri-

fication, milk-handling, etc., etc., which form so important an item in Public Health work—let him know wherein lies hope for the health of the community, just how far he can legally attain the fulfilment of his hope, and how exactly to accomplish the attainment of saner, juster laws; and our D.P.H. man will be a man who will go forth to conquer fairer fields for those whose fields are far from fair.

Any new course on Public Health service should have in view, first, the most urgent need of the near future, and secondly, the likely needs of the more remote; and of these the first contains "Housing," "Food," and "Alcohol."

Yours faithfully,

AUSTIN PRIESTMAN,

Assistant Medical Officer of Health, Borough of Folkestone.

FROM THE MALTHUSIAN LEAGUE.

BIRTH CONTROL CONFERENCE IN LONDON.

Sir,—Up to the present the question of family limitation has not received the attention which it merits from the medical profession. Almost all medical practitioners will agree that some form of birth control is justifiable, and even desirable, under certain conditions; but so far they have devoted little care to the subject, and especially to the consideration and improvement of contraceptive technique.

An international conference dealing with the various aspects of the subject will be held in London next July, 11th to 14th. Friday, July 14th, will be devoted to the medical and contraceptive sections, the latter of which will be open only to medical practitioners and students. The fee for membership of the conference is 10s., but medical men and women can become honorary members by applying to the medical secretary. Any of them willing to contribute papers are invited to communicate with us. The presidents of the other sections are: Professor MacBride (eugenics), Mr. J. M. Keynes (economics), Mr. Harold Cox (national and international aspects), and the Rev. Gordon Lang (moral and religious aspects).

We are, Sir, &c.,

G. ARCHDALL REID, President, Medical Section.
NORMAN HAIRE, President, Contraceptive Section.
B. DUNLOP, Med. Sec., 71, Harley Street, W.1.

Public Health

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Editorial.

"COVERING" BY MIDWIVES.

As the result of representations made to the General Medical Council by the Central Midwives Board, warnings have been issued to the medical profession concerning the danger to which medical men expose themselves by making arrangements about confinements with women whose names are not on the Midwives Roll; such a practice is described as "covering," and the severest penalties of the General Medical Council are threatened in connection therewith. In other words, if a doctor makes an arrangement with an unregistered woman whereby he is to be sent for in connection with a confinement if necessity arises, it is held by the General Medical Council to be "covering," and is regarded by them as infamous conduct in a professional respect. Such a practitioner would be liable to have his name erased from the Medical Register and would be ruined.

In view of the very serious issues that are obviously involved in this matter, it is particularly important to study a case recently brought before the Central Midwives Board. A midwife practising in a certain town was charged by the Local Supervising Authority with employing an uncertified person as her substitute. Conclusive evidence was forthcoming in connection with four specified confinements to the effect that the midwife had deliberately sent an unregistered substitute to attend in her place. The Board, in accordance with their invariable practice, declined to consider three of these four cases on the grounds that a doctor had been engaged and that the midwife was, therefore, acting as monthly nurse. The fourth case, where apparently a doctor had not been engaged, but where the midwife had sent a substitute to the confinement, was considered and dealt with.

This incident, having regard to the general procedure of the Central Midwives Board in such

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cases, needs special attention because it represents a menace to the general public safety as well as to the medical profession, and the decision of the Central Midwives Board not to investigate this matter because a doctor had been engaged, and because, therefore, the midwife was acting as a monthly nurse, is most unfortunate. Such a decision would result in a continuation of this dangerous practice indefinitely unless public attention were called to the matter.

If the decision of the Central Midwives Board in this case is to prevail, it means that doctors may, without any warning, and in perfect innocence, find themselves charged with infamous conduct in a professional respect as the direct result of the refusal of the Central Midwives Board to require a midwife to obey the rules whether she is working with a doctor or alone. The danger will be clear to everyone who considers the obvious possibilities. A doctor may make an arrangement with a practising registered midwife that he will, for a fixed fee per case, hold himself in readiness to come to the help of the midwife on request—a perfectly satisfactory professional arrangement between a registered midwife and a doctor. The midwife, however, without his knowledge, knowing that a doctor is professionally engaged for the case, and trading upon the decision of the Central Midwives Board that she is thereby freed from all restrictions in the way of rules, may decide to send to all such cases an unregistered and unqualified substitute who conducts the confinement entirely upon her own responsibility and without calling in the doctor. This is what happened in three of the four cases mentioned in the above charge—the unregistered and unqualified substitute was sent to deal with these confinements and had sole charge of them and, although a doctor had been “engaged,” he did not attend once, because he was not sent for. Although the doctor concerned in these cases could be charged before the General Medical Council with “covering” an unregistered woman, and in spite of the obvious danger to the public entailed in such practices, the Central Midwives Board decided not to consider that part of the evidence.

OPHTHALMIA NEONATORUM.

Ophthalmia Neonatorum has now been a notifiable disease for a sufficient length of time to enable us to commence some careful checking as to the possible deficiencies in the system. Medical inspection in infants' departments of schools should reveal numerous children showing evi-

dence of ophthalmia during infancy, and, provided that such children have resided continuously in the same district, there is no difficulty in searching the notification records and so instituting a check. An investigation in this way upon a large scale appears to be called for, and we hope that some of our big areas will undertake it. In the minds of many medical officers of health there is no doubt that the present system is defective, and there seems to be an impression that lying-in institutions and maternity nursing associations for training midwives are among the chief offenders. Possibly the defects are due essentially to the existing lack of expert supervision of the work of the midwife. The Midwives Act, 1902, was passed in order to establish a service of trained women practising under continuous expert supervision and inspection, and it is most unfortunate that, in practice, the service has developed without adequate supervision.

The results of increased care being given to the eyes of a child at birth are distinctly encouraging. In practically all the States of America, where ophthalmia neonatorum is considerably less common than it is in this country, a midwife is required to treat the eyes of every newly-born infant with a solution of nitrate of silver, while in New York City, where specially stringent regulations have been made, it is claimed that the disease has almost ceased to exist.

HOUSING AND OVERCROWDING.

In a recent report Dr. J. R. Kaye, Medical Officer of Health for West Riding County Council, described conditions in some parts of the Riding as appalling, and his reports have so impressed the County Council that a deputation has been appointed to wait upon the Minister of Health in order to impress upon him the serious nature of the position, and to get something done. Commenting upon the report, “Sheffield Independent” says:—

“Judging by the report of the Medical Officer of Health to the West Riding Public Health and Housing Committee, Sir Alfred Mond's dissertations on housing should be thoroughly popular in the Conisbro' district. It seems that out of a sanitary survey of 680 houses in Denaby Main, there were 225 houses with lodgers of two or more families, 93 with two families, one with four families, and 128 overcrowded. Of 924 houses inspected at Edlington, 419 had lodgers or more than one family, and 217 had two families in each house. Well might such a report end up by saying that such a position affords an example of

‘the general deterioration that is taking place in South Yorkshire and the West Riding generally,’ and by expressing the view that remedial action is needed!

“It would not much matter if the position here revealed was exceptional. But all the evidences are to the effect that it is not.”

In this area Dr. Kaye reports that a scheme for 283 houses was approved by the Ministry of Health on a site of 34.403 acres, but the Ministry only allowed 32, and quite recently returned the plans for these houses, the tenders for which were about £500, requesting the Council to submit fresh plans, and up to now no houses have been started.

Similarly with regard to Sowerby Bridge, the Ministry of Health approved of a scheme of 101 houses on a site of 8.4 acres. Tenders for only 43 houses had been approved when the Government “cut” came. These have been completed, and the Ministry refuse to give their sanction for more houses to be built.

OPHTHALMIA NEONATORUM.

A circular was recently issued by the Scottish Board of Health to medical practitioners “strongly recommending the installation of silver nitrate solution into the eyes of newly-born children, and intimating that they will in future require a report, with particulars of treatment, from medical officers of health on all cases in which there occurs loss of vision.” The recommendation is no doubt the result of long-considered thought on the part of those who wish to lessen by some means the cases of preventable blindness. At the second English-speaking Conference on Infant Welfare, held in July, 1921, a resolution was unanimously carried urging the Ministry of Health to institute an inquiry. Some training schools teach the use of perchloride of mercury, protargol, or argyrol in certain cases, such as breech and face presentation and B.B.A.'s, or when the mother has a discharge, while other training schools teach and many authorities advise the use of a solution of nitrate of silver as a routine practice for all cases.

So far in England there is no regular provision or any law to enforce the use of any prophylactic prevention, although such is used by a large number of those who undertake midwifery cases; a solution of nitrate of silver does not, however, recommend itself to all, and there are other preparations that are considered efficacious, and are used with marked success. Whatever preparation is used, it is agreed that nothing can

take the place of the other preventive measures: the thorough and efficient cleansing of the mother, the elimination of the danger of a vaginal disease, the rigid observance of C.M.B. Rule E. 14, with regard to care of the infant's eyelids and eyes at birth, strict cleanliness, and the prompt compliance with the rule laid down for the procuring of medical aid. Ophthalmic surgeons believe that, if proper treatment is given to the eyes at birth, no cases of ophthalmia neonatorum need ever occur; that if a case *should* occur and “adequate and prompt skilled treatment is provided, no eye need ever be lost, practically speaking, and that very few need ever be permanently damaged.”

THE DISTRICT NURSE AS HEALTH VISITOR.

In our June issue we referred to the strong evidence which had been issued by the M.O.H. Society in favour of whole-time health visitors, and we regard with much pleasure the valuable support which is forthcoming from the “British Journal of Nursing.” In discussing this important problem in its issue dated July 15th, 1922, the “British Journal of Nursing” says: “We quite agree that when she undertakes public health work it is desirable that she should be a whole-time official.” There seems to be, therefore, striking unanimity among members of the nursing profession and the medical officers of health, and the whole case for the employment of district nurses in this capacity appears to depend upon some local efforts in the alleged interests of economy supported by those areas which are at present employing the district nurse as health visitor, and which naturally desire to justify their practice, together with undoubted support from the Ministry of Health. The matter, however, will probably be decided ultimately by the expert and experienced advisers of local authorities, and so we have no doubts about future developments. The attitude of the Minister presumably represents temporary political expediency and will, we trust, be altered as soon as it is realised that the great body of experienced opinion is against this reactionary proposal.

Interesting corroboration from the district nurse has been received by the writer of one of the three papers which are published in this issue. A district nurse writes as follows:—

“I have just read with interest your paper on the district nurse. It comes at an opportune

'powers that be' are trying to force me to undertake health visiting. . . . Health visiting has been undertaken by this Association in the past, but in what a fashion! It merely consists, as far as I can make out, of weighing the babies and finding out what they are fed on. To do this County Medical Officer justice, I do not think he wants us to do it. But the Association grieves for its lost grant, which I believe is about £18. The sanitary arrangements here are unsatisfactory, and there is gross overcrowding, in spite of years' of health visiting by the district nurses. I need hardly say this is quite confidential, but I felt I must write and thank you for taking up the cause of the district nurse-midwife. Perhaps in the future you will be able to do something towards getting a better state of affairs."

WIMBLEDON M.O.H.

A new terror has been added to the life of the M.O.H. by the action of the Wimbledon Borough Council in connection with their process of selecting a Medical Officer of Health. A newspaper report states that after the six officially selected candidates had been interviewed, the Town Clerk was requested by the Joint Public Health and Staffing Committee to visit Hindley and Tunbridge Wells and make a report to that Committee about two of the candidates concerned. It is unfortunate that the members of the Wimbledon Committee did not consider themselves capable of making a selection after considering carefully made applications with testimonials, as well as a personal interview. The practice of sending an officer of the Council to make inquiries in the district of a medical officer of health is most undesirable, and one that should be opposed very strongly by every officer employed by a Local Authority. We commend the incident to the notice of the National Association of Local Government Officers.

CREWE TREATMENT CENTRE.

The protagonists of part-time medical services for official work scored a success in March last when the Crewe Town Council accepted the offer of the local practitioners to undertake the work of school medical inspection and infant welfare centres for £300 for twelve months. Fortunately, however, the members of the Crewe Town Council quickly realised their mistake, and became aware of the administrative impracticability of such schemes, and they subsequently rescinded that resolution and decided to appoint a whole-

time assistant at £500 per annum. The employment of local practitioners for this and all such work will never be really comparable with whole-time services as regards cost so long as public bodies are able to appoint a fully qualified medical man with considerable post-graduate experience at the inadequate salary of £500 per annum. It is not possible to refer too often to this fact, and we recommend every member of the British Medical Association to give serious attention to this danger to professional remuneration as a whole.

B.M.A. AND SALARIES.

Everything points towards a satisfactory termination of the present negotiations between the B.M.A. and the M.O.H. Society concerning the joint action by the two societies in connection with the scale of salaries and other matters. The M.O.H. Society has always desired nothing more than the support of the B.M.A., but unfortunately there has been a tendency on the part of the B.M.A. to regard such support as a special favour to be granted only on terms. Perhaps the most encouraging fact is the disappearance of this attitude. Presumably it is now being realised by the leaders of the B.M.A. that the ability of any Local Authority to engage, with the full approval of the B.M.A., a medical practitioner not only fully qualified, but also equipped with post-graduate qualifications and experience, at a whole-time salary of £500, constitutes a serious danger to and degradation of professional remuneration as a whole. In future negotiations concerning panel rates of pay, the most serious and damaging argument in favour of a substantial reduction of the present rates is the present rate of remuneration in the public health service. The awkward fact remains—and this is a fact which cannot be repeated too often until it is thoroughly appreciated and understood by every member of the B.M.A.—that a newly-fledged medical practitioner on the present scale of panel payment has an opportunity of starting in panel practice with a certainty of being paid for any work that he does at a rate equal to the highest salary paid in the whole of the public health service—a rate which is at least four times greater than that of the man who is entering the public health service.

DR. ST-NOY SCOTT has resigned his appointment as Medical Officer of Health for the Plympton St. Mary rural district.

THE DISTRICT NURSE AND HEALTH VISITING.*

BY

ROBERT A. LYSTER, M.D., Ch.B., B.Sc., D.P.H.,
County Medical Officer for Hampshire.

In making a study of the rapid developments which have taken place in public health administration in this country during the past 20 years one cannot fail to be struck by the prominence of three particular features which appear to be inseparably associated with the improvement. These three principles are:—

(1) *The continuous elimination of the part-time officer from official public health work.* For many years it has now been recognised frankly that definite official duties (i.e., work in connection with the carrying out of the public health responsibilities of local authorities) on the one hand, and the interests of private practice on the other hand, are inevitably in opposition; and that where the same individual undertakes official work of this character and also carries on private practice, the interests of one or the other must suffer. In practice, one finds usually that it is the official work that is done badly, or done only partly, or not done at all. The suggestion with regard to the employment of a district nurse as health visitor has, I understand, now been restricted entirely to those areas where the district nurse and midwife has no opposing privately practising midwives, and so it is unnecessary for me to refer to those completely unsatisfactory conditions which would arise in addition if the district nurse were given an unfair advantage over her competitors.

(2) *The more complete recognition of the essential principle that public money must not be expended by private individuals, but must always be expended under the direct control of public bodies.* The farming out of public work to private individuals, or to voluntary associations, who have no direct responsibility to the public, has now been recognised for many years as being opposed to the public interest. Public work by district nurses should be regarded as unacceptable unless the local authority has a voice in the appointment and dismissal of the nurses, and also has complete control over that part of the work which they carry out for the public authority. Even with this concession the handicap to which the nurse's work is subjected on account of the violation of the principle involved in the foregoing paragraph renders her employment less likely to produce entirely

satisfactory results than the use of whole-time health visitors directly under the control of the local authority.

(3) *A marked tendency in the way of combination of the various public health duties of public health officers.* Piecemeal legislation and the special stimulation of public interest in particular subjects led, unfortunately, to the development of special services, and so in most areas there developed special staffs to deal with these subjects as watertight compartments. In this way many areas had and, unfortunately, a few still have separate staffs to deal with school work, tuberculosis, maternity and infant welfare, and in one or two instances there has been organised even a special staff to deal with measles! Fortunately common sense has called a halt in this kind of development, and for many years there has been a tendency to dissolve these watertight compartments and to start a general public health service, to the very great benefit of the service, and to the public, as well as a considerable reduction in expenditure. Some unification is claimed by combining health visitor services with that of district nurse, but there is no difficulty in showing that this is not a true unification at all on account of the inherent defects which belong to the position of district nurse.

Each of the above important principles has some bearing upon the subject now under discussion. The employment of the district nurse (a private practitioner) in definite public duties, under no real public control, is opposed to the first principle; the handing over of large sums of public money to be expended by nursing associations is opposed to the second principle: the alleged combination of duties is not only, in this case, in direct conflict with the first principle, but any careful examination of the position must reveal the fact that no real combination of duties is effected by adding official duties to those of a district nurse.

Before proceeding further with the examination of this subject I should like to say that I am not in any way hostile to the district nurse. She does admirable work, often in the most adverse circumstances, and usually carries out her duties as a private practising midwife and nurse in an exemplary fashion. But her ability within her proper sphere forms no valid reason why she should be thrust into work for which she is unsuited. It is her misfortune that she belongs to a sweated industry. She is grossly underpaid, and is liable to be treated most unjustly, and to be dismissed arbitrarily, if she fails to please the local personages who have constituted themselves the total

* Paper read at the Conference on Infant Welfare on July 3rd, 1922.

nursing association. Members of nursing associations have in my hearing frequently attacked the principle of the employment of health visitors on the grounds that they are paid too high salaries and that the payment of such salaries makes it increasingly difficult to obtain district nurses on the old scales of remuneration. My experience leads me to believe that practically the whole of the hostility towards the whole-time health visitor on the part of nursing associations is due to this cause, combined with the fact that the present financial stringency makes it difficult for nursing associations to collect their subscriptions. Naturally they cast longing eyes upon public funds, and in some areas nursing associations have been placated by handing over to them large sums of public money which have gone essentially to the relief of private subscribers without resulting in any additional services or benefits to the public.

Another fact which I should like to make quite clear is that in my own area I have a thoroughly well-organised and efficient County Nursing Association with the members of which I have always maintained the most friendly relations. It would be difficult to imagine a better method of providing, in the present circumstances, nursing services for the public. Such a County Nursing Association is able to raise considerable funds from voluntary sources, and is able to form the necessary connecting link between the various small local nursing associations which provide the actual nurse. It is true that since the provision of midwifery has become a responsibility placed upon Local Authorities the position has been altered to some extent, and the present practice of the Ministry of Health in making large grants of public money to such voluntary associations appears to me to have very grave disadvantages. At the same time one realises that such grants are probably intended only as a temporary measure during a period of transition from one system to another. No difference of opinion is likely to arise between any Nursing Association and myself until such an association suggests that the district nurse is capable of carrying out efficiently the duties—school, tuberculosis, maternity and infant welfare, etc.—at present performed by whole-time health visitors. My experience is that to attempt to carry out this work by the employment of a part-time district nurse is administratively difficult, unnecessarily costly, and inefficient, and that any such change can only be regarded as reactionary.

The discussion of this subject would be far easier if it were possible to assume that the qualifications, personality, and training of health

visitors and district nurses are on the whole equal. Unfortunately, this is not the case. The average level among district nurses is greatly below that among whole-time health visitors: very few district nurses would stand any chance at all of obtaining an appointment as a whole-time health visitor, although it is true that a few selected ones are occasionally successful. The point of view of the two individuals is, moreover, often opposed. The district nurse works from the individual standpoint, and throughout her work she is imbued with the impression that in order to retain her post she must retain her local popularity, and do nothing to displease anyone. The health visitor's point of view is that of the common good, and she realises that those who are offending against the common good may be displeased with her if she does her work properly.

I have been at some pains to try to ascertain precisely the claims of those who are advocating an extended employment of district nurses in health visitor duties. Moreover, I have had considerable experience in my own area in the employment of district nurses for public health duties, and also, in the greater part of my area, the employment of whole-time health visitors for the purpose, and as a result of this experience, which has extended over many years, I am able to say without any hesitation or reservation whatever that there is no comparison possible between the standards of work obtained in the two cases. From a public health point of view, and from the view of preventive medicine, the work of the whole-time health visitor is as a rule effective while the work of the district nurse employed upon public work is generally ineffective. In order, however, that I might be able to present, as far as possible, the whole case, I have carefully studied the claims of those who are advocating the extended employment of district nurses, and I find that these claims resolve themselves into the following:—

1. It is claimed that the health visitor, with a relatively large area to cover, is able to visit individual children only at comparatively long intervals. This statement may be true in those areas which still employ separate staffs for school work, tuberculosis, and general health visiting, with the result that the person in charge of each of these three subjects is necessarily given a large area to cover. Fortunately, however, this method may be regarded as obsolete, and has few defenders. The proper comparison is with those areas where one specially selected nurse is put in charge of all public health duties, with the result that the area is sufficiently small to enable her to

visit individual children as frequently as may be necessary. In practice one does not find that a district nurse visits individual children so frequently as a health visitor does when employed on the latter system. In many instances the cases are such as to cause the district nurse to be extremely loath to visit at all.

2. It is also claimed that the health visitor cannot have the influence with the mother that a district nurse has, and that the district nurse is able to keep an infant under frequent observation from its birth onwards. As regards the alleged influence with the mother, one finds at least as many instances where the influence of the whole-time health visitor is greater than that of the district nurse, while so far as the ability of the district nurse to keep an infant under frequent observation from its birth onwards is concerned, I see no reason why this should not be carried out always, but I do not agree that it is in any way a substitute for the work of a whole-time health visitor.

3. Undoubtedly the argument which appears superficially to be the strongest in favour of the employment of the district nurse is that by such an employment there is unification of service with economy of work and financial expenditure. Unfortunately, however, an analysis of the position shows that this claim is entirely without foundation. First of all there is the inherent weakness due to the association of private practice with the carrying out of public duties which has proved in the past to be so thoroughly unsatisfactory. As regards expenditure it is quite easy to show that no real saving is secured: very large sums are spent annually by those areas which use district nurses, and these sums are spent without adequate public supervision and control. Even more conclusive is the fact that when a district nurse is given these public duties there must still be some duplication because the strongest supporters of the district nurse admit that she cannot be expected to discover verminous conditions in the school, or to discover sanitary defects in the houses. Her position locally would be impossible if she were to do either of these things, and as a result she naturally does not do them, so that the visit of a second person in the form of a whole-time health visitor is still necessary. The alleged unification is, therefore, not accomplished in practice.

4. Another rather vague claim is that a district nurse is of value as a factor in the work of preventive medicine because of her influence upon the mother and infant. In making this claim it is usually suggested that the provision of an

efficient general nursing service would have prevented many of the evils with which the whole-time health visitor has to deal. This is the kind of argument that should be met definitely. If the influence of the district nurse is so great and so beneficent it is astonishing to find so much for the whole-time health visitor to do after the district nurse has had full scope for her influence and activities for so many years. In practice, there is no evidence available that the district nurse has the influence which is claimed or that she has exercised her opportunities in the interests of preventive medicine. As regards the provision of an efficient general nursing service, this is not at the present time a legal responsibility of any local authority, and if the suggestion means anything at all, it can only be that the advocacy of the employment of district nurses as health visitors is due to a desire to saddle local authorities with a large public expenditure which is, in reality, to be used to provide general nursing services which it is illegal to provide directly and openly.

Even the chief protagonists of district nurses admit two insuperable defects. They admit first that a district nurse should not be required to report upon sanitary conditions or, at all events, not to do more than present such a report as will enable another officer to visit and "discover" the conditions. Another important admission is that district nurses cannot be expected to "discover" verminous conditions and can only be responsible for following up such conditions when discovered by somebody else. These two admissions seem to me to give away the whole case. My own experience is that a district nurse, in the best of circumstances, will do satisfactory following up as long as she can put the whole of the "blame" for the discovery of the condition upon someone else's shoulders, but she very wisely fails to discover unsatisfactory conditions either among children or amongst houses. The first kind of discovery would make her unpopular with the parents concerned, and the second kind of discovery would probably make her very unpopular with certain members of her local committee which has the power of dismissal.

The present wave of economy which, curiously enough, appears to be directed more against the molehill of public health expenditure than against the mountains of expenditure upon roads, education, and armies and navies, has very naturally given great opportunities to reactionary forces which have always been opposed to public health progress, but which have not had much effect previously. From such sources the suggestion comes that by the employment of district nurses

instead of whole-time health visitors a saving of expenditure will be accomplished. All those who believe that such is possible without the sacrifice of a very large amount of public health efficiency are invited to inquire very closely into the relative expenditures in those areas where the two different systems are at work, and also to examine carefully the standard of work which obtains in the areas concerned.

I have not in the foregoing remarks alluded in detail to the question of expenditure, as I have throughout the whole of my public health work contended that in connection with health only secondary consideration should be given to expenditure and that the system which is likely to give the best results is the one which should always be employed. It just happens that in this case there is overwhelming evidence that, assuming that approximately the same results are obtained in the two cases, the employment of the whole-time health visitor, both for urban and rural areas, is far more economical and entails much less public expenditure. I have never been able to subscribe to the theory that makeshift systems are good enough for rural areas. No one suggests for a moment any other system than the employment of whole-time health visitors for urban areas, where the district nurses are usually far more efficient and better trained, and so I suggest that it has only to be proved that the whole-time system is practical in rural areas, for that system to be accepted by all people who consider that the health and well-being of the rural population is just as important as of those who live in towns.

THE DISTRICT NURSE AS HEALTH VISITOR.

BY

H. J. CATES, M.D., D.P.H., County Medical Officer, Surrey.

During the recent economy campaign once again was heard the voice of the advocates of the employment of district nurses as health visitors.

To judge by the amount of lobbying that has lately been going on, it seems that a serious attempt will shortly be made to force County Councils generally to use district nurses for public health purposes. The motives which lie behind this movement are not always apparent, but there is no intention in these notes to suggest a reason for the recrudescence of the activities of the supporters of the district nurse.

There are several insuperable difficulties to the

economical and efficient use of a district nurse as a health visitor.

In the first place there must be dual control, the nurse will look to the Nursing Association for her salary and nursing supervision, while she will do the public work under the direction of the County Medical Officer of Health.

Every day experience shows that the employee of two masters is apt to be the servant of neither. While it is true that in some localities to meet this objection the county superintendent of health visitors has been appointed superintendent of district nurses, yet this compromise is rarely satisfactory, because the official of the County Council becomes subservient to a committee of voluntary workers, many of whom have influential positions.

Much is being made just now of the possibility of overlapping in public health work, and examples are given of counties in which visits are paid to a house by various officials all engaged in health work, the tuberculosis nurse, the school nurse, the health visitor and the school attendance officer. Doubtless this may occur when the administration is faulty, but the remedy is easy and lies in the allocation of all this work to one health visitor in each area and not in placing the duties of school nurse and health visitor on the district nurse, who ought to give her whole time to midwifery and home nursing.

The duties of a district nurse are partly routine and partly of the nature of emergencies. There is the daily list of home visits for dressings, maternity cases and other nursing, and there are the sudden calls for confinements, accidents and serious illnesses.

A health visitor who carries out all the usual public health work has the following up of children found to be suffering from defect or disease at the time of medical inspection, visiting under the Notification of Births Acts, and inquiry into instances of tuberculosis, ophthalmia and other diseases; there are routine visits, but in some cases, for example the ophthalmia investigations, the visit must be made at once—delay may lead to the blindness of the infant.

Then there are the fixed appointments such as medical inspection in the schools, surveys of children to discover uncleanness, dental inspection, attendance at maternity centres, school medical and dental clinics.

These fixed appointments—unless due notice is given—cannot be changed without great inconvenience to parents and teachers. The arrangements for the inspection and the actual treatment are carried out by the health visitor, and her sudden absence is a difficulty not easily overcome.

A UNIFIED NURSING SERVICE.*

BY

G. PRATT YULE, M.D., F.R.C.P. (M.O.H. for Cupar, Fife).

In contrasting the whole and the part-time welfare worker, it is not the voluntary worker I have in mind. Of recent years an attempt has been made—and is at present being actively pursued—by the Queen Victoria Jubilee Institute to annex in the spacious name of a "unified nursing service" all public health preventive nursing, the duties of which would be undertaken by the nurses of local district associations in addition to their routine sick nursing work. This is the part-time health worker I have in view, as opposed to the whole-time nurse employed in preventive nursing by the public health local authority. And it is because I regard the two types of service, sick nursing and preventive nursing, as having little in common and tending in practice to react detrimentally on each other in comparatively closely settled communities that I am strongly adverse to the combination of duties in areas similar in characteristics to my own county.

Where the local authority or its officials have no experience of the growth of the efficiency of a whole-time welfare service over a number of years I can readily understand the appeal, in these days of financial stress, of the propaganda carried on at present. Those urging combination have, so far as I am aware, no practical experience of a whole-time service or what it means to the medical officer of health. There cannot be the same thorough efficient work from the part-time nurse undertaking the combined duties of sick—and preventive—nursing as from the whole-time local authority nurse.

In Fife, our nurses act as health visitors, tuberculosis nurses, and assistant inspectors of midwives. From the first the aim has been to concentrate all executive public health nursing work in the local authority's nurse with a view to limiting the officials likely to seek entrance to the home.

I cannot well imagine how my work could possibly proceed without the whole-time health visitor, for the investigation of necessitous families, the supervision of the tuberculous, the provision of additional nourishment, inquiries into still-births and other accidents of pregnancy and the question of provision of the service of midwife or doctor in confinements for necessitous women. No other

In country districts mothers and children often travel long distances to a centre, and it may be somewhat serious if the journey is made in vain.

Where a district nurse attempts to perform public health work it is clear that there are bound to be many occasions in which fixed appointment must be neglected on account, for example, of a midwifery case or some other unexpected emergency.

Between the district nurse and her patients there usually exists a friendly relationship promoted by the intimate nature of the nursing work. She is regarded almost as one of the family, and owing to the method of selecting candidates adopted by some nursing associations she may be actually working in the village in which she lived as a child.

A considerable part of the time of a health visitor and school nurse is occupied in issuing and following up official notices for verminous conditions, defects and diseases discovered in the course of medical inspection.

It is hardly necessary to state that where a district nurse carries out school work, the service and following up of notices will place her in a difficult and unfair position that few people would care to occupy. On the other hand, if she is relieved of this branch of the work, another person will have to do it, and overlapping and friction will follow.

As time goes on health visitors have more and more to do with the investigation of infectious diseases, the examination of contacts, and the taking of swabs; it appears very undesirable that a woman so engaged should undertake midwifery and the nursing of non-infectious cases.

There is already a dearth of candidates to be trained as district nurses; in many areas the nurses have too much to do; if additional duties are placed upon them some part of the work will be neglected.

It is doubtful whether further economy can be effected in expenditure on public health services without loss of efficiency. In fact, in some areas, carefully thought out schemes which have been built upon by cautious experiment extending over a quarter of a century are now in jeopardy.

Economy in public expenditure has become a catch phrase to be used or ignored as occasion demands; fortunately, when advanced as a reason for the employment of district nurses for public health purposes in rural areas, inquiry will show that the phrase is hollow and that it is not to the interest of the community, or of the district nurses themselves, that they should be so employed.

* Extracted from an Address at the Aberdeen Conference of Health Visitors.

official has the knowledge of the conditions of her district, no other health officer brings so speedily to notice overcrowding, burst pipes, choked drains and other defects of housing and the whole gamut of existing and potential nuisances.

Recently, through the efforts of the Queen Victoria Jubilee Institute, a County Nursing Association, to which the majority of district nursing associations are now affiliated, has been established in Fife with the object of organising a complete system of nursing. The County Association have shown themselves very anxious to take over the duties of health visitors for discharge by district association sick nurses who would thus serve as part-time local authority health visitors.

As medical officer of health I am not prepared on any consideration to lose my whole-time nurses, as in my opinion such a combination of duties would not, in a county like Fife, prove either practicable or satisfactory. My objections may be summarised as follows:—

(1) Sick-nursing and preventive nursing react unfavourably one on the other. The sick must necessarily have first call on the service of the part-time nurse; the preventive work falls into abeyance. The theory that the leeway is made up when sick-nursing is slack or the epidemic has passed is not convincing. Public health nursing is much too important to be allowed to lapse.

(2) The district of the local association nurse is apt to be far-flung; her duties are onerous; in stress of work she is apt to be overwhelmed. The quota of population she serves is sufficient to absorb her working day in purely sick-nursing.

(3) Various counties and burghs are quoted as if a unified nursing service were in force. So far as I have learned only in two areas, Ayrshire and Motherwell, have the local authorities combined with the local nursing associations for part-time preventive nursing service, and no scheme is complete. It appears that the cost of the part-time nurse to the local authority is approximately £100 per annum and that with a quota of population for sick-nursing which can leave little time for the explanatory teaching of preventive work. Obviously, therefore, the scheme of combined work is not economical.

(4) The medical officer of health is usually cognisant of the characteristics of each whole-time health visitor, but would find it impossible to gauge the nature of the work of the part-time nurses necessary to cover a county area.

(5) It is urged in favour of a combined service that the control would be in the hands of the medical officer of health. In practice this would

prove impossible, and the medical officer would lose that personal knowledge essential to the work if the interests of ratepayers are to be safeguarded in the granting of additional nourishment and other services.

(6) The cost of the maintenance of a nurse has more than doubled since pre-war times. With reasonable local organisation there is little difficulty in raising voluntarily sufficient funds for sick-nursing purposes. If the nursing-service is to be in part rate-supported, private effort will tend to fail.

(7) Another issue raised by the proposal of the County Nursing Association for a unified service is that, in effect, its approval would create a monopoly of appointments for nurses trained by the Queen Victoria Jubilee Nursing Institute.

"PUBLIC HEALTH PROGRESS—THE RETROSPECT AND THE FOREGROUND."*

BY

EDMUND M. SMITH, M.D., D.P.H.,
Medical Officer of Health and School Medical Officer for the City and County Borough of York.

My previous Presidential Address, delivered to the Branch at Bradford on October 19th, 1906, bore the—perhaps rather ponderous—title of "The Programme of Future Public Health Reform." It has appeared to me that a brief retrospect of those portions of that programme which have since been partially or wholly realised might be interesting and encouraging, and that it might also be profitable to look ahead and view those fields of labour which appear to me to be in the foreground of our future work.

In speaking of public health progress, it is a favourite analogy of mine to liken its developments and achievements to the filling in of a "jig-saw" puzzle. As time passes on we get one piece fixed here and another there, almost at random; then other pieces are fitted in, according to the vision of the time, or on the lines of least resistance, and even yet many parts of the puzzle are incomplete.

Take, for example, the human tuberculosis section of the puzzle, in which a large number of the pieces have been fitted since my last address. No sooner had we begun to realise that phthisis and other forms of tuberculosis were communicable and preventable, and that the arrest of the disease was possible in many cases, than the sanatorium conspicuously claimed its place. The great

* Presidential Address delivered to the Yorkshire Branch of the Society of Medical Officers of Health.

International Tuberculosis Congress in London in 1901 was soon followed by the adoption in some districts of the voluntary notification of phthisis. Then followed national compulsory notification, which was later extended to all forms of tuberculosis; good work was accomplished, even by voluntary notification, although, of course, it was very limited in extent. Then the National Health Insurance Act and the famous Astor Report led to the foundation of more sanatoria, and the general adoption, after prolonged hesitation, of that effective central piece, the tuberculosis dispensary—with its open doors to all suspects, its several methods of diagnosis, its examination of contacts, and its selection of cases for treatment. Another most beneficial development of recent years has been that of the *Open-Air School*, which has undoubtedly arrested tubercular or pre-tubercular disease in numerous children.

The present "economy wave" seems likely to arrest the development (a) of more organised treatment of tuberculous and other cripples—a piece of the puzzle which cries aloud, as it were, to be filled in—and (b) of more colonies for convalescent or chronic cases, where patients may continue to live in and under the conditions in which they have stayed for a limited time in a sanatorium, consolidate their improvement, and learn more suitable occupations than those in which they had been engaged prior to their breakdown. (Several of such colonies have made a promising beginning and in York we now possess a very hopeful nucleus.)

Yet, all this time, the problem of the isolation of the advanced or hopeless case of phthisis—the case infecting the rest of the household, the real crux of prevention—was almost entirely ignored—probably, of course, because public opinion was not ripe enough for action. The problem has only recently received anything like the consideration it demands, and, still, we have no universal power to secure the hospital isolation of such cases, even if adequate accommodation to receive them existed in all districts. I said in 1906 that these cases "cannot be left in present housing conditions without grave danger to household, friends and neighbours." In that respect, again, we have made little or no progress, for to-day we are in the most regrettable position of having numerous unhealthy areas and unhealthy dwellings in our towns, which were not cleared before the war—largely, be it noted—for financial reasons! I need not remind you that those "financial reasons" weigh more heavily than ever, and that there is little hope of seeing those unhealthy areas cleared in the remaining lifetime

of some of us. There is no need, either, to do more than merely mention how the present overcrowded conditions, in which a large part of our populations are at present merely existing—for they cannot live in them with comfort, health or decency—are bound to maintain the occurrence of tuberculosis, especially in those households which contain one or more infectious cases.

Therefore, adequate accommodation, however temporary, and adequate powers for the removal of these "advanced" cases thereto, are more necessary than ever; yet, quite recently, the proposal of at least one local authority to provide isolation accommodation for such cases has been declined by the Ministry of Health, and Poor Law Infirmaries, which have done such great service in this direction in the past, are forbidden to receive ex-Service cases.

These difficulties, along with the pressure of approved societies to give even their most hopeless cases a chance for life, have, I am afraid, led to the abuse of sanatoria by the reception of many cases quite unsuitable for accommodation there, cases unlikely to recover. Consequently, statistics of sanatorium treatment, unless carefully analysed, are not as satisfactory as they might have been, and have led to extravagant public statements—on platform and in the Press—derogatory to the service and usefulness of sanatoria.

Adequate and universal action as to the extermination of bovine tuberculosis—the source of so much of the tuberculosis of children—is another piece of the puzzle which has not yet been filled in. Here and there some large towns possess some imperfect special powers, limited practically to their own locality, but, in my opinion, this is not a problem for mere local action. It is a national problem, and I am convinced that the disease will never be eradicated or seriously reduced until that work is undertaken as a national task by such a body as the Ministry of Agriculture, with the assistance, it may be, of local officials (as in the case of swine fever), but with uniformity and free from local limitations. Experience shows that this work cannot be adequately carried out by local authorities, across whose boundaries cattle are being unceasingly transported, without such an amount of co-ordination between one local authority and another as is impracticable, for, *inter alia*, we do not possess the gift of omniscience.

The need for national action is also true, in my opinion, of the maintenance of a pure milk supply. Although some considerable advance may have been made in towns in the comparative purity of

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the milk supply, and in the hygiene of the cowshed and dairy buildings, yet we still have complaints of the delivery of dirty milk and sour milk, or milk which sours soon after delivery, we still find "pus sold as a beverage," we still have the house-to-house delivery can and sales of milk carried out in the open street between one purveyor and another.

Much has been accomplished in the education of milk-producers and purveyors, and of the consuming public, but there is need for still greater effort in that direction, although the apathy of some of the milk-purveyors and of the public is very hard to overcome. There has been a gain in the prohibition of the use of chemical preservatives in the sale of milk and in the limitation of their use in sales of cream.

Model milk-farms and dairies have been established by private dealers or companies, but they have been far too few in number and far too limited in operation. They have not had the indirect effect as some hoped of eliminating or exerting pressure upon unsatisfactory sources of the public supply. They don't seem to have had any great success as model teaching centres, and it is sad to read of the recent financial failures of some of the farmers' co-operative companies. I have an open mind about the numerous remedies suggested in the direction of obtaining a more pure milk-supply, e.g., the sterilization of milk before delivery, and the sale of graded milk (about the practical wisdom of which I am very sceptical); there is a strong case for the municipalisation of the milk-supply—at any rate, for the supply of public and private institutions, the larger schools and the poor—but the whole subject is too vast and complicated for me now to discuss. It is the central government which makes little or no progress in the matter; as you know, we have been waiting for them to do so for years. We want consolidation, simplification, and extension of all the complicated legislation about all that pertains to the production, transport, sale, and distribution of milk, its relationships with diseases of animals and human beings, and its liability to contamination of various kinds. The Sale of Food and Drugs Acts and relative Circulars, etc., need clearing up in relation to the paralysing effect of the case, Hunt versus Richardson, and it seems to me that we want now, not only a chemical standard, but, even more so, standards as to the limits of permissible bacteriological content.

My last word about milk for to-day is that I think it would be much the most satisfactory thing

if, at any rate, the *main* responsibility of the administration of all control of the milk-supply were in the hands of a central authority and its officials, independent of all local and vested interests, free from limitations of local opinion, local jealousies and local boundaries. Failing that, the annual licensing, by the Local Authority, of all milk-producers and retailers supplying the district, and the annual licensing of their buildings and of all places where milk is stored or sold, seem to me to be the next best steps.

Maternity and Child Welfare.

In my address in 1906 I referred at length to the proceedings of the First National Conference on Infant Mortality, which had been held three or four months before. It is a matter upon which the community can be congratulated, that so much energy and effort has been put forth, since then, to reduce infant mortality and to abolish or counteract its causes. The few health visitors of those days have now become a large army, and almost every district has now one or more infants' clinics, municipal or voluntary. Speaking broadly, we may be said to have accomplished great victories over ignorance and carelessness and "quackery"; and the campaign against flies and summer diarrhoea has made really wonderful progress. We hear less of the use of patent foods, and there seem to be fewer brands upon the market. On the other hand, the advent of dried milk has been a great boon, and its use, if carefully supervised, a great success.

The 1906 Conference on Infant Mortality called urgent attention to the duty of the public health service and of the whole community towards the care of motherhood. Hence, we have now got our ante-natal clinics and schools for mothers, our legislation and public opinion about factory-labour during maternity, and the rapidly-increasing number of, and demand for, maternity homes and hospitals. In all this work, I should like to say that, in my opinion, we owe an immense debt of gratitude to voluntary agencies for their splendid work in these directions. It has proved to be desirable that the executive detail of the work of such agencies should be chiefly carried out by trained workers, but I think that if we discourage the assistance of tactful voluntary workers we make a misake, and I am convinced that, on the whole, the management of such institutions as carry out schools for mothers and mothers' and infants' clinics is far better in the hands of a body of intelligent voluntary workers, who are not bound down by official procedure, but are essentially humanitarian in both methods and outlook.

A good deal has also been accomplished in the education of the growing girls in our elementary schools in elementary mother-craft. We might well do more in that direction in our secondary schools.

In the year after my previous address, appeared the Notification of Births Act, but the need for the amendment of the present system of the registration of births, deaths and still-births is still ignored by the Government, and Dr. Kaye and I and many others who have called attention to this matter have been as so many "voices crying in the wilderness."

The most difficult part of the Infant Mortality campaign which lies ahead is ante-natal pathology and hygiene, the prevention of such maternity catastrophes as abortion, premature birth, still-birth, and death within the first few weeks of life. This part of the work has not been neglected, but it is very difficult; it calls for more knowledge and research and application on the part of the medical profession, it calls for the higher training of our helpers—the health visitors. If the health visitor can do nothing else, she can help us to fight, as Dr. Ballantyne said years ago, "against the paralysing conclusion that recurrent abortions are incurable, and against that dangerous popular belief that an abortion does not matter." I think we are slowly getting rid of that fatal acquiescence in the occurrence of these catastrophes. Personally, I feel that we must learn more and do more in this direction, not merely for the sake of the children that might be saved, but in order to eradicate the causes if possible, as those causes are frequently concerned with maternal deterioration. One of the most important features which this work should comprise is the pre-maternity education of young married women and young mothers; they make so many mistakes, even regarding marriage, for want of knowledge and for want of intelligent guidance; so often they are the victims of the ignorant or superstitious advice of their friends and relations.

The improved civic and domestic sanitation of our towns, the increasing use of dried milk, the improved midwifery service, and the increasing number of maternity homes have all contributed to the encouraging reduction in the infant mortality rate, but I am also certain that an equally large contribution to that reduction has been the educational seed sown by health visitors and by the comparatively more recent schools for mothers and maternity and child welfare centres. What statistics the Medico-Sociological Committee of the British Medical Association considers possible, to show the extent to which each of these

factors has contributed to the total result, it is not easy to conceive. About one thing we can feel positive, however, and that is—that it has become obvious that the saving of the life and physique of mothers and of young children is going to count for more than ever in the maintenance of the nation.

The same thing may be said of the present attitude of the Government and of local authorities towards the obvious extensions required in the facilities for treatment of those painless defects in school-children which do not otherwise get treated, in nine cases out of ten. When I wrote my address in 1906 the medical inspection of school children, the great need of which some of us had foreseen for years, was just about to be enacted; it was a great step forward and it has now become an established part of our public health and educational system. Its beneficial work was woefully held up by the war. There was nothing about which a real patriot could feel more reasonably unhappy during the war than that that vitally important work should be held up, almost closed down, and it does seem to me to be nationally "penny wise and pound foolish" now to retard or thwart the developments of the work of school clinics with respect in particular to the treatment of unhealthy conditions of ear and throat, the organised treatment of cripples, and the adequate grappling with that vast problem of the decay of the teeth. All these things call aloud for the modern expert facilities of treatment; it is a gross mistake to withhold those facilities. If not treated through the facilities in connection with a school clinic, it is certain that, until the education of the people has advanced very considerably, thousands of cases will go untreated, with the consequent physical deterioration of a large proportion of the present and future generations.

Speaking of *public health education*—there is a field not only for our most attractive leaflets, but for our most attractive lecturing-capacity. There are plenty of subjects about which the public need much instruction—for long past neglected by the medical profession, e.g., the rôle of the teeth in health and disease; the why and wherefore of vaccination; how to breathe and how to ventilate; rheumatism and neuritis, etc. Such subjects can be vividly illustrated by pictures and models, etc.

To continue our analogy, there is one large piece of the puzzle which has been most unexpectedly filled in by the Government in recent years, and which is about the only thing for which public health workers have to thank the war, viz., the institution of the long-needed campaign for

combating *Venereal Disease*. We are realising almost every day that the task of extermination of these terrible race-destroyers bristles with difficulties calling for the most determined application and perseverance.

Alongside the work of treatment, some of us have recognised from the very beginning that the work of the education of the public, and the stimulation of individual responsibility in citizenship, are, in this matter, pre-eminently, of essential importance if the campaign is to attain the success we hope for. The work of the N.C.C.V.D. and its branches has been one of the greatest things I have seen in my life-time—only rivalled by the educational campaign on Tuberculosis, started over twenty years ago by Sir Malcolm Morris, to whose foresight and splendid optimism again we largely owe the campaign against venereal disease.

As most of you know, I have not been silent in expressing my deep regret that the workers in this educational campaign should have been divided by the establishment of the rival Society, named the "Society for the Prevention of Venereal Diseases," but which, in my opinion, works "from the wrong end of the stick," so to speak. We ought to have been united in this campaign. For civilians, I am convinced that the "prophylactic packet" policy is medically unreliable, and that to urge its adoption by the general public is absolutely impracticable. Moreover, some of us cannot imagine any other result than such policy and propaganda would maintain the evils of amateur and professional prostitution, and the continuance of disease. I am convinced that the only policy likely to be successful ultimately in the elimination of venereal disease and of prostitution, as serious features, at any rate, in human life, is Education—not merely as to the terrors of disease, but the education—biological, ethical, and idealistic—of the rising generation, in the proper conception and knowledge of the function of sex. It is on those lines that our future educational work should be carried on, with the utmost energy and diplomacy.

In conclusion, we may rejoice to-day in the achievements of the past. In the towns, at any rate, we have very largely abolished gross insanitation, we have secured the safe disposal of our sewage, the purity of our water-supplies, and the practical extermination of some of the more serious infectious diseases; and I believe that the same may truly be said of many of our villages and smaller urban districts. In recent years I have been surprised at what has been accomplished outside the larger towns in the provision

of a water-tap supply of pure water, in the disposal of sewage by the water-carriage system, and so on.

We may also rejoice for what has been accomplished during the last few years in the hygiene of the individual, of the children in particular, and although the present financial hold-up of some of this work is disappointing, especially to those of us who are getting on in life, yet we, as public health workers, must spare no effort or opportunity to press onward to complete conquests over disease, to the advancement in every direction of the health and happiness of the people, and to the satisfactory development of the rising generation. In all this work, a Society like ours is a constant source and medium of stimulation, of which we should never fail to avail ourselves to the utmost.

FORTY YEARS IN A RURAL DISTRICT.

BY

DR. T. LAMBERT LACK, M.O.H. for Forehoe Rural District.

In looking over my yearly sanitary reports I thought it might be of some little interest to you if I described the condition of my small district some forty years ago, and that now existing. Most of you probably know the district, which consists of 23 parishes with an estimated population of 11,500, and is some 12 miles long and 7 broad. The Rivers Yan and Winsum water a considerable portion of the district. Many of the villages lie on the right and left of those rivers. There are two considerable towns—Wymondham and Hingham. The drainage of those towns in 1882 consisted of barrel drains constructed some 40 years earlier, and were for the purpose of carrying away surface water, and quite unfitted for sewerage. Those barrel drains received the greater portion of the sewage. Those in Wymondham eventually discharging themselves into the River Tiffey, and those in Hingham into open ditches north and south of the town.

The water supply was from wells, many of them very shallow and ill-constructed and always subject to contamination from surface water. The water from the Tiffey, in spite of receiving large quantities of sewage matter, was used for drinking purposes.

Housing.—A large proportion of the cottages needed repair, and had but poor sleeping accommodation—boys and girls sleeping in the same bedrooms. The windows in many could not be opened. This was immaterial to the occupiers, who as a rule objected to fresh air.

Privy accommodation very bad and insufficient, consisting principally of open privies with huge vaults.

There was no provision for isolating patients, nor any proper means for disinfecting.

The death-rate from all causes and from one year and under was respectively 17 and 150.

Such then was the condition of the Forehoe rural district. Now I will briefly describe its present state.

Housing much improved, a large number of new houses have been built and others put in good repair, all now admitting sunlight and air. The privy accommodation is fairly good. The old vaults are nearly all abolished. Scavengers have been appointed for the two towns. After many years' impotency we have a very nice isolation hospital (9 beds), also a portable disinfector—Thresh's. The Maternity and Child Welfare Act has been adopted with beneficial results, but alas! the drainage is still most unsatisfactory and the water supply insufficient and of very varied quality.

The local authority is very hard to move when money has to be spent, and the Ministry occasionally sends an official to look round, but nothing results. However, in spite of our imperfections, the death-rate was for 1921, at all ages, 9.9, and for one year and under, 41 per 1,000.

THE CONTROL OF VENEREAL DISEASES.

BY

CHRISTOPHER ROLLESTON, M.A., M.D. Oxon., D.P.H. Cambridge, M.R.C.P. Lond.

The problem of preventing enthetic disease is, and has always been, a subject of controversy among the medical public. In the earliest days of official medicine—in the time of Sir John Simon—a section of the public began to agitate for the control and free treatment of these maladies.

Simon, an eminent sanitarian and also a surgeon, set his face firmly against any official action. He pleaded strongly "against subsidising the fornicator out of rates and taxes," and this "enlightened" view prevailed at Whitehall up till 1916, when, under the leadership of Sir Arthur Newsholme, a great forward step was made in the establishment of free clinics and more or less expert treatment. But no arrangements were made for the prevention of these disabling plagues, and it is certain that not one medical officer of health in a hundred knew that these ailments could be prevented. Even in modern text books of preventive medicine no mention is

made of the wonderful work of Metckinkoff and Roux, and as the only extended reference to this work is in Sir Archdall Reid's book published last year, and in an English translation of Paul Maisonneuve's work, which, so far as I know, was not reviewed in any Public Health Journal and has never reached a second edition, I venture to reproduce the account of the epoch-making experiment.

On February 1st, 1906, Metckinkoff and Roux inoculated a young man—Paul Maisonneuve—with the virus of syphilis obtained from two patients in the most deadly and infectious stage of the disease. One hour later they rubbed in calomel ointment, and although M. Maisonneuve was kept under observation for several months no syphilis ever supervened.

To test the virulence of the inoculation four monkeys were inoculated at the same time as M. Maisonneuve and with the same virus. One of the monkeys was treated with calomel ointment one hour later in exactly the same way as M. Maisonneuve. Another was treated with it 20 hours after inoculation. The remaining two monkeys were not treated at all. The result was as follows:—The two untreated monkeys developed syphilis after seventeen days, the usual incubation period in monkeys. The monkey treated after 20 hours with calomel ointment developed a mild syphilis in thirty-nine days; on the other hand the monkey treated after one hour remained permanently free of syphilis. The effectiveness of the virus was thus established and the potency of calomel ointment as a preventive of venereal disease was definitely proved.

Valuable confirmation of this work is afforded by an article recently published by Colonel L. W. Harrison in the "Dictionary of Practical Medicine" (Waverley Book Co., Ltd., Vol. III., p. 312). He writes as follows: "The virus of syphilis is undoubtedly very delicate and the prompt application of any antiseptic should suffice to prevent infection."

He adds that the most effective method would be to steep the part in 1 in 2,000 perchloride of mercury.

This testimony is all the more impressive as Colonel Harrison has always been opposed to the popular application of these methods of prevention.

These researches are the ground on which the Society for the Prevention of Venereal Disease bases its campaign. To this Society have rallied all the men of light and leading in science, art, and medicine. It has issued most valuable directions couched in simple language on the methods

to be employed by those who expose themselves to venereal infection. It has unfortunately received comparatively little support from those whom it might naturally consider would be its warmest adherents. It might be thought that those who practice preventive medicine would rally enthusiastically to its ranks, and that they would eagerly embrace a policy which must eventually lead to a triumph equal in glory to the victories of Lister over septicæmia, Wright over typhoid, of Pasteur over hydrophobia, and of Jenner over small-pox. Such unfortunately is far from being the case.

The Medical Department of the Ministry has given scant support to the Society. It has refused to grant subsidies or to allow local authorities to distribute its leaflets.

It has, however, had to acknowledge that "certain drugs and medical preparations may be relied upon to remove or destroy the infection of venereal disease."

It has held an inter-departmental inquiry in which, by suppressing evidence favourable to disinfection such as that of Sir James Barnett, and by blindly accepting the statements of officers and men as to time and manner of disinfection, it was enabled to persuade the Government that the policy advocated by Sir A. Reid and many other officers was impracticable. Although the Ministry refuses to subsidise the Society for Preventing Venereal Diseases it has lavished £49,995 on the Society for Combating Venereal Disease. This Society relies mainly on lectures and facilities for expert treatment. It sternly forbids any reference on the part of its lecturers to the success of disinfection immediately after sexual congress. A few remarks on the policy of this Society will not be out of place. The attendance of the male population at their lectures is very poor. Compulsory attendance was inflicted on the majority of young adults during their period of service in the Army, and, curious though it may seem, they do not appear willing to repeat the experiment.

In many areas those who attended were usually over seventy years of age and were no doubt attracted by the memories of their stormy youth. Women, it is only fair to note, attend these lectures in large numbers.

Seeing that medical men and medical students are as frequently infected by syphilis and gonorrhœa as the general population, it seems doubtful if the policy of depicting the consequences of venereal disease to the general public will have any more effect in preventing illicit sexual intercourse than the prospect of hell fire

for non-church goers had in filling the churches. The Society profoundly misunderstands the habits and views of the ordinary person. In the *British Medical Journal*, November 26th, 1921, pp. 918 and 919, a layman, over the signature of "Venerealee," states that the vast majority of persons among whom he lives in the suburbs of London (presumably members of the professional classes) are as regular in their illicit sexual intercourse as they are in their football and cricket. He adds that "to address us from the moral aspect is waste of time—we do not consider it immoral."

He points out that the majority of young men in suburbia are decent-living, law-abiding, and hard-working citizens, but they regard sexual intercourse as a normal enjoyment to which they are entitled. That these are the views of the great majority of mankind at the present time I have no shadow of doubt. History teaches us the same lesson. It was practically impossible for the pre-reformation church to prevent irregular intercourse among the celibate clergy—at a time when the edicts of the Church had immeasurably greater power than they have to-day. I think it may be safely concluded that the propaganda work of the Society is worthless.

With regard to the campaign adopted by the Society to support curative treatment centres, it must be emphasised that no disease, however excellent the treatment, has ever been eradicated by therapeutic measures. Anthrax, malaria, diphtheria are still with us in spite of Pasteur, Behring, and Roux, while hydrophobia, on the other hand, was banished by the Muzzling Order. It must further be noted that only 14 per cent. of the syphilitics complete their treatment at the large and well-equipped Liverpool clinics, and in the smaller towns even less. Again it is doubtful if the newer methods of treatment are any more effective in preventing the onset of the cerebral and spinal complications of the disease.

In fact, one authority goes so far as to say that since Salvarsan and its modifications were in general use these unfortunate sequelæ are more frequent. It may, I think, be conceded that this portion of the Society's work falls very far short of success.

The Society for Combating Venereal Disease has always prided itself upon the righteousness of its methods in not enlightening the young as to methods of avoiding the consequences of sexual irregularity.

This is a difficult point, for morals are not included in the course of study prescribed for any medical degree, but as an amateur I should

hesitate to advertise the fact that I had purposely delayed administering an antidote to a friend or an enemy who had recently partaken of a deadly poison. In my opinion this suppression of knowledge is one of the most criminal actions of modern times. It has caused the loss of thousands of lives. It has ruined countless families and it nearly caused the ruin of this great Empire and the triumph of the Prussian, Austrian, and Turk. At the beginning of 1918, when the Germans broke the British lines and when nearly one hundred thousand British troops went into captivity, there were, but need not have been, in the venereal hospitals or in depôts, British, French, and American soldiers sufficient not for an Army Corps only, but for a great Army. All these men had become diseased after the authorities had learnt how to prevent the disease.

I conclude with an appreciation from Sir A. Reid's book on the work of the Society:—" . . . the chicanery and the humbug, the uncourageous fanaticism, the treachery to the Army and the nation, and the flood of useless misery and disease, the slaughter of the innocents, these, I think, will not be forgotten, but will stink in the nostrils of the nation for evermore."

NOTES FROM THE BRANCHES.

METROPOLITAN BRANCH.

BRANCH OFFICERS FOR 1922-1923.

At the recent annual meeting, Dr. William Heaton Hamer, Medical Officer of Health and School Medical Officer, London County Council, was unanimously elected to the Presidency for a second year, and will have supporting him as vice-presidents, Dr. W. M. Willoughby, Medical Officer of Health, Port of London Sanitary Authority, and Dr. R. King Brown, Medical Officer of Health, Bermondsey. Dr. T. Shadick Higgins and Dr. Charles Porter were re-appointed Hon. Treasurer and Hon. Secretary respectively, and Dr. H. Kenwood and Dr. Higgins, in addition to the Hon. Secretary, were chosen to represent the branch on the Council of the Society.

MEMBERSHIP.

Looking over the 13 years that he has held office as honorary secretary, Dr. Porter must regard with surprise and gratification the growth of his branch. To go back but a few years, it appears from the branch annual report just issued that the number of members on the roll is 214, as compared with 180 during the previous session, and 88 during 1918-1919. The membership, moreover, is said to be steadily on the increase.

REPRESENTATIVES ON OTHER BODIES.

For purposes of reference it may be convenient to include in this month's notes a list of the members who have been elected to represent the branch on other bodies, as follow:—

Metropolitan Asylums Board.—Dr. F. J. Allan, Dr. E. G. Annis, Dr. R. King Brown, Dr. T. Shadick Higgins, Dr. D. L. Thomas, Dr. C. Porter (Hon. Sec.).

Panel Committee for the County of London.—Dr. W. J. Howarth, Dr. C. Porter (Hon. Sec.).

Sanitary Inspectors' Examination Board.—Dr. F. J. Allan, Dr. T. Shadick Higgins.

Ken Wood Preservation Council.—Dr. T. Shadick Higgins.

Central Council for Rescue and Preventive Work in London.—Dr. C. Porter (Hon. Sec.).

ANNUAL REPORT ITEMS.

Rat repression appears to have called for active measures on the part of the Holborn Borough Council, arrangements having been made for the preparation of rat poisons and their distribution to ratepayers at cost price, and for firms of rat-catchers to carry out work for owners and occupiers of premises. In this connection the central authorities have been urged to introduce legislation to provide, *inter alia*, for the registration of rat-catchers. In the report of Dr. Hutt, from which this information is obtained, the registration of ice cream manufacturers and vendors is recommended, and it is suggested that the term "ice cream or other similar commodity" should be defined to include such substance while in process of manufacture for ice cream.

"So far as I am aware, no other country permits the unrestricted importation of foodstuffs to which preservatives have been added," says Dr. W. J. Howarth in his excellent annual report for 1921, *apropos* an investigation as to the presence of preservatives in imported fruit pulp. Sulphur di-oxide in amounts varying from 0.011 per cent. to 0.14 per cent. was found in a number of samples of strawberry pulp, and a sample of raspberry pulp was also found to contain 0.018 per cent. Though the amount of preservative in the samples was not large and would probably disappear in the processes of jam making, Dr. Howarth considers that chemical preservatives of any nature should not be permitted in foodstuffs, except under regulation, and that if present scientific knowledge is inadequate for the purpose of enabling regulations to be framed, or if doubt exists as to the harmfulness or otherwise to human beings of certain of the more commonly

used preservatives, it is time that some investigation work was carried out to enable a definite position to be taken up. The City of London report, it must be added, contains in addition to the usual features much interesting information on the subject of food, certain of which has been noted in these columns from time to time when the various reports have been first presented.

YORKSHIRE BRANCH.

THE JUNE MEETING.

At the meeting at Northallerton on June 30th the Medical Officer of Health, Huddersfield—S. G. Moore—spoke on the subject of the milk supply. He addressed himself particularly to the considerable number of farmers and dairymen who were present, appealing to them to enable the whole medical profession—and particularly medical officers of health—to refer to the milk supply in such terms as would induce the public to drink milk in larger quantities. He mentioned that he had recently met a gentleman from Toronto who started in the milk trade with a round of 8 gallons, who now sells day by day 32,000 gallons, and who is manifestly a rich man. His success was not the result of any special secret or process—he first provided “the goods” and then advertised.

Doctor Moore proceeded to point out the reasons why at the present time the medical profession is unable to “boost” milk (the speaker had been particularly warned beforehand not to talk over the heads of the farmers, and who appeared to have taken this advice very much to heart—hence the terms which he employed), citing epidemics of diphtheria, scarlet and typhoid fevers, cholera, septic sore throat, and insisted particularly upon the evil influence on the infant mortality figure of impure milk. He attached the greatest importance to this aspect of the case.

Then followed an account of the work of the Honourable Nathan Straus, of New York, who started a campaign for pasteurisation in that city 30 years ago, who for many years distributed pasteurised milk by millions of bottles and glasses annually at less than cost price, and who by his strenuous long-continued advocacy succeeded at length in obtaining ordinances prohibiting absolutely the sale of any milk for human consumption in that city which was not (a) pasteurised by the holding process, or (b) Grade “A” certified milk. These ordinances are in operation to-day in all of the principal cities of North America, including Canada.

In the concluding part of what he had to say Doctor Moore gave a somewhat detailed account

of a complete dairying plant. He insisted that the best milk available must be obtained in the first instance, thereafter centrifuged to remove solid particles, pasteurised by a holding process (145° F. to 170° F. range, for from 30 to 20 minutes, the longer period for the lower temperature, and the shorter period for the higher temperature, obviously), refrigerated, bottled, and kept in a cold store until delivery.

He gave the costs and pointed out that in the United States there are pasteurising plants not actually in the milk trade, where dairymen can take their milk and have it pasteurised at a cost of from 1 to 1½ cents per gallon. He cited a big dairy company in London delivering pasteurised milk in bottles at one halfpenny per quart above the charge of their competitors delivering milk in the old bad way from churns and cans, and conducting a very successful business on these lines.

He concluded by making an appeal to the farmers to have regard to the public health, and to enable medical men to rely upon them for a safe milk supply.

Replying to the discussion, Doctor Moore referred to the various points raised, and in particular pointed out that at the present time there is not in the whole country enough Grade “A” certified milk to furnish a supply to one of the smaller towns.

NORTH-WESTERN BRANCH.

CHESHIRE.

On Saturday, June 24th, Wrenbury Hall, situated 4½ miles from Nantwich, was opened by the Duchess of Westminster as a Tuberculosis Training Colony for 50 patients. The Hall was purchased by the Joint Committee of the Red Cross and St. John in Cheshire, who, with the aid of a grant from the Ministry of Health, defrayed the whole cost of the purchase and conversion of the Hall and park of 170 acres, as a memorial of the work of the British Red Cross Society and the Order of the St. John of Jerusalem in Cheshire during the war.

The Hall has been converted into administrative buildings, dining hall, recreation rooms and a ward of 10 beds for cases requiring observation and nursing. The remaining 40 patients are accommodated in four large huts and nine single shelters which have been erected in the grounds in front of the hall and connected with a central building containing lavatories, bathrooms, etc., by covered passages.

The Colony, which has now 40 resident patients, has been handed over to the Cheshire

County Council to be maintained by them as a training colony for tuberculous patients from Cheshire and also from Warrington and Glossop, preference being given, where possible, to ex-Service men.

MANCHESTER.

A revised scheme for the classification and grading of the technical, professional, administrative, and clerical staffs of the Corporation was approved by the Conditions of Service Special Committee of the Manchester City Council yesterday and will be submitted to the Council for confirmation at its meeting next Wednesday. It is the result of many months of work by the Committee, and as it has been prepared in co-operation with a joint committee on the lines of the Whitley Councils, on which the Council and its staffs have been equally represented, it has the virtue of being an agreed scheme.

Dr. W. W. C. Topley, at present director of the Institute of Pathology and lecturer at Charing Cross Hospital, London, has been appointed Professor of Bacteriology at Manchester University and director of the Public Health Laboratory.

GLOSSOP.

The approval of the Ministry of Health has been received to an order making (a) chicken-pox and (b) zymotic diarrhoea in children under two years of age compulsorily notifiable from July 4th until further notice.

CREWE.

Dr. Mary Turner, M.B., Ch.B., L.R.C.P., of Manchester, has been appointed lady assistant school medical officer for Crewe at a salary of £500 per annum. There were nearly 40 candidates for the position.

EASTERN BRANCH.

THE BRANCH.

This branch is showing signs of increased vitality. The meeting held on July 1st, 1922, was the best attended for many years (14 years to the knowledge of the hon. secretary). The branch has lost two members by death, and has gained six members by election during the past year. This is partly due to the reconstitution of the Society, which admits all public health medical officials to membership; and partly to calling the meeting for Saturday afternoon, which is convenient for assistant school medical officers, who cannot otherwise attend. Generally at the close of a week most members can more conveniently attend than during a week-day. The members

attending on July 1st included public health medical officials from the Administrative County of Norfolk, the City of Norwich, the County Borough of Great Yarmouth, and the R.D. of Nutford and Lotherland (Suffolk).

It is greatly to be regretted that more members from a distance cannot manage to attend the meetings of the branch, but, apart from motoring, there are no convenient facilities, the cross country railway services being extremely slow and inconvenient. In any case, Norwich being near one border of a large area, considerable sacrifices have to be made to enable members to attend; yet it is realised that no more central position can be selected with a view of increasing attendances.

THE PRESIDENT.

The President of the branch, Dr. T. Lambert Lack, M.O.H. of Forehoe R.D. (Norfolk), is in his eightieth year. He has been M.O.H. for 40 years. He was unanimously re-elected president for the coming year. He is a fine type of the old English gentleman practitioner. He retained his M.O.H.-ship when he retired from practice a few years ago. He interested the members of the branch with a review of the sanitary conditions and circumstances of his district, comparing existing conditions with those of 40 years ago.

RURAL PROBLEMS.

The problems of adequate water supplies and sewerage for sparsely populated rural districts remain practically where they were 40 years ago, as instanced by Dr. Lack in the townships of Wymondham and Hingham in the Forehoe R.D.

POORE'S VIEWS.

In connection with this subject it may not be amiss to refer to the views of the late Professor G. Vivian Poore. He contended that if we want pure water, a scientific and careful bestowal of putrescible refuse is the first thing necessary; that while putrescible matter mixed with water and allowed to accumulate in underground receptacles not only escapes the salutary action of the humus, but, leaking under pressure, inevitably trickles unchanged to our wells, however deep they may be, the same matter, if superficially buried in the humus and allowed to oxidise and eutryfy, is not likely to foul a properly made well, no matter how shallow it may be.

Poore was of opinion that the bestowal of refuse is a problem which confronts every individual, and that we are individually under a moral obligation to see the refuse of our dwellings safely bestowed so as not to endanger the health of others. What

is wanted is the cultivation of an individual health conscience. As Poore, contended, in sanitary matters, more than in any others perhaps, we are gradually losing our freedom, and are too prone to allow "rates" to take the place of morals, and to expect a collection of individuals, merely because they are called a "board" to be able to do for us that which we ignorantly profess to be unable to do for ourselves. Poore unhesitatingly and unequivocally condemned modern sanitary methods, and argued that the mixing of putrescible matter with water is a fundamental scientific error which leads to the dissemination of water-borne diseases, the pollution of rivers, and the poisoning of wells. Whether such methods, he said, be regarded in the modern light of bacteriology or if the evils and expenses of which they are notoriously the cause, they must be condemned as unscientific, thriftless, and immoral—unscientific because nitrification is hindered and putrefaction encouraged; thriftless because there is waste or destruction of matter which if rightly used should be a source of profit and productiveness; immoral because we pass on our refuse to be a nuisance elsewhere, and deliberately condemn the "golden rule."

Poore very rightly attributes these evils to over-concentration of population—not allowing each individual sufficient space to have his fair share of sunshine and fresh air; and his fair share of God's earth for the proper disposal of his own refuse which in the proper cycle would return to him in the fruits of the earth. He further insists that this over-concentration is an indirect effect of modern sanitary methods, which give what may be called a fatal facility for the packing of houses in dangerous proximity to one another.

But it should here be pointed out that such dangerous proximity is not altogether the result of modern sanitation. The present writer has been struck with the inadequacy of curtilage for many dwellings in many country villages innocent of drains, and with many acres of land available; and has wondered that in such surroundings cottages should have been so cramped and contiguous. Expressing this to someone, the reply was that these cottages were probably erected in times of uncertainty—civil war, etc.—when people preferred keeping as near to one another as possible for mutual protection. Seeing that old mansions for the gentry in the country are surrounded by broad acres, the writer has difficulty in accepting such a suggestion, and feels more inclined to attribute the inadequacy of curtilage of these small cottages to meanness on the part of former

ground landlords. If as a result infective disease was engendered which ultimately cut off the heir to the acres in childhood—this would appear to be only just retribution for neglect of the "golden rule." As the philosophic Poore remarks, "the retention of a rural element in our developing towns and the allowing of open spaces to interpenetrate and dovetail with the houses has not only great advantages on the score of health, but is equally advantageous when regarded in its purely financial and economic aspects." Every individual requires a definite minimum amount of earth, air and water in order to live. "It is largely due to neglect of the earth unit that our increasing difficulties with regard to municipal water supplies are due."

If the above speculations (largely culled from Poore's philosophical writings) arising from the 40-year review of the sanitary circumstances of the district of which the President of the Eastern Branch of the Society is M.O.H. are of sufficient interest to the members of the Society generally, the Secretary of the Branch (Dr. J. T. Nash, C.M.O., Norfolk) will be pleased to extend these notes in the next contribution from the Eastern Branch.

WEST OF ENGLAND BRANCH.

BRANCH OFFICERS.

For some years the only officers to be elected at the annual branch meeting have been president, secretary, and treasurer, and even this has often meant only two individuals, since the last two offices were usually combined. Several disadvantages resulted which will disappear under the system which it is intended to adopt in future. At each annual meeting, commencing with that already held in July, 1922, a president, secretary, treasurer, vice-president, assistant secretary, and journal correspondent are to be chosen, and the opinion was expressed that the first five should usually be separate individuals. The vice-president and assistant secretary will live in districts distant from those in which the corresponding senior officer lives, and the former will, in the natural course of things, succeed the president when he retires at the end of his year of office.

A list of officers for 1922-23 will be given next month, but it may be stated now that Surgeon-Captain Andrews, R.N., has accepted the presidency offered to him by the unanimous and cordial vote of the meeting held at Taunton on July the 8th.

DEVON AND THE SALARY QUESTION.

There has been a good deal of skirmishing recently in this western county, and on the whole the results have been satisfactory. Reference was made in these notes last month to an attempt of the Devon Education Authority to reduce the commencing salaries of the School Medical Inspectors to a figure below £500. A reasonable compromise has now been made by which, although certain reductions will follow, the essential principle of a minimum of £500 remains intact.

Some months ago the Plymouth Education Authority endeavoured to obtain a lady Medical Officer at £450 by advertising in the lay press. There appears to have been some response, but the significant fact remains that at the moment of writing the post is still vacant.

One of the District Medical Officers, rather than accept a quite inadequate salary, has had the courage to resign his appointment, while a long controversy over an adjustment in the salary of a very able Tuberculosis Officer seems likely to end in a solution satisfactory to the officer concerned.

There can be no doubt whatever that the protests of our Society and of the B.M.A. have been of material value in the various negotiations which have taken place.

GRADED MILK.

There is a good deal of difference of opinion even amongst those who might be supposed to be well informed on the matter as to the best means of providing a clean milk supply for the whole community. Pasteurisation, grading, bacteriological tests, and so forth, all have their advocates, and arguments have been adduced against all of them. It is claimed by some that when conditions necessary to obtain a Government licence to use the term "Grade A" are fulfilled, something very near the ideal has been attained as far as that particular supply is concerned. A number of producers have now been granted this licence—Sir Richard Paget in Somerset and Major Fuller in Wiltshire might be mentioned as examples.

It is interesting and satisfactory to know, too, that it has been found possible to arrange that most of the milk supplied by the Bath City Council both to school children and through the Infant Welfare Centres shall be Grade A milk.

DR. JOHN C. McVAIL has been awarded the Jenner Medal of the Royal Society of Medicine.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

METROPOLITAN BRANCH.

The annual meeting was held at the Society's house in London, on Friday, 23rd June, 1922, the President (Dr. W. H. Hamer) occupying the chair. Seventeen other members were present.

The Branch expressed general agreement with the views of the committee appointed to go into the question of the proposed modification of the constitution of the Society, so far as the abolition of the distinction between fellows and members was concerned, but disagreed with the suggestion that the secretaries of the branches should no longer be, *ipso facto*, members of the Council, but should be elected as one of the total number of members to which any branch was entitled. It was considered that under the proposed method not only would there be a reduction in the number of representatives to which a branch was entitled, but the Council itself might be deprived of branch officers whose knowledge of the affairs and policy of the branch and of the Society as a whole must inevitably prove of the greatest service to both.

The Branch received a letter from the Metropolitan Asylums Board stating that it had been decided to recommend the adoption of the suggestion that the Board's ambulance nurses should, on removing infectious cases, leave a written warning as to precautions to be taken before disinfection of the premises, and that Dr. Caiger, chief medical officer of the infectious hospitals service of the Board, had been asked to confer with the Branch with a view to the preparation of the draft of the notice to be used in the event of the adoption of the proposal. Instructions were given for a draft to be prepared by Dr. Higgins and the Hon. Secretary.

A report of a further conference between the representatives of the Branch and the Asylums Board, on the subject of the admission of cases of measles and whooping cough to the Board's infectious hospitals, was received. As a result of this meeting a report is to be submitted by the Infectious Hospitals Committee to the Board as to the desirability, or otherwise, of the continuance by the Board of their traditional policy of admitting scarlet fever in preference to measles and whooping cough at times when it appears likely that the accommodation at their disposal will not enable them to receive all the patients suffering from infectious fevers for whom beds are required. In the meantime the Board state that

additional wards are being opened for measles as soon as they become available.

Consideration was given to the proposed by-laws of the London County Council as to houses let in lodgings, and no observations were offered except in regard to clause 13 (c), dealing with the letting of rooms not in a cleanly condition and free from vermin. In order to ensure that there should be cleanliness in all parts of a room it was decided to suggest to the County Council that the words "the floor of" be omitted from the clause in question.

Attention was drawn to the fact that in the proposed by-laws as to rag and bone dealers no provision had been made for prohibiting the use of rooms opening directly from rag and bone stores as sleeping apartments, and the President promised to look into the matter.

NORTHERN BRANCH.

The annual summer meeting of the branch was held at the Dinsdale Spa Golf Club, Dinsdale, on Friday, 7th July, 1922.

Present.—The President (Dr. T. Eustace Hill) and 15 members.

A letter and report from the Executive Secretary upon the constitution of the Society was presented and read and referred to the Council to report at the next meeting of the branch, special or otherwise, before October 20th.

The following resolution from the Southern Branch regarding salaries was submitted:—

"That this Branch views with alarm the continued appearance of advertisements for public health appointments for which the remuneration offered is below that approved by the Society of Medical Officers of Health, and urges that the Council should at once, in conjunction with the B.M.A., devise a scheme to prevent this. The Branch, moreover, is of the opinion that the first duty of the Council is to place the question of salaries on a satisfactory basis."

It was agreed to support the resolution, it being clearly understood, however, that the branch realises that every effort is being made at the present time by the Council of the Society in the direction specified.

Election of President, 1922-23.—On the motion of Dr. T. Eustace Hill it was unanimously agreed to elect Dr. T. Horne, Medical Officer of Health, Stockton-on-Tees, President for the next session, and he was further appointed Representative of the Branch on the Council of the Society.

Dr. Horne, in accepting office, paid a well-merited tribute to the services of Dr. Hill during the past two years, and expressed the gratification

of the branch on Dr. Hill's election as President of the Society.

Dr. H. Kerr was re-elected Honorary Secretary and Treasurer, and a vote of thanks was passed for his services in that capacity.

Reference was made by the President and Secretary to recent events at West Hartlepool and Hartlepool, where in the first named it was understood that on a reduction of salary being proposed the Medical Officer of Health (Dr. H. M. Cargin) had resigned his appointment, which had been offered at £600, without advertisement, to his assistant (Dr. Gordon Lilico) and accepted, this being below the minimum standard demanded by the Society of Medical Officers of Health and the B.M.A.

The Medical Officer of Health, it was stated, had entered into partnership with a private practitioner in the same town and had accepted appointment as a part-time Assistant Medical Officer of Health at £350.

The Honorary Secretary was instructed to ask Dr. Cargin and Dr. Lilico to report on the circumstances for the information of the Council of the Branch.

Meanwhile it was stated that according to a newspaper report the suggestion to reduce the salary of the Medical Officer of Health of Hartlepool below the existing figure of £700 had been opposed by the Society of Medical Officers of Health, strongly backed by the Local Division of the B.M.A., with the result that the proposal had been defeated in the Borough Council.

After luncheon in the Club House, a portion of the party proceeded to Middlesbrough by the kind invitation of Dr. C. V. Dingle, Medical Officer of Health, where they visited the small-pox hospital, and were shown a number of recent cases of the mild modified smallpox, typical of the considerable outbreak at present running in that town. The visitors were kindly entertained to tea by Dr. Dingle.

The remainder visited the Dinsdale Council Education Authority's "School for Mentally Defective Children" in the mansion adjoining the Dinsdale Golf Club, under the conduct of the Medical Superintendent, Dr. W. Lumsden, after which an adjournment was made to the very fine and exceedingly beautiful golf links, where play was continued until a late hour under ideal conditions.

This meeting was one of the most successful and enjoyable that the branch has ever held. The spot is idyllic, and the local amenities unsurpassed.

MIDLAND BRANCH.

The annual meeting was held at Coventry on July 8th. Prior to the meeting the President, Dr. E. H. Snell, entertained the members present to lunch at the Craven Arms Hotel. At the conclusion the health of the President was proposed and drunk into acclamation.

Present.—The President (Dr. E. H. Snell) and 29 members.

Numerous apologies for non-attendance were received.

Salaries.—A letter was read from the Southern Branch enclosing the following resolution and asking for the support of the Branch: "That this Branch views with alarm the continued appearance of advertisements for public health appointments for which the remuneration offered is below that approved by the Society of Medical Officers of Health, and urges that the Council should at once, in conjunction with the B.M.A., devise a scheme to prevent this. The Branch, moreover, is of the opinion that the first duty of the Council is to place the question of salaries on a satisfactory basis." The Secretary was instructed to write to the Council in support of the same.

Election of Officers and Council.—The following were elected: President, Dr. Gibbons Ward; President Elect, Dr. Hamilton Wood; Vice-Presidents, Drs. Bostock Hill, George Reid, Robertson, Ridley Bailey, Snell; Elected Members of Council, Drs. Gordon-Smith, G. A. Auden, Molloy, Wilkins, Cowie, Davison, Stocks; Treasurer, Dr. Ridley Bailey; Secretary, Dr. Jolly; Branch Correspondent, Dr. Davison; Representatives on Council of Society, Drs. Snell, Gibbons Ward; Auditor, Dr. Davison.

The proposed alterations in the constitution of the Society, as referred to the Branch by the Council of the Society, were then discussed at considerable length; and it was decided to instruct the Secretary to write to the Council stating that the Midland Branch approved of the alterations suggested.

The usual vote of thanks to the Corporation of Birmingham for the continued use of a Committee Room, was passed unanimously.

Dr. Snell proposed that in view of the fact that Dr. Bostock Hill, who is one of the oldest members of the Branch, has removed into the area of the Southern Branch, he be elected an Honorary Member of the Midland Branch. This was seconded and passed unanimously.

At the conclusion of the meeting, His Worship the Mayor (Alderman W. H. Grant, J.P.) con-

ducted the members over St. Mary's Hall and described the various antiquities and matters of interest to be found there. The new Council House was then visited, and the Mayor entertained the party to tea. At the conclusion the President expressed the thanks of the members to the Mayor for his kindness and hospitality, and this concluded a most enjoyable visit to the ancient yet up-to-date city of Coventry.

YORKSHIRE BRANCH.

A meeting of the Yorkshire Branch was held in Northallerton, on the premises of the Densbydale Pure Milk Company, on Friday, June 30th. Twelve members were present.

In the absence of Dr. Buchan, the chair was occupied by Dr. E. M. Smith.

About 28 members of the local Farmers' Union attended the meeting, on the special invitation of the Hon. Secretary.

Dr. Moor (Huddersfield) gave an interesting address, entitled "Possible Profits from Milk—The Hygiene of Milk." At the close of the address Dr. Moor demonstrated the use of a home steriliser for milk, and Dr. Sutherland, Bacteriologist to the West Riding County Council, showed several guinea-pigs (in spirit) the subject of generalized tuberculosis, caused by being injected with the deposit of milk purchased on an ordinary milk round.

A general discussion followed, in which many members of the Farmers' Union took part.

The General Manager of the Dairy Company then took the meeting over the works.

A vote of thanks for the hospitality of the Dairy Company was proposed by Dr. Pearce and seconded by a member of the Farmers' Union.

THE NAVAL, MILITARY AND AIR FORCE GROUP.

A meeting of the Naval, Military and Air Force Group of the Society of Medical Officers of Health was held at 1, Upper Montague Street, W.C., on Friday, the 9th June, 1922, when a paper was read by Surg.-Commander S. F. Dudley, O.B.E., R.N., entitled "The Carrier Problem." A discussion followed in which Rear-Admiral Sir Percy Bassett-Smith, Professor Kenwood, Lieut.-Colonel P. Caldwell Smith, and others took part.

DR. ANDREW GILMOUR has been appointed Medical Officer of Health for the borough of Wimbledon.

CORRESPONDENCE.

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

THE PREVENTION OF DECAY IN TEETH.

From Dr. Y. SIM WALLACE.

Sir,—There were two errors in my contribution to the discussion which followed Dr. Wheatley's paper in the July number of *Public Health*. In one sentence apparently a line of manuscript has been omitted in the printed report. The sentence referred to (p. 276) should have read: "This latter committee was not elected in such a way that it might be supposed to represent little more than a passing fad, but it represented the views of the most celebrated investigators the dental profession has produced."

The other error was the substitution of the word "caries" for "hypoplasia" in the last line of the same page.

Yours faithfully,

150, Harley Street, Y. SIM WALLACE.
London, W.

SCHOOL MEDICAL SERVICE—EXPENDITURE.

A Circular (No. 1269), dated the 5th July, 1922, has been issued by the Board of Education on the subject of grants towards the six Special Services of Elementary Education, of which the School Medical Service is one. "The Board find that the large economies already effected by Authorities themselves as a whole have brought their aggregate estimates within the total on which the Board are in a position to pay grant. It will not be necessary, therefore, for the Board to apply any general system of 'rationing,' and they are now proceeding to consider each Authority's proposals on their merits." With regard to the School Medical Service, the Circular states that the Board wish it to be understood "that they will not be able to accept proposals which reduce or leave the Authority's arrangements for their essential Services below a reasonable level of efficiency in respect of their scope or the maintaining of efficient administration."

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

NOTICES.

Members of the Society of Medical Officers of Health are reminded that entries for the Neech Prize for the Session 1921-22 should reach the Executive Secretary on or before September 30th, 1922. 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.

MEMBERS are reminded that the *Annual Capitation Grants to Branches*, now due for payment, are based on the actual number of subscriptions received during the current session. Members who have not yet remitted their subscriptions are therefore requested to do so by an early post, in order that the branches may get the full Grants they are expecting. Branch Secretaries are entitled to be notified of Subscriptions overdue at the date of the grant.

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Editorial.

MILK PROSECUTIONS.

Perhaps the greatest of the many betrayals of the public health and the public interests that have been perpetrated by the Ministry of Health consists of the issue of Circular No. 325. We have on many occasions in the past commented upon the extraordinary influence of the milk and farming industry, but there has never been previously such a flagrant illustration of the callous indifference of that industry to the welfare of the public or of the abuse of its power, or of the way in which it is ready and able to bend ministries to its will, even when the ministry bears the title of "Health," and when the interests of the trade can only be served by sacrificing some of the most vital interests of the public health.

Fortunately there seems to be abundant evidence that the Ministry has in this act gone too far. It is the duty of every medical officer of health to advise his Council strongly and promptly upon this matter, and in this connection it would be difficult to improve upon the two following references which have been selected from our contemporaries.

The "British Food Journal," in its issue of July, 1922, says:—

"We publish below a Circular which has been issued by the Ministry of Health (Circular No. 325), addressed to the Town Clerks of the various Councils, urging the Councils not to take actions against vendors of adulterated milk except in cases where it has been proved by repeated sampling that the milk from such vendors is consistently below the legal standard. A more stupid and damaging circular it is not possible to conceive, and the matter is one which calls for very strong representations being made by the Councils throughout the country. The effect of adopting the recommendations of the circular in question would be to practically stultify the Food and Drugs Act in so far as the sale of adulterated

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milk is concerned, and it would further encourage the dairy farmer to keep certain breeds of cows which are well known for the very large quantity of milk which they produce of poor quality. The mixed milk from a properly selected herd of cows which are properly fed will never fall below the extremely lenient standard fixed by the Board of Agriculture. Whether the production of inferior or adulterated milk is due to the extraction of cream, the addition of water, improper feeding or improper selection of the cows, is of no moment to the consumer; the motive for the adoption of any of these methods is pecuniary benefit. If the desire of the Ministry of Health is to encourage adulteration and sophistication of food and to bring to nought what little protection is afforded to the consumer by the administration of the Sale of Food and Drugs Acts, a more effective Circular could hardly have been issued."

The "Medical Officer," in its issue dated July 29th, 1922, says:—

"We can recall nothing quite like the sensation in public health circles which has been caused by the publication of the Ministry of Health Circular (No. 325) in regard to the sale of milk deficient in fat. The circular, which we summarise on another page, and which has been the chief topic of conversation amongst those attending the congress of the Royal Sanitary Institute during the past week, is so surprising that it might be the practical joke of a society for the defence of fraudulent milk dealers. Unfortunately, there is no doubt about the authenticity of the document, and henceforth it will remain as a very present help in times of trouble for every rogue in the milk trade. It is a pity that the official circulars of the Ministry are now known by numbers, for the one under notice deserves some such resounding title as '*The Magna Carta of Milk Sophisticators (England and Wales)*.'"

"The Authorities responsible for the administration of the Sale of Foods and Drugs Acts have had difficulties enough already; we shall not blame them if they now throw up their hands as the result of this surrender by the Government Department which might reasonably have been expected to assist and support them. We suppose that the Acts were intended to safeguard the public and to insure among other things that a person who paid for milk should obtain an article having 'the proper amount of fat.' We suppose also that the Ministry are aware of the overwhelming body of evidence that cowkeepers can without difficulty secure all the year round milk with a fat content well above the minimum of 3 per cent.

hitherto enforced. While there seems in the circular under notice to be a great anxiety on the part of the Ministry to avoid 'irritating' the vendor, we look in vain for any indication that the unhappy purchaser has some right to protection. We hope, however, that the widespread dismay caused by this circular amongst those familiar with the tricks and excuses of milk adulterators may at long last arouse consumers to insist that their side of the case should receive the attention it deserves."

The attention of every member is called to the important report issued by the Council on this subject. If every M.O.H. acts at once public interest and indignation will be aroused, and if this results in a complete investigation into the existing condition of affairs as regards milk, then the issue of this scandalous Circular 325 will prove to be a blessing in disguise.

SALARIES.

The following letter from the Ministry of Health was presented to the monthly meeting of the Hexham Rural District Council:—

"I am directed by the Ministry of Health to advert to previous correspondence as to the proposal of the Hexham Rural District Council to reduce the remuneration paid to the Medical Officer of Health and sanitary inspectors. As was pointed out in the letter from this Department of 20th April last, the reduction which the Minister is asked to sanction in the salaries of these officers is greater than that which has been made by the District Council in the salaries of other officers, and no explanation on this point has been afforded by the Council.

"While the Minister is alive to the need for the strictest economy in national and local expenditure at the present time, he does not consider that he can properly acquiesce in reductions of salary in the case of sanitary officers which are in excess of the reductions made by a local authority in the salaries of other officers, and which would result in the payment of salaries for which reasonably satisfactory service cannot be expected.

"In the case of the Medical Officer of Health the proposal is that the total remuneration be reduced from £560 per annum to £500. The Minister understands that the officer is reimbursed only a part of his travelling expenses; he is required to abstain from private practice; and though allowed to take other public health work, he may not hold another medical officer

of health's appointment without the Council's consent. In 1914 the Council refused to allow him to act as the medical officer of health for the Prudhoe Urban District Council. Unless the officer is able to supplement his income appreciably from taking public health work of the nature described, the Minister considers that the proposed total remuneration of £500 per annum is insufficient.

"It is proposed to reduce the total salary of one sanitary inspector from £240 to £200, and of the other from £220 to £180. These salaries compare unfavourably with the salaries of three highway surveyors, which the Ministry understands have been reduced from £309 to £300 and £309 to £300 respectively.

"The officers concerned do not consent to the reductions proposed and, in the circumstances set out in this letter, the Minister must ask the Council to reconsider them."

This letter seems to confirm our suspicions that the Minister does not attach any serious importance to the alleged "security of tenure" which is supposed to be possessed by medical officers of health, and is prepared to act only in cases where that officer seems to be treated more harshly than his colleagues.

WATER SUPPLIES AND DISEASE.

Sir George Newman, Chief Officer, Ministry of Health, has presented a report by Dr. W. V. Shaw, one of the medical officers, on the occurrence of enteric fever in the Bolton-upon-Dearne Urban District and adjoining sanitary districts in the West Riding of Yorkshire in 1921.

In his letter to the Minister of Health accompanying the report, Sir George Newman states that the account given by Dr. Shaw illustrates the well-known fact that the water of a village pump, liable to pollution from its surroundings, may be used by a community without any manifest disadvantage until it becomes contaminated, through one channel or another, with specific infection present in the population of the neighbourhood. When this occurs local disaster may follow.

"This outbreak of widespread and fatal illness following the accidental contamination of a public water supply warns us against being lulled into a false sense of security. For quite apart from the occurrence of typhoid or other endemic disease transmissible by drinking water, cholera has, at the present time, assumed epidemic proportions in Russia and in Poland, and the possible introduction of the infection of this disease into England

is a fact that has to be realized. It, therefore, behoves all public authorities who are responsible for our water undertakings to use every endeavour to ensure the purity and safety of their supplies."

COLLECTIVE RESEARCH.

One of the most useful spheres of activity of a Society such as the Society of Medical Officers of Health is undoubtedly the question of organised research. In the first place administrative medical officers of health are likely to have a far better perspective as to the relative needs for research and the relative value of results obtained than those pure laboratory researchers in whose hands most of the subsidised research work of this country is being placed. It is a most deplorable fact that the men at present in charge of organised research have had little or administrative experience in public health problems, and so the proposals emanating from the West of England Branch of the M.O.H. Society are particularly welcome, and we may venture to express a hope that the example will be followed by other branches and that the idea will be fostered and encouraged by the Council in every possible way. If we remember rightly, a few years ago the subject of such organised research formed an important part of a certain presidential address, but, like so many schemes which have formed the subjects of presidential addresses, this is one that has never developed.

UNQUALIFIED DENTISTS AND THE NEW ACT.

According to Mr. F. D. Acland, M.P., in his capacity as Chairman of the Dental Board, upwards of 6,765 applications on the part of unqualified dentists to be registered under the new Act have been dealt with by the Board's officials in the three months since the regulations were framed. Of the persons applying, 4,294 were men claiming to have been in practice for five years out of the seven previous to the passing of the Act, while 1,551 were members of the Incorporated Dental Society, the largest body of unqualified dentists, and 423 were dental mechanics, a class which has to pass an examination before being registered. The chemists who applied, alleging that when the Act came into force they had a substantial practice as dentists, numbered 226. In the case of 4,085 out of the whole number the Board were satisfied with the application. One of the most difficult problems which came

before the Board was the question of how to deal fairly with the claims of ex-Service men who have not completed five years' practice of dentistry. This problem affects others than men who served in the war. The Board finally decided that in all cases if the period was less than five years the examination must be taken, but also that ex-Service men should be allowed to enter for it without paying the fee.

THE MINISTRY OF HEALTH AND MILK PROSECUTIONS.

At the annual provincial meeting of the Society of Medical Officers of Health held at Bournemouth on July 28th, 1922, it was decided to forward the following report of the Society's Special Committee on Foods to the Minister of Health, with a resolution urging the withdrawal of Circular 325. The Report and Resolution read as follows:—

Your Committee have noted with some concern Circular No. 325 recently issued by the Ministry of Health.

This Circular suggests for reasons stated, that in cases of milk adulteration prosecutions should be instituted only where a series of tests have shown "repeated default."

The chief reason for this suggestion is that conditions may exist which cause an animal temporarily to yield milk below the official standard.

Your Committee agree that this may be a fact in occasional instances, but it is very rare that the mixed milk of a herd will be found below the low official standard.

Your Committee recognise no advantage in the Circular other than to the unscrupulous milk seller, who will now find a means of enriching himself at the cost of the community with less risk of punishment than has hitherto been the case.

The honest trader is amply protected since Local Authorities are always willing to consider exceptional circumstances. If he still feels aggrieved after a decision, it should be noted that the standard with which a milk seller is required to comply is only one of presumption. Provision exists whereby, in such instances as those enumerated in the Circular, the milk seller may submit proof to the Magistrate, in case of prosecution, that the circumstance is one arising from natural causes and not from wilful tampering with the milk.

Your Committee consider that a few instances of hardship to a trader should not result in a general rule, the application of which is certain to penalise the public in the attempt to avoid the exceptional milk seller being occasionally exposed to some inconvenience.

Your Committee further are of opinion that the suggestions in the Circular, if given effect to, will be destructive of efficiency in the administration of the Food and Drugs Acts in relation to Milk.

Certain of the effects of the Circular will be as follows:—

- (a) Some unscrupulous dealers will take advantage of the concession and continue to extract fat from, or to add water to, milk until that series of tests which will show "repeated default" has been obtained.

- (b) The probability of a positive series being obtained within a brief period will be decreased if the milk seller ceases to adulterate for a time after a positive result has been obtained. Such intermittency will reduce the probability of default being detected; or with the same intention such milk seller might only reduce the quality of the milk on certain days with obvious effects on the value of the sampling.

- (c) Informal sampling cannot always be carried out and the question arises whether in the case of positive results being thus obtained they can be used in Court as evidence of "repeated default."

- (d) Milk is the most important food of infants, and of many invalids, and inferior milk may continue to be supplied with the knowledge of the Local Authority to certain persons to their serious detriment, that is during the time the series of tests to prove "repeated default" are being obtained.

- (e) The Food and Drugs Acts were never intended to bear this generous trading concession, and if such applies to the milk seller it ought to be held to apply to every other trade sample.

In conclusion your Committee recommend the Society of Medical Officers of Health to communicate the above considerations to the Minister of Health, together with the request that on reconsideration the Minister may see fit to withdraw, or in some way modify, Circular No. 325.

The above report was submitted to the Society of Medical Officers of Health in annual provincial meeting assembled at Bournemouth on July 28th, and it was unanimously resolved:—

"That the Society of Medical Officers of Health do approve the above report and that a copy be forwarded to the Minister of Health. The Society further express their regret that such a Circular should have been issued and trust that the Minister on reconsideration will withdraw it."

As we go to press we learn that Dr. R. Veitch Clark, Medical Officer of Health for Croydon, has been appointed Medical Officer of Health for the City of Manchester.

The Roll of Members of the Society of Medical Officers of Health for the session 1922/23 is now in preparation for the press. Fellows, members and associates, who have not notified changes of appointments or addresses, should send early notice to the Executive Secretary at 1, Upper Montague Street, Russell Square, W.C.1.

The French Minister of Health, M. Paul Strauss, who has been visiting London in connection with the holidays of French children from devastated areas, is taking the opportunity of studying public health administration in this country. He was entertained at lunch by the First Commissioner of Works, when Sir Alfred Mond was in the chair. Amongst those invited to meet him was the President of the Society of Medical Officers of Health (Dr. W. J. Howarth, C.B.E.).

VOMITING IN INFANTS.*

BY

H. C. CAMERON, M.A., M.D. (Cantab.), F.R.C.P.

Physician, Guy's Hospital.

The stomach of the infant is adapted for a particular task, the digestion of breast milk. After a feed of breast milk the presence of free hydrochloric acid can be demonstrated; with artificial feeding the tests usually fail. Breast feeding is natural feeding, substitute feeding, no matter how cleverly managed, is unnatural feeding. With breast feeding the stomach empties comparatively quickly, generally in about one and a half hours. When cow's milk is substituted, owing to the delay caused by the coagulation of the much denser casein clot, the time which elapses before complete emptying is much longer, three to three and a half hours. The whey with the carbohydrates leaves the stomach first and passes the pylorus even before the conclusion of the meal. The casein clot with the fats is retained much longer. The use of sodium citrate with the cow's milk shortens gastric digestion considerably because it lessens the density of the casein coagulum.

The infant's stomach is tubular in shape and vertical in position. The cardiac opening lies opposite the ninth dorsal vertebra, the pylorus lies, as a rule, in the mid line, though sometimes just to the right of it. The capacity of the average infant's stomach at different ages is even to-day a matter of uncertainty. Measurements taken by aspiration are uncertain because of the very rapid escape of fluid through the pylorus. Measurements taken after death are inaccurate because the muscular coats undergo contraction, and distension must be achieved by varying hydrostatic pressure. According to observations post-mortem by Holt the capacity at birth in an infant born at full time is one and a half ounces, at three months four and a half ounces, at six months six ounces, at one year nine ounces.

Because the infant relatively to the adult consumes amounts of food which are very large, the function of digestion is comparatively unstable, and symptoms of disturbance such as vomiting are of common occurrence and are evoked by comparatively trifling causes.

Simple Regurgitation. Possetting.—Simple regurgitation of food without symptoms characteristic of dyspepsia is not uncommonly met with, especially among breast fed infants. Without crying, pain or apparent discomfort, and without

any forcible act of vomiting, the regurgitated milk appears in the mouth or upon lips and chin. Possetting babies are commonly of good size and weight and the fraction of the whole feed lost is usually small. The vomited milk is hardly altered and has little of the sour smell characteristic of the vomited matter in dyspepsia.

Treatment.—Possetting of this sort hardly requires treatment. At the most it may be taken as evidence that the child is receiving amounts of food which are filling the stomach to the limits of its capacity. It is a protective device by which the child regurgitates any amount which if retained might distend the stomach uncomfortably. It may be wise to shorten a little the period of nursing. A gradual passage from this symptomless regurgitation to the true vomiting of dyspepsia is not infrequently seen and is indicated by the increasing sourness of the vomited milk, and a lengthening of the interval since the meal, with evidence of gastric discomfort and pain. With infants fed artificially possetting is less common.

Vomiting with eructation of wind.—In infancy wind is for the most part due to aerophagy. From the first the efficiency of the infant's suction is very great. Nevertheless, in early infancy, and most obviously in the first weeks of life, the adaptation of the child's mouth to the nipple and its power of swallowing the milk unmixd with air is sometimes faulty. As a result the stomach becomes distended with "wind." Aerophagy of this sort is most apt to occur when the infant is too eager and excited, and when it mouths and bites at the nipple in its over anxiety. With the drowsy, quiet child the sucking reflex acts much more efficiently. Nasal obstruction in the child naturally adds to the difficulty, as does depression or malformation of the mother's nipples.

When the stomach becomes distended with wind, the child may refuse to suck further, showing obvious signs of discomfort. With regurgitation of the wind relief is clearly obtained. It is not infrequent to find that the eructation of the wind is accompanied by the vomiting of a great part of the stomach contents.

Treatment.—To prevent vomiting of this sort we must endeavour in the first place to put a stop to aerophagy. The child should not be fed when too excited or after crying. Handling by a skilled nurse who knows how to quiet the baby's nervous system is an important part of the treatment. Small doses of Chloral Hydrate, grs. 1 or 2, or of Potassium Bromide, grs. 1 or 2, three or four times a day given before meals and accompanied, if necessary, by a hot pack, will often

* Paper read before Maternity and Child Welfare Group, Soc. M.O.H.

assist, if the unrest of the child has become really serious, in producing the necessary quiet for the important act of nursing. Depression of the nipples and nasal catarrh must receive the appropriate treatment. When in spite of every care the stomach has become distended with air, the instinct of the mother to hold the child upright and await the escape of air is correct. In this upright position the bubble of air in the cardiac part of the stomach comes to lie almost directly under the cardiac opening of the stomach, and can therefore be expelled with comparatively little effort. If the child is laid down, on the other hand, the air bubble is apt to pass to the fundus and to the left, and since it thus becomes shut off from the cardiac opening, the air can only be expelled by a relatively great effort which is liable to dislodge the fluid contents of the stomach at the same time.

With artificial feeding aerophagy and consequent vomiting is not met with at all frequently. Suction from a bottle is comparatively effortless and unless the bottle is carelessly given there should be no admixture of its contents with air.

Vomiting with other signs of neurosis.—With some nervous infants we find vomiting as a constant symptom from the first. The severity of this habitual vomiting varies greatly in degree. In the worst cases its persistence and violent projectile character, as well as the considerable emaciation to which it gives rise, lead to confusion with the vomiting of hypertrophic pyloric stenosis, from which indeed it can only be distinguished by the presence in the latter of the greatly hypertrophied stomach and the palpable pyloric tumour. Nervous infants with habitual vomiting are usually thin, meagre, restless and rigid with increase of muscular tone, so that the position adopted is almost one of opisthotonos. There are no other dyspeptic symptoms such as abdominal distension, pyrexia or failure of appetite. As a rule vomiting of this sort ceases before the end of the first year, to be replaced perhaps by other manifestations of the nervous inheritance.

Treatment.—The vomiting may be most intractable, yet except for the increased risk of intercurrent infection, increased because of the prolonged flattening of the weight curve which accompanies the vomiting—the tendency is always to complete recovery. It is important to recognise these cases and to distinguish them clearly from cases of primary dyspepsia, because their treatment is very different. Deprivation of food and partial starvation only serve to increase the vomiting and the nervous unrest on which the

vomiting depends. In this it resembles the vomiting associated with anorexia nervosa in adult life. A comparatively generous diet is indicated in both conditions as the first step in treatment. The provision of a good infant's nurse is essential. Her quiet confident handling, replacing over-anxiety and fussiness, will diminish the nervous tension of the baby. The anxious look will leave its face, the limbs will become less rigid, sleep will become sounder, and the stomach will grow less intolerant.

Sodium citrate or sodium bicarbonate (grs. 30 per diem in each case) in this form of vomiting are often immediately successful. The tolerance for fat may be low and at times it may be necessary to lower the percentage of fat and to make a corresponding addition of sugar. Children who suffer from nervous vomiting of this sort during infancy are often the offspring of highly nervous parents whose over-anxiety makes the management of the case very difficult. In such cases we have especially to set our faces against excessive medication and too frequent dietetic changes.

Vomiting with hypertrophy of the pylorus.—We do not know the cause of the great over-growth of the circular muscular fibres of the pyloric portion of the stomach, which produces the condition generally known as hypertrophic pyloric stenosis. The symptoms seldom begin until some time, very often about three weeks, from birth. Sometimes the symptoms seem to develop from and to be a further complication of that functional nervous inco-ordination of the stomach described under the preceding heading. Boys are much more often affected than girls, the first born more often than children born later in the family. A distinct nervous inheritance is often found. The condition is comparatively rare in hospital practice. The majority of the cases occur in breast-fed children.

The symptoms, taken with the physical signs, are characteristic. After a meal, which is generally greedily taken because of the hunger, the baby shows evident signs of discomfort. If the abdomen is examined at this time a ball-like swelling may be seen to rise in the left hypochondrium and to pass slowly from left to right across the epigastrium. Often two or three such peristaltic waves can be seen following each other. The pylorus can be felt as a hard tumour, about the size of the terminal phalanx of the thumb, lying in the middle line or just to the right of it. The enlarged pylorus can be felt to harden as the wave of peristalsis reaches it across the hypertrophied stomach. Between these waves there may be considerable intervals when it is

difficult to palpate. Hypertrophy of the stomach, as shown by visible peristalsis and a palpable pylorus, may be developed with very great rapidity. Often they are present within a few days of the onset of the vomiting. Even in cases which are relatively mild, these striking signs should be present at the end of a fortnight or three weeks, and should serve to make the diagnosis clear. The vomiting is copious, explosive, and comparatively effortless. In a wide stream the contents are projected often for a foot or more from the child's mouth. The vomit is never bile-stained, as it always is in congenital atresia of the upper intestinal tract, a condition with which occasionally confusion may occur. Emaciation is progressive and is apt to reach an extreme degree. The stools are infrequent and scanty, dark, slimy, pigmented, and somewhat resembling meconium. As the obstruction yields, improvement in the character of the stools is one of the first signs of recovery. The urine is commonly scanty and high coloured.

The severity of the symptoms varies greatly in different cases. The duration, when no operation is performed, is often about ten weeks. Towards the close, weakness and emaciation may be extreme. It appears almost as if spontaneous recovery only took place when the general weakness has become so great that the spasm yields, just as the spasm in whooping cough diminishes as the strength fails.

Treatment.—In cases of considerable severity, and these are the more common, immediate surgical intervention offers the best hope of recovery. The pylorus may be stretched after opening the stomach, or without opening the stomach, an incision may be made through the hypertrophied pyloric musculature down to the mucous membrane (Rammstedt). Posterior gastroenterostomy is an operation of greater severity, and although infants after gastroenterostomy often thrive uninterruptedly and grow to vigorous and healthy childhood, nevertheless it introduces anatomical alterations which seem too permanent for a condition which is transient and yields spontaneously after a comparatively few weeks. Success, however, depends more upon the individual experience of the operator with the method adopted and upon the skill with which the after-care is managed than upon the particular method adopted to overcome the obstruction.

The mortality is very much greater in bottle fed infants than in those that are breast fed. In the last fourteen breast fed cases in which I have had a Rammstedt operation done, all have recovered.

When the general condition of the child is too feeble to permit of operation, or in very mild cases in which symptoms, not very severe, have been present for many weeks without causing great loss of weight, and which therefore may be regarded as being within reasonable distance of spontaneous recovery, medical treatment may be adopted. Most reliance must then be placed upon regular and daily lavage of the stomach, usually performed night and morning or even before each feed.

The breast-fed child should not be weaned, but if necessary the milk may be drawn off from the breast with a breast pump and given to the child with a spoon. In this way it may be retained when it is constantly vomited after suction at the nipple. The drawback is the danger of failure of the flow, consequent on removal of the stimulus of the child's suction. Sometimes the milk is better retained if given cold, after being set on ice.

Immediately after nursing five grains of sodium citrate may be given in water. Sometimes small and frequent feeds at intervals of one and a half or two hours are best retained, but there are many instances in which greater success follows the plan of adhering to the long four-hourly intervals, washing the stomach free of food residue before each meal. Extra fluid should be given per rectum, and in pyloric stenosis the fluid given in this way is usually well retained, so that subcutaneous infusion is seldom necessary. Four to six ounces of normal saline or dextrose (grs. 105) dissolved in four ounces of water may be injected slowly by tube and funnel at six-hourly intervals. Warm fomentations to the abdomen relieve pain and sometimes seem to control the vomiting. If the baby is already being artificially fed, a mixture which is likely to pass through the pylorus as quickly as possible should be chosen. For this reason mixtures with a high percentage of casein and of fat must be avoided. Whey with added dextrimaltose (Mellin's Food) is often well borne, given in doses of one ounce at intervals of one or one and a half hours. When milk feeding is again introduced it should be citrated fully. Of drugs directed towards diminishing the spasm little is to be expected. Tincture of opium, atropine or belladonna, pushed far beyond doses which would usually be considered suitable, are commonly without result. It goes without saying that great care should be taken to conserve the infant's heat during the long period of inanition.

Vomiting with Dyspepsia.—In infancy vomiting is a constant symptom of dyspepsia. It is then commonly accompanied by diarrhoea, with

frequent explosive defæcation and the noisy passage of gas from the intestine. The stools are acid, watery, green, and contain lumpy curds of soap and of casein. The temperature is generally a little raised. The curve of the weight becomes flat or weight may be lost. The child is restless, fretful because of pain and sleepless. The skin loses colour, and becomes of a greyish pallor. The abdomen is often distended. The vomited matter has a sour smell due to the volatile fatty acids.

Dyspepsia of this nature is commonly due to overfeeding, or in cases of artificial feeding to the use of a mixture of unsuitable composition. When vomiting is very prominent in dyspepsia, the fault is usually to be found in an excess of fat. Excess of sugar, on the other hand, commonly leads to excess of intestinal fermentation with diarrhœa as the more prominent symptom. In feeding with cow's milk dense casein curds may be ejected, but this is not to be taken as implying that the casein curd has caused the attack. The casein curd is not responsible for the dyspepsia, although it determines the character of the vomited matter. In primary dyspepsia of the nature which we are now considering, due generally to excess of food or unsuitable food, the onset, as a rule, is insidious. In this it contrasts with the sudden onset, a bolt from the blue, in vomiting and dyspepsia which is symptomatic of pyrexia and acute infections whether intestinal or non-intestinal. As a rule in dyspepsia from unsuitable feeding there have been several days of fretfulness and disturbed sleep before the disturbance culminates in vomiting.

Treatment.—Treatment is to be begun in all cases by a temporary withdrawal of food, for twelve or twenty-four hours, to permit the stomach to become empty. For that space of time water or albumen water may be given freely, while care is taken to keep the child sufficiently warm. Thereafter feeding may be begun again gradually. A breast-fed infant may be put to the breast for five minutes at the usual four-hourly intervals and gradually the time of nursing may be lengthened. If the child is artificially fed, the first feeds after the preliminary starvation must be of small bulk until it is clear that tolerance for food is re-established as shown by the cessation of vomiting, and diarrhœa and the improvement in colour and sleep. If vomiting recurs with the resumption of food, the stomach should be washed out with a weak solution of sodium bicarbonate, and the attempt to feed renewed. The amount and composition of

the food on which the disturbance originated must be scrutinised carefully and if necessary reduced, especially it may be necessary to curtail the fat.

At the same time it is unwise to make sweeping alterations at a single stroke of the whole character of the diet, as, for example, in replacing a diet of whole milk or dried milk by a malted milk. Changes in the character of a young infant's food should always be gradually introduced. Similarly increase in the amount should not be on too large a scale. An addition of 10 per cent. is reasonable. To add 50 per cent. at a stroke is unreasonable and, though often done, is a common cause of dyspepsia. With breast feeding the prescription of too frequent feeds at intervals of two or two and a half hours is the most common cause of dyspeptic vomiting. The routine use of a four-hourly interval is to be recommended.

With bottle feeding the symptoms are commonly produced by sudden and unnecessary additions to the amounts taken, and additions upon a dangerously large scale, because of impatience with a weight which remains stationary for a few weeks. The conditions of temperature prevailing at the time must also be taken into consideration in adjusting the amounts given. In times of great heat food must be restricted to meet the lesser demand consequent upon the diminished heat loss. Amounts which can be well tolerated under ordinary circumstances become sufficient to produce dyspepsia with vomiting during a heat wave. The treatment of dyspeptic vomiting by drugs gives disappointing results, but in severe cases alkali should be given freely, sodium bicarbonate or sodium citrate in doses of 20 or 30 grains daily. Small doses of grey powder or calomel, grs. $\frac{1}{4}$, may assist in elimination. Opium is out of place, because the diarrhœa and vomiting are protective reactions in the interest of the child.

Vomiting with pyrexia.—The most common cause of sudden vomiting in infancy is that which is symptomatic of acute infection and pyrexia. In adults the invasion of some acute infective process is commonly ushered in with a single attack of vomiting or shortlived gastro-intestinal disturbance. In infancy the dyspeptic symptoms may persist throughout the whole illness and determine the clinical picture throughout. This sudden onset of dyspepsia *ex infectione* is characteristic, and may help to distinguish it from primary dyspepsia *ex alimentatione*. Further, in infection the pyrexia is usually higher and is not

lowered by temporary withdrawal of food. Infections, such as nasal catarrh, otitis media, influenza or pyelitis, which may be difficult to detect in infancy, are apt to pass as primary disturbances of digestion.

In the treatment of vomiting symptomatic of infection stringent dietetic restrictions are out of place. It must be explained that the child is ill from an ascertained infective cause and that while this lasts there may be a constant tendency to reject all food, even the most suitable. The daily amount given from the breast or bottle should be somewhat less than in health, and the total intake of fluid should be made up by the addition of water. Weak China tea, diluted to the colour of pale sherry, given in a bottle, is a good diuretic and stimulant for infants with high pyrexia.

It is generally necessary to lower the fat percentage in artificial feeding during prolonged pyrexia and to substitute a proportionate addition of sugar, which is generally well born in fever. In severe cases peptonising the milk will often be found effective in controlling the vomiting. We must resist the constant demands to change the diet. It is especially deplorable when a pyrexial illness, which in the nature of things is likely to be transitory, is seized upon as an excuse for weaning. If an infant at the breast suffers not only from vomiting and pyrexia, but also from loss of appetite, there is of course some risk that the breast milk will disappear. This should always be guarded against by the use when necessary of the breast pump after nursing.

*MATERNITY AND INFANT WELFARE.

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This subject is one which has of late been discussed very frequently and from various points of view. I propose, therefore, to limit my remarks to a few observations on the subject in general, followed by a description of what I consider to be the most appropriate scheme for such work in a municipal borough possessing a population of 40,000 to 50,000 inhabitants, that being the size of the town with which I am connected.

I may premise that my borough is a somewhat congested district with certain areas containing old and dilapidated cottages, that the people work chiefly in cotton mills and that many mothers go out to work. In considering the subject generally the first point that stands out is the rapid growth of the work during recent

* Presidential Address opening Meeting, N.W. Branch, Manchester, October 14th, 1921.

years. This is strikingly shown by the fact that although the first school for mothers was only founded in 1907, yet in January, 1921, there were in existence no fewer than 1,923 Infant Welfare Centres, and the total grant from Government sources had reached the sum of £777,000.

To quote Dr. Addison in June of this year, "taking only the cost which was met out of money supplied from public sources—that is from the Exchequer and from local rates—the expenditure on Maternity and Child Welfare Services for England and Wales in 1920 was £1,950,000. In other words, during a period of 13 years, the amount spent on Maternity and Infant Welfare work had risen from zero to about two million pounds. As the subject is attracting special attention in all civilised countries, it is clear that the demand for Child Welfare has become almost universal, and when one considers the statement of Sir George Newman that there are 1,200 funerals per week, of dead infants, in England alone, there is obviously pressing need for its continuance and extension.

If we ask ourselves whether the money and time now being expended on the work can be justified, by showing that it produces, and will produce, a lessening of infant mortality, we obtain an answer in the interesting 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 of this year.

Here we find it stated that "all the witnesses ascribe a considerable portion of the diminution of infant mortality to Maternity and Child Welfare work," and also "we are satisfied that Maternity and Child Welfare work has contributed to an appreciable extent to the reduction of infant mortality that has taken place."

It may be taken for granted, therefore, that the importance of the subject in the Scheme of Public Health is fully recognised both by the general public and by the medical profession, and that public opinion is fairly represented by Mr. Hayes Fisher when he states that the supreme importance of Maternity and Child Welfare work at the present time needs no emphasis.

I will now consider some general questions which bear upon the manner in which the work should be carried out, and the form which shall be given to schemes as devised for areas of different size.

Firstly we have the question of Prevention versus Cure. Let us ask ourselves, is it desirable

to limit the work strictly to Prevention or may Curative work also be undertaken, and if it may then to what extent? And here we tread on delicate ground, for it is easy to absorb work which properly belongs to the province of the general practitioner. I agree with the conclusion of the British Medical Report that "the primary and main object of Maternity and Child Welfare Centres should be educational, preventive and advisory, and that no treatment should be given for conditions which, in the absence of the Centre, would be recognised as calling for the attendance of a medical practitioner." This, I am aware, is not in accord with the practice at some centres, where medicine is prescribed and dispensed for gastritis, bronchitis and other ailments. If the slippery slope of dispensing is once entered upon, it is difficult to know when to stop. I should, therefore, limit the supply of articles at the centre to such things as cod-liver oil, Virol, and dried milk. No doubt simple ointments and dusting powders might be reasonably added, though at present I refer mothers to the chemist for these. Other treatment we carry out is the strapping of umbilical herniæ by the nurses in the patient's home, and the giving of massage at a special clinic. This I look upon as supplementing the work of the general practitioner, and not in any way supplanting it. The result is that in our area no objection is made by medical men to the work of the centres. The local doctors are represented on the Statutory Committee by two members, who also belong to the Town Council.

Secondly, we have the question of Officialism versus Voluntaryism. In this matter the practice varies in different places. In some the work is carried out entirely by officials, in others by voluntary workers with the help of officials, and in a third class by officials assisted by voluntary workers.

After personal experience of two of these methods I consider the most feasible plan to be that all expenses should be paid by the Town Council and that the work be directed by whole-time officials, assisted by voluntary workers. By this means a recognised standard of work and continuity of methods are obtained, whilst at the same time the assistance of voluntary workers is duly made use of. I note here that this is the method recommended by the British Medical Association's Report.

Thirdly, we come to the question of whole-time versus part-time officers. In the matter of the staffing of the centre, the Medical Officer should be a whole-time official. The great advantage of this lies in the fact that it does away

with any feeling of rivalry with the local general practitioners, and so makes it possible to obtain their close co-operation. The whole-time officer may share this duty, as in my own case, with the general work of Medical Officer of Health. By this means variety of occupation is given, and the feeling of monotony avoided. The obvious disadvantages in having this work carried out by General Practitioners, acting as part-time officials are (1) mothers do not like the frequent change of personnel which is involved in a rota, (2) the work may come to be looked upon, by the General Practitioner concerned, as merely a side-line, in which, therefore, he feels little interest; (3) other calls upon the practitioner's time may render his attendance irregular.

Having considered these general questions, we now come to the particular scheme of work desirable in a town of 40,000 to 50,000 inhabitants. In discussing this question I will briefly enumerate various branches of the scheme and make a few remarks under each heading.

(1) *The Welfare Centres.*—Two of these are necessary, one for each half of the town. It is better that the municipality should have complete control of the premises rather than that they should rent rooms in buildings used for other purposes, such as a Sunday School. They are then free from hampering restrictions and can add extra work as may seem desirable, such, for instance, as a Massage Clinic and providing meals for expectant mothers. A resident caretaker is necessary. The heating of the room is best accomplished by central heating, supplemented by gas fires.

The gas fires may be used for single occasions. At our centre mothers and children are advised at one and the same time, and the records of children on attaining the age of 5 years, are handed over to the School Medical Department, and there affixed to the school inspection cards.

(2) *Home Visitation of Mothers and Children.*—This is carried out in the usual way by two Health Visitors, assisted by a Superintendent. Our Council have also appointed a nurse especially for the purpose of nursing cases of pneumonia, measles, whooping-cough, and scabies. This nurse also assists in the work of the two centres by undertaking the sale and distribution of dried milk, cod-liver oil, and Virol, in which she has the help of a voluntary worker. In the matter of nursing cases of pneumonia, etc., she attends once or twice a day, as required, for the purpose of giving assistance in the details prescribed by the doctor in attendance. She visits and advises cases

of measles and supervises in the home the treatment of children suffering from scabies. Exception has been taken to this appointment by the local District Nursing Association, but I consider it is beneficial in securing rapid attention to cases. Such a nurse is also useful in the extra work involved in an epidemic of diarrhoea or to act as a supply for the Health Visitors at holiday times or during sickness.

(3) *Supply of Dried Milk, Free of Cost, to Necessitous Mothers and Children.*—The scheme for this purpose is administered entirely at the Welfare Centre by the staff, assisted by voluntary workers. Advantage is taken of the opening so afforded to put pressure upon lazy and indifferent mothers to amend their ways. To such as have means to pay for it, the dried milk is sold at cost price. Cod-liver oil and Virol are also purveyed at cost price, but are not given free.

With regard to free meals, it is proposed by the voluntary workers during the coming winter to make a commencement by supplying free dinners to expectant and nursing mothers, who are in need. These will be provided on the welfare premises.

(4) *The Provision of Hospital Accommodation for Difficult or Complicated Cases of Pregnancy and Parturition.*—Our area is fortunate in possessing an excellent District Infirmary, to which may be sent any surgical cases, such as caesarian sections. The Hospital Committee will not, however, admit other difficult cases. These latter have to be sent to the Maternity Hospital in Manchester, six miles distant. As we possess the usual motor ambulance such provision may be looked upon as adequate.

(5) *Hospital Accommodation for Diseases of Children.*—Our needs in this direction are partly met by the local Infirmary. In a town which did not possess a hospital within reasonable reach, cots could be provided on the Welfare premises. The drawback to such a scheme is that the maintenance of beds and Nursing Staff at once adds heavily to the cost of maintenance. Cases of diarrhoea from slum districts might be suitably nursed at the Borough Fever Hospital.

But the most urgent want, in my opinion, is the provision of open-air hospital treatment for weakly children and convalescent hospital treatment for such as are recovering from acute diseases. A large number of conditions met with in early and later child life are amenable to general hygienic treatment in the open air, and

we are constantly meeting with such cases as rickets, debility and marasmus, in the clinics, which require only suitable open-air treatment and diet to restore them to health. In this connection it is to be deplored that we are forbidden to make use of small-pox hospitals, which are often situated in suitable positions in the country and lie empty, doing nothing but support a caretaker for terms of years.

In the matter of providing convalescent treatment I would recommend to your notice an excellent piece of work that was accomplished by the ladies of our voluntary helpers committee in 1920. They made arrangements with the Ormrod Children's Convalescent Home at St. Ann's and sent there, during the summer, 33 children who were suffering from general debility, anæmia, rickets, etc. All these children returned to their homes much improved in health. Before being sent they were examined as to their suitability by the Medical Officer to the Centres. The Ladies' Committee made a grant of £28 12s. 8d. towards the expenses, the remainder of the cost was defrayed by the mothers of the children. Five mothers paid the full fees; in three cases of poverty the whole cost was borne by the Committee. The fee charged by the home was 14s. per week, and the railway company allowed a small reduction in the fares. The total payments made by the mothers amounted to £54 5s. 4d.

(6) *Dental Treatment for Children and Mothers.*—We have not made any arrangements for treatment of children and mothers, but it would certainly be most beneficial, and provision might be made for using the premises of the School Dental Clinic, in the same way as is being done in the Adult Dental Clinic at Folkestone.

(7) *Day Nursery.*—A crèche was established and maintained, by a voluntary committee in our town, several years before the war, and carried on with marked success, until 1915. It was then closed owing to the difficulty of obtaining nurses under war conditions, and it has not since been re-opened. It was housed in a commodious and well-built dwelling-house which had been adapted for the purpose. The staff consisted of a matron, a sister, and three probationer nurses. The probationers were trained during a six months' course in residence, in the hygiene and practical care of infants, after which they obtained positions as private nurses. For this course of training they paid a fee to the management. The infant accommodation was for 12 babies, 6 being infants and 6 "toddlers." They always had the full

number of babies being nursed, and also others waiting for admission. These babies were brought from the immediate neighbourhood by mothers who went each day to work. The first was taken at 5.20 in the morning and the last taken home at 6.30 at night. None were kept through the night. All infants were fed on Glaxo, which was also provided to the mothers for use at home at the week-end. The inclusive charge (pre-war) was 4s. per week.

Present-day opinion seems to be divided as to the desirability of maintaining these day nurseries. Our experience was that it met a distinct need for nursing the children of mothers who had to go out to work, and that the precautions taken prevented its being a means of spreading infectious disease.

(8) *Maternity Home*.—I consider there is distinct need in a town of the size we are considering, for a small home to provide accommodation for normal confinements. Such a home should be near the houses of the people. In my town we have no such institution, either official or voluntary. We frequently have application for this provision from women expecting confinement and who live in crowded four-roomed cottages. During normal times we could obtain considerable help towards its maintenance by the payment of fees from the patients, the majority of whom would be not only able but also willing to make some contribution.

(9) *Massage Clinic*.—In connection with our own two Welfare Centres a clinic for treatment by massage was established in September, 1919. This has proved to be not only beneficial to the children but also to be highly appreciated by the mothers. A competent masseuse is employed and all cases are examined and placed on treatment by the Medical Officer. The sessions are held on three mornings per week at one centre and three afternoons per week at the other. By this means the services of the masseuse are retained for three whole days per week. Towards this expenditure the Ministry of Health have contributed 50 per cent. Up to the present time this treatment has been given free of cost to the patients, but the committee now contemplate making a small charge, in accordance with the means of the parents. During the course of the massage each child receives a cup of free milk, and the mother is asked to provide cod-liver oil for administration at home. Printed instructions are also given to the parent with regard to special diet.

Nature of Ailments Treated during 1920.

Ricketty deformity	Paralysis	Congenital deformity	Malnutrition
27	6	4	2

Ages of Children Treated.

Under 12 months	2-3 years	3-4 years	4-5 years
3	15	6	12

During the year 1920 there were 153 sessions held, at which 36 children made 1,137 attendances. It may be objected that the number of individual children treated was small for the amount of work and time expended, but it must be recollected that cases of rickets and paralysis require prolonged treatment if a satisfactory result is to be obtained, and it is useless to give them perfunctory attention. In conclusion I would like especially to observe that the arrangement of schemes for providing accommodation at a Convalescent Home and for treatment of suitable cases at a Massage Clinic for Infants and Young Children attending Welfare Centres, will be found to be among the items which conduce much to the benefit and satisfaction of those receiving them, and can be carried out with a small expenditure of money.

NOTES FROM BRANCHES.

THE METROPOLITAN BRANCH.

HOUSING IN STEPNEY.

The work of house-to-house inspection in Stepney has evidently been carried out with considerable vigour. Prior to 1914 every house in the borough had been inspected at least once since the formation of the borough council, and in his latest annual report Dr. D. L. Thomas is able to state that a complete re-inspection of the whole district has taken place since 1919, the work proceeding at times in twenty parts of the borough simultaneously, and involving, in 1921 alone, the service of some 12,000 statutory notices, and the institution of legal proceedings under the Public Health (London) Act, 1891, in over 120 cases, with fines and costs amounting to £292.

The urgent need of an adequate organisation to deal with the after-care problem in tuberculosis cases is emphasised by Dr. Thomas, who deplors the loss of benefit obtained by treatment owing to the return of the patient to an unsuitable occupation or to poor home conditions. Provided with suitable work of a comparatively light nature

the disease, in his opinion, would eventually become arrested entirely in many cases.

THE GROWTH OF HAMPSTEAD.

In a hundred years Hampstead has increased its population twelve times, the census figure for 1921 being 86,000, which, but for the postponement of the census from April to June, would in the opinion of Dr. Scrase have reached the 100,000 mark; 504 samples of food and drugs taken in the borough during the year were submitted to analysis, and showed the percentage adulterated to be the exceptionally low one of 1.5.

WEST OF ENGLAND BRANCH.

ELECTION OF OFFICERS.

At the Annual Branch Meeting held at Taunton on July 8th the officers mentioned below were elected for the session 1922-23. Our President, Dr. Dunlop, retires automatically at the end of his year of office, and the present Secretary, who has only recently recovered from a severe illness, was compelled to decline re-election:—President, Surgeon-Captain O. W. Andrews, C.B.E., R.N.; Vice-President, Dr. G. Adkins; Secretary, Dr. P. H. Stirk; Treasurer, Dr. J. F. Blackett; Assistant Secretary, Dr. B. A. Peters; Journal Correspondent, Dr. J. F. Blackett. The next meeting will probably be held at Bristol early in October.

THE PRESIDENT-ELECT.

Surgeon-Captain Andrews, R.N., was appointed M.O.H. of the West Gloucestershire Combined Districts in 1913. Both before that date, and during the whole of the war, his career in the Navy was a very distinguished one. In 1899, after 10 years in the Service, he was specially promoted to the rank of Staff-Surgeon and awarded the Chadwick Gold Medal. He visited Berlin and Hamburg as Naval Representative at the 14th International Congress on Hygiene and Demography. His contributions to medical literature include a book on Public Health Laboratory Work and many papers to various scientific journals.

Among the numerous honours he has received may be mentioned the official thanks of the New Zealand Government for work in connection with Leprosy and Depopulation in certain Pacific Islands, the Silver Medal for Military Valour conferred by the King of Italy in 1917, the Legion of Honour, and the C.B.E. awarded in 1919.

A VETERINARY CONFERENCE.

In the course of the Annual Conference of the National Veterinary Medical Association held at Bath during the first week in August a number of matters bearing on Public Health came under consideration. During the discussion on one paper, Dr. Savage (C.M.O., Somerset) made some interesting remarks on our national milk supply. As regards cleanliness and purity he thought that, speaking generally, there had been little or no advance on the deplorable standards of 20 years ago. Milk was just as dirty, just as liable to convey infectious disease, just as contaminated with tubercle bacilli now as it was then. *The new Milk Bill was not designed to make any progress. It was simply an evasion and a putting off doing anything really effective*, the present demand for economy being used as an excuse. Dirty milk, however, was dear at any price. He also pleaded for closer co-operation between the medical and veterinary professions in certain matters which concerned them both.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

COUNCIL MEETING.

A meeting of the Council was held at the Chine Hotel, Boscombe, Bournemouth, on Friday, July 28th, 1922.

The President (Dr. W. J. Howarth) was in the chair, and there were present: Prof. H. R. Kenwood, Lt.-Col. Herbert Jones, Drs. R. A. Lyster, R. Veitch Clark, J. Wheatley, Charles Porter, Thos. Evans, Charles Sanders, D. C. Kirkhope, R. J. Ewart, E. H. Snell, R. Woolsey Stocks, H. Gibbons Ward, T. Eustace Hill, T. W. Naylor Barlow, G. W. N. Joseph, R. H. Wilshaw, J. F. Blackett, J. J. Buchan, G. H. Pearce, and G. A. Auden. Messages of apology for absence were received from Lt.-Col. F. E. Fremantle, M.P., and Drs. G. F. Buchan, A. B. McMaster, H. Kerr, T. H. Peyton, and R. Denison Pedley.

The Policy of the Society in Relation to the B.M.A.—Dr. D. C. Kirkhope submitted for the approval of the Council the amended report on the Policy of the Society in Relation to the B.M.A. in regard to the Public Health Medical Services, as agreed by the joint conference of representatives of the B.M.A. and the Society. The report, as amended, was as follows:

1. The Society of Medical Officers of Health have reviewed the obligations and powers imposed and conferred upon Local Authorities by Acts of Parliament in regard to Health Administration and the relative position of Medical Officers of Health and general practitioners in

schemes of Health Services. These obligations and powers include:—

- (a) Medical survey or inspection.
- (b) Treatment.

II. Local Authorities must give effect to their legal obligations. The extent to which they exercise their powers is in the discretion of the Local Authority subject to the prior approval of the appropriate Central Government Department.

The Society of Medical Officers of Health are of opinion that benefit would be likely to result from a closer co-operation of the local medical profession with the Local Authorities' schemes of medical survey or inspection and treatment.

III. The Society are in general agreement with the view of the Consultative Council on Medical and Allied Services as stated in that part of paragraph 6 of their interim report, which recited:—

"Preventive and curative medicine cannot be separated on any sound principle and in any scheme of medical services must be brought together in close co-ordination. They must likewise be brought within the sphere of the general practitioner whose duties should embrace the work of communal as well as individual medicine."

IV. The Society of Medical Officers of Health are therefore prepared to advise Local Authorities:—

- (1) That where private general practitioners place their opinions before Local Authorities on any proposed scheme of medical survey or inspection and treatment, their representations should have due consideration by the Local Authority in order that it may be ascertained how far it is practicable or desirable to give effect to their view.

- (2) That those engaged in general practice must either be prepared to accept responsibility for the treatment of such of their private patients as are discovered by medical survey or otherwise by the Local Authority to be in need of treatment, or they should agree that treatment be undertaken by the Local Authority without regarding such medical provision as an encroachment on their practice. To this end persons found to be in need of treatment should, in the first instance, be referred to their private medical practitioner, or if they have no regular medical attendant they should be advised to consult a private medical practitioner.

- (3) Private practitioners should assist Local Authorities by intimating their willingness or otherwise, to undertake the treatment of patients discovered in the manner stated, to be in need of treatment.

V. That practitioners, and any arrangement Medical Students, should have access to centres and clinics established by Local Authorities, in order that they may gain such experience as the centres and clinics afford.

VI. That private medical practitioners should be able to refer to clinics and centres for advice and treatment patients who would thus be most appropriately provided for.

VII. That payments or charges, if any, made in respect of medical treatment should be either voluntary or of such a character as will not deter persons from seeking advice and obtaining early treatment.

VIII. Centres and clinics should be established and administered for the benefit of:—

- (a) Those who are unable, for some reason, to obtain treatment from a private doctor, and

- (b) Those who, as a result of supervisory medical work undertaken by the Local Authority, are discovered to be ailing, and for whose ailments treatment would not be sought unless it were provided by the Local Authority.

But treatment at centres and clinics should be such as can be actually given therein, and should not include any treatment that makes domiciliary attendance advisable or involves a stay of more than 48 hours at any clinic where beds are provided.

IX. The Society is of opinion that in the interests of harmonious working the possibility should always be considered of clinical work done for the Public Health Authority being carried out through the agency of private practitioners where conditions are suitable.

X. For the purpose of a better understanding, the Society of Medical Officers of Health desire to state further:—

- (1) That private general practitioners or consultants accepting offices under Local Authorities must realise that the duties of these offices require to be fulfilled strictly in accordance with the conditions of the appointments and in priority of all other engagements.

- (2) That health policy is settled by Local Health Authorities, not only on medical grounds but after due regard has been given to the closely-related questions of administration and finance, local conditions and other relevant considerations.

- (3) That the Medical Officer of Health should so far as possible secure the co-operation of the local medical profession in the discharge of his duties.

- (4) That the final decision on health policy must always rest with the Local and Central Authorities.

- (5) That it is the duty of the Medical Officer of Health to ensure that effect is given to the decisions of those Authorities.

Dr. Kirkhope having explained the bearing of the various amendments suggested by the B.M.A. representatives, the report was unanimously adopted.

Co-operation between the B.M.A. and the Society M.O.H.—The President submitted the scheme for co-operation between the Society and the B.M.A. as agreed by the joint conference of representatives of the two bodies, as follows:—

1. (a) The B.M.A. so to alter its constitution as to secure the direct representation of such of its members as are in the Public Health Service, on its various governing bodies, by—

- (1) The election of one or two members on each Divisional Executive Committee.

- (2) The election of two or three members on each Branch Council.

- (3) The election of one or two members on the Central Council.

- (4) The nomination of an agreed proportion of the members of the Public Health Committee of the Central Council (other than *ex-officio* members), the remaining members being elected by the Council itself or the Representative Body.

- (5) The appointment of four representatives to the A.R.M.

- (b) The Society of M.O.H. so to alter its constitution as to allow of the Association being directly represented

on the Council of each Branch and on the Central Council of the Society.

NOTE.—It is eminently desirable that the representatives on the Council of the Association, or Society, should be members of the other Council.

"II. The Society of the M.O.H. to continue to formulate and urge any medico-political policy that it wishes, and where such policy is of mutual concern to both the Society and the British Medical Association, the Society will present that policy to the Association through its direct representatives, and when any such medico-political matter has been finally determined by the A.R.M., it is desirable that all action consequent thereon be taken by the B.M.A. The Society shall refrain from taking in action any support of a divergent policy until after the decision of the A.R.M., but in the event of the Society thereafter feeling constrained to take divergent action, such action shall not be taken until the Councils of the Association and Society have conferred together thereon."

III. As a condition of, or preliminary to any agreement on the above lines if desired a common declaration of policy on general lines to be promulgated by both Association and Society and a common arrangement in general terms as to certain points with regard to salaries and the method of securing them to be agreed upon.

Dr. Howarth explained that the representatives of the Association and Society had agreed to place the scheme for co-operation before their respective Councils for approval and adoption; it being understood that the details in para. I. of the scheme are tentative and should form the subject of future conferences between the two bodies. After several members of the Council had expressed their satisfaction at the prospect of closer co-operation between the Society and the great representative body of the whole profession, the scheme was approved by acclamation.

Prevention of Dental Caries.—On behalf of the Special Committee appointed to recommend propaganda methods in connection with Dental Caries, Dr. Wheatley submitted a leaflet for distribution to teachers, parents and children. Letters were read from Lt.-Col. F. E. Fremantle and Mr. R. Denison Pedley suggesting that there should be detailed discussion of the leaflet before its adoption. It was finally decided that consideration of the leaflet be postponed and that meanwhile a copy should be sent to the Medical Research Council for any suggestions or observations they might be willing to offer.

Milk and Dairies (Amendment) Bill.—Dr. Wheatley reported that the Committee on Foods recommended that endeavours should be made by the Society to secure the following amendments in the above Bill:—

- Clause 2.—(1) "Purveyor" inserted in place of "retailer."

- (2) The power should be in the hands of the Local Authority, with the right of appeal of the person aggrieved.

- Clause 3.—(1) "Local Authority" should be substituted for the "Minister of Health."

- (a) Pasteurised milk should not be certified, but should be subject to the conditions of the resolution of the Society of M.O.H. already forwarded to the Ministry of Health.

Clause 4.—(1) "Skimmed milk" should be added after water.

- (2) Should be altered accordingly.

Clause 5.—(1) "Knowingly" should be omitted and the following words added: "Provided that no offence has been committed if the vendor can show that he has taken reasonable precautions."

Milk Prosecutions; M. of H. Circular No. 325.—The President reported the recommendations of the Committee on Foods (see p. 318) in regard to Circular No. 325 of the Ministry of Health. There was unanimous agreement that the Report be adopted and forwarded to the Ministry of Health, and the hope was expressed that Local Authorities would also urge the Ministry to withdraw a circular so universally deplored by members of the Public Health Service.

The meeting then adjourned.

ANNUAL PROVINCIAL MEETING.

The Annual Provincial Meeting of the Society was held at the Chine Hotel, Boscombe, Bournemouth, on Friday, July 28th, 1922. The President (Dr. W. J. Howarth) was in the chair, and there was a large attendance.

The minutes of the last annual provincial meeting having been approved, the following candidates were elected to the Society:—

As Members:

Balmain, Augustus Rollo, M.B., B.S.Lond., M.R.C.S., L.R.C.P., D.P.H.; Bignold, Mary Florence, M.B., Ch.B.Edin.; Cramb, Rutherford, M.B., Ch.B.Glasg., D.P.H.; Donald, Harry Gordon, M.B., Ch.B.Aberd., D.P.H.; Donaldson, Eric, M.A., M.B., B.Ch.Cantab., M.R.C.S., L.R.C.P., D.P.H.; Edwards, Thos. Peters, M.D., B.S.Lond., D.P.H.; Gamgee, Catherine Mary Lovell, M.R.C.S., L.R.C.P.; Houlton, Charlotte Leighton, M.D., B.S.Lond.; Jewesbury, Reginald Charles, M.A., M.D.Oxon., F.R.C.P.; Jones, Joseph, M.D., Ch.B.Vict.; Kirker, Arabella Crory, M.B., Ch.B.Belf.; Lewis, Anna Gwenllian Mary, M.B., B.S., M.R.C.S., L.R.C.P.; Pemberton, Thos. Eben, M.B., B.S.Durh.; Priestman, Austin, M.B., Ch.B.Edin., D.P.H.; Proctor, Ruth Elizabeth, M.A., M.B., Ch.B.St. And., D.P.H.; Sturm, Frank Pearce, Ch.M., M.B.Aberd.; Wyllie, E. Mary, M.B., Ch.B.

As Associates:

Entwistle, Edward, L.D.S.Eng.; Fooks, Herbert Johnstone, L.D.S.Eng.; Inder, Reginald John, L.D.S.Eng.; Marsden, Dorothy, L.D.S.Manch.; Smith, Nathan, R.D.S.

The Society and the B.M.A.—The President reported to the meeting the preliminary agreements reached by the Joint Committee of representation of the B.M.A. and the Society. (See report of Council Meeting, *supra*.) General satisfaction was expressed that so much had been achieved towards making closer relations between the two bodies, and a resolution was passed cordially approving the action of the Council.

Ministry of Health Circular No. 325.—The steps taken by the Council in regard to the above circular were reported by the President and unanimously approved.

The meeting then adjourned, and the members and ladies accompanying them were afterwards hospitably entertained at tea by Mrs. Howarth.

SCHOOL MEDICAL GROUP.

The Sixth Annual and Sixteen General Meeting of the School Medical Group of the Society of Medical Officers of Health was held at the Society's Offices on Saturday, June 24th, 1922. Dr. E. L. Wear, C.M.G., S.M.O. of Leeds, was voted into the chair.

After reading of the Minutes and Correspondence, matters arising out of correspondence were considered. It was resolved "That the Group support any action taken or proposed to be taken by the B.M.A. or the Society in the matter of Dr. Pringle, of Newcastle, and Dr. Andrews, of Worcester, *re* salaries and security of appointment."

Dr. J. Sim Wallace was elected to represent the Group on a Committee approved by the Society for drawing up a leaflet on Dental Caries, and Dr. C. J. Thomas to represent the Group on the Metropolitan Branch Council.

The Northern Sub-Group reported a meeting held at Newcastle-on-Tyne in May, when Dr. W. H. Dickinson, T.O., read a paper on "Tuberculosis in Children."

Dr. C. J. Thomas, Senior M.O. to the L.C.C., D.P.H., was elected President of the Group, and Representative of the Group on the Council of the Society of M.O.H. for the year 1922 to 1923.

In considering the election of the Group Council it was resolved "That the Representatives of the Northern, North-Western, and Midland Sub-Groups be elected to form the Group Council, and that the Council have power to add to its number representatives from other areas."

It was further resolved that Dr. A. Ashkeny be re-elected Hon. Secretary and Treasurer.

The Annual Report of the Treasurer and Secretary showed a favourable balance in hand.

The Memorandum and Report of the Society *re* alteration of its constitution was considered. The meeting gratefully acknowledged the good spirit underlying the new proposals.

Sections (a), (b) (c) and Sub-sections (d) 1, (d) 2, and (d) 4 of the Report was passed unanimously. It was, however, resolved "that in Sub-section (d) 3 after the word 'direct' in second line, the words 'non-M.O.H.' be inserted."

The Sub-section would then read: "One M.O.H. elected by the outgoing Council for each direct, non-M.O.H. Group representative." The Meeting being of the opinion that it would appear invidious to appoint a second M.O.H. as an offset against a Group representative, who is already an M.O.H.

A letter received from the Society *re* relation of School Medical Officers and their Assistants to Secretaries of Education Committees was considered. It was resolved "That the Council of the Group appoint six Chief S.M.O.'s to draw up a Memorandum to regulate the relations of the S.M.O.'s and Secretaries of Education Committees and to present the same for consideration at the next Group Meeting."

MATERNITY AND CHILD WELFARE GROUP.

The Annual General Meeting of the Maternity and Child Welfare Group of the Society of Medical Officers of Health was held on Monday, July 3rd, at 5 p.m., at Carnegie House, 117, Piccadilly, London, W.1.

Dr. Harold Scurfield, Senior Vice-President, presided, and 48 members and several visitors were present.

The Annual Report of the Executive Sub-Committee having been printed and circulated to all members of the Group, was taken as read, entered on the minutes, and adopted.

The officers and committee were elected for the Session 1922-23, and the list will be published in the October issue of "Public Health."

A discussion on Rickets was introduced by Dr. Corry Mann, who made special reference to the relative importance of Environment and Diet as causative factors, dealing with the results of 533 cases investigated by him in South London as compared with a large series of controlled cases.

Drs. Pritchard, Scurfield, Moore and several others took part in a vigorous discussion.

The Group has been active throughout the Winter Session. There have been four clinical meetings, at which the following papers have been read:—

1. "The Nature of Summer Diarrhoea," by Dr. H. C. Cameron.
2. "Investigations of Causes of Rickets," by Dr. Corry Mann.
3. "Notes on Natal, Ante-Natal, and Neo-Natal Accidents and Fatalities," by Dr. Louise McIlroy.

4. "Some Notes on Breast Feeding," by Dr. R. C. Jewesbury.

All papers were followed by vigorous discussion. The attendance at the meetings averaged 25.

The formation of Sub-Groups to meet the needs of members of the Society of Medical Officers of Health who are unable to attend the Group's Meetings in London, has engaged the attention of several members, and on April 26th, the Metropolitan and Home Counties Sub-Group was inaugurated, the Hon. Secretary being Dr. Mary Kidd, 3, Cheyne Court, Chelsea, S.W.3. The response from the provinces to form Sub-Groups has so far been disappointing, but it is hoped that during the coming session Sub-Groups will be formed in the Birmingham and Midland Areas, North-West, including Manchester and Liverpool, Northern (Newcastle), and Yorkshire areas.

The business of the Group, which is left to the Executive Committee, included the following references:—

1. From the Council of the Society of M.O.H.:—

- (a) Concerning Registration and Inspection of Lying-in Homes. Report submitted to and adopted by the Council of the Society. (See "Public Health" for January.)
- (b) Representations of Groups on the Council of the Society. Various conferences have been held, and recommendations concerning the alteration of the Articles of Association will shortly be submitted to the Branches and Groups for approval.
- (c) Recommendation for a representative of the Society of Medical Officers of Health on the British Committee in connection with the Inter-National Congress for Infant Welfare.
- (d) Recommendation for a representative of the Society of the Medical Officers of Health, on the Maternity and Child Welfare Sectional Committee of the National Council of Women.
- (e) Appointment of 3 representatives of the Group to confer with a similar number of representatives of the School Medical Group, Dental Group, and Council of the Society, with a view to drafting a leaflet on The Prevention of Dental Caries.

Dr. Flora Shepherd, Dr. Harold Scurfield, and Dr. Harold Waller were appointed.

- (f) Appointment of Representative of the Group on the Council's Committee on Training of Health Visitors.

Dr. Kirkhope was appointed.

2. From the National Association for the Prevention of Infantile Mortality:—

- (a) Request to the Group to draw up an informative leaflet on the duties of Medical Officers of Infant Welfare Centres, and the best methods of carrying them out.

This matter is still under consideration.

The present membership of the Group is 172.

TUBERCULOSIS GROUP.

The Annual General and Committee Meeting of the Tuberculosis Group was held at the House of the Society on July 21st, 1922.

Present: Professor E. L. Collis, Drs. Peyton, Blackmore, McClure, G. Macdonald, Forrest, Faill, Wilson, Morgan, Gibbins and Caley.

Rule 2 of the Constitution of the Group was altered to read as follows: "Membership. All members of the Society of Medical Officers of Health interested in Tuberculosis Work are eligible for election as Members of the Tuberculosis Group."

Rule 6 was amended to make provision for obtaining representatives on the Committee from Branches which have formed no Sub-Group.

Dr. F. C. Morgan, Tuberculosis Officer, Croydon, was elected a member of the Group.

The officers and committee were elected for Session 1922-23. The list will appear in the October issue of "Public Health."

MIDLAND TUBERCULOSIS SUB-GROUP.

The fourth General Meeting of the Midland Tuberculosis Sub-Group was held at the Anti-Tuberculosis Centre, 44a, Broad Street, Birmingham, on Saturday, May 27th, 1922, at 3.30 p.m.

The President, Dr. Dixon, occupied the chair.

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

The President then called upon Dr. Elliott, of Shrewsbury, to read his paper, "The Tuberculous Child in relation to Tuberculosis work."

This proved very interesting, and productive of much discussion. Amongst those who took part were Drs. Dixon, Watt, Bell-Ferguson, Sharpley, Clarke, Peebles, and Stevenson.

Subsequently the meeting unanimously appointed the following for office during 1922-23:—

President.—Dr. Gordon-Smith, Worcester-shire. Proposed by Dr. G. B. Dixon, seconded by Dr. Clarke.

Vice-President.—Dr. Watt, Derby. Proposed by Dr. Campbell, seconded by Dr. Peebles.

Proposed by Dr. Stevenson, seconded by Dr. Bodington that the present Committee should retain office for another year.

The question of appointing a Secretary and Treasurer was deferred until next meeting.

Dr. Watt proposed and Dr. Elliott seconded that Dr. Dixon be appointed a member of committee on his vacating the Presidential chair.

Professor Collis was proposed by Dr. Elliott, and seconded by Dr. Dixon, as a suitable candidate for the Presidency of the Tuberculosis Group. This was passed unanimously.

The Meeting then discussed the recent Circular 304 and considered that the suggestions contained therein were unsuitable, and decided that Drs. Dixon and Campbell should communicate with the Secretary of the Tuberculosis Group in London on the matter.

It was the unanimous wish of all present that the present representatives on the Group Committee, *i.e.*: Drs. Dixon, Gordon-Smith, and Watt, should continue to act in this capacity for the year 1922-23.

The proceedings then terminated.

METROPOLITAN TUBERCULOSIS SUB-GROUP.

The Annual Meeting was held at the House of the Society on July 12th, Dr. H. R. Wilson in the chair. It was decided to hold the ordinary meetings on Fridays, not later than 6 p.m., of which notices will appear in "Public Health." The following were elected for the session 1922-1923: Chairman, Dr. H. R. Wilson; Secretary, Dr. H. B. Gibbins; representative on the Metropolitan Branch of the Society, Dr. F. G. Caley.

PUBLIC HEALTH (OFFICERS) ACT, 1922.

The Ilford Urban District Council has, by unanimous resolution, put the above Act into operation, and has appointed, with the approval of the Minister of Health, its three Assistant Inspectors, Messrs. T. V. Haigh, H. C. Monkcom, and C. W. Fisher, as Sanitary Inspectors, Mr. F. W. King being designated Senior Sanitary Inspector.

We understand that Ilford is one of the first of the Urban Districts to put into force the provisions of this important Act, by which, for the first time, more than one Sanitary Inspector can be legally appointed by an Urban District.

WEST OF ENGLAND BRANCH.

COLLECTIVE RESEARCH.

THE RELATIONSHIP OF SQUINT, STAMMERING, AND LEFT-HANDEDNESS.

The West of England Branch presents the following case for a collective research:—

Dr. Inman, Ophthalmic Adviser to Portsmouth Council, finds that so-called eye headaches, and even squints, are due to a neurosis, or psycho-neurosis, more often than to errors of refraction; and that they are frequently associated with stammering and left-handedness in the patient, or other members of the family.

If his findings are confirmed it means an all-important modification in our treatment of these, and other conditions. The object of this research is to obtain further evidence on the point.

It is suggested that each S.M.O. undertaking the work could investigate, in the course of the year, 100 cases. *For each case investigated, a control child must be similarly investigated.*

Left-handed children may be:—

- (a) Obviously and completely left-handed.
- (b) Left-handed for some things only (partial left-handedness).
- (c) Have been left-handed, but now no longer so, owing to education.

Instructions:—

- (1) Cross out or leave in the word "control," according to the case.
- (2) The history is to be obtained by the S.M.O. cross-examining the *mother*, or *some near relative*.
- (3) S, St, or L (a, b, c), and O, may be used as abbreviations.
- (4) "Other symptoms" would include headache or night terrors, and other conditions at the discretion of the S.M.O.
- (5) Records to be sent in to the committee as soon as 10 observations have been made.

The sub-committee (Drs. Dunlop, McCallum, and E. Ward) appointed to draw up a scheme for research by School Medical Officers reported also:—

- (1) The subject selected must be simple. A form should be drawn up and filled in for each patient and an explanatory circular also sent to each S.M.O. undertaking to complete the forms.
- (2) Only those officers who wish to do the work should be asked to undertake it. It could

be put before them by the respective medical officers of health, in the absence of an S.M.O. Sub-group.

(3) The committee should see the first few reports of each officer before any more are made, so as to clear away any misunderstandings which might arise.

(4) The expenses of the forms and circular would be small, and, the committee thought, would present no difficulty.

PROPOSED FORM.

THE RELATIONSHIP OF SQUINT, STAMMERING, AND LEFT-HANDEDNESS.

Date (Control) No.
 Name and County or Town of S.M.O.
 Name and Address of Child.....
 Symptom noticed—S, St, or L
 Age School
 Source of Information
 (1) Has the Child ever Squinted?
 (2) Or Stammered?
 (3) Is it Left-handed? (a)..... (b)..... (c).....
 (4) Other symptoms
 REST OF FAMILY:— F. M.
 Other children and ages. Say whether S, St, or L (a, b, c).
 If not, O:—

COMMENTS:—

Signed

FROZEN MILK.

An unusual defence was raised in a milk case heard at Bootle Police Court on Thursday, August 10th, 1922. The defendant, a milk dealer, was summoned for the sale on Monday, July 10th, of a sample of milk where analysis showed 3.05 % of fat, and 7.49 % other solids, indicating the addition of 14 % water. For the defence it was stated that the sample was part of a consignment received from a farmer on Tuesday, July 4th, and placed in cold storage in readiness for the increased demand at the weekend; the milk was removed from the cold store frozen on Saturday, July 8th, and as it had not thawed sufficiently for sale on Sunday, it was broken up and placed in several buckets, and it was suggested that the act of freezing had caused an unequal distribution of the non-fatty solids with the result that certain of the thawed fractions showed deficiencies.

Admittedly, the first "ice" formed in the freezing of milk is practically without any milk solids, with the result that portions of a block of frozen milk which have thawed separately will have varied quantities of non-fatty solids, yet if a quantity of milk be frozen, then completely thawed and thoroughly mixed, the relation between milk sugar, proteids, and water will be the same after as before freezing. The constituents were in these relative proportions before, and the theory of the defence must be discarded. However, as milk frozen and treated as here described cannot be held to be "not come from the cow," the decision in *Richardson* does not apply, and the milk is liable equally as much as if he acted on water.

The defendant was convicted and fined.

SMALLPOX OF MILD CLINICAL TYPE.

The Ministry of Health have issued the following memorandum (69/Med.) regarding recent outbreaks of smallpox of mild clinical type:—

(1) A few outbreaks of smallpox, though of no considerable magnitude, have occurred in England during the present year in which the clinical type of the disease has been conspicuously mild. It has, for example, been noted in these outbreaks:

(a) *Mortality.*—No fatal cases have occurred.

(b) *Constitutional Symptoms* have been slight, even when the rash has been extensive and copious. Secondary fever and any considerable pustulation have been rare.

(c) The above characteristics (a) and (b) are not limited to vaccinated persons whose protection has diminished from lapse of time, or to persons who have only been vaccinated with indifferent success; they have been found to apply to persons of all ages whether or not they have been vaccinated at some previous date. In other words, the mild type of disease has been related to the character of the smallpox infection itself.

(d) In a few instances, there is some evidence that there has been an unusually long interval between the initial symptoms and the appearance of the rash; in some the rash has seemed to come out in successive crops.

(2) The prevalent character of the disease in these outbreaks has led to some cases being reported as "varioid" or as "alastrim,"* rather than as variola or smallpox.

(3) Investigations of these outbreaks have been made not only by the medical officers of health and the hospital medical officers locally concerned, but also, at the instance of the Ministry, by medical officers of the Ministry and other medical experts with exceptionally great experience of smallpox. Upon their reports it is evident that (apart from intercurrent chickenpox, which could be differentiated both clinically and epidemiologically) the outbreaks in question have been outbreaks of smallpox, and are to be classed with other outbreaks of a mild clinical type which have frequently occurred in the history of smallpox both at home and abroad. There has been the usual period of incubation and the usual history of case to case transmission. The distribution and character of the rash has in general been that which characterises mild or modified cases of smallpox in any epidemic. In an analysis of over 100 recent cases the incidence, according to age, in vaccinated and unvaccinated persons has been found to show the features usual in smallpox—contrasting with the corresponding figures for chickenpox and other diseases which are not influenced by vaccination.

(4) Attention is drawn to these facts in order to emphasise the following considerations when smallpox of this type occurs:—

- (a) None of the customary and necessary procedures of smallpox prevention (including vaccination) should be omitted.
- (b) Close inquiry should be made to ascertain whether chickenpox is prevalent at the same time as smallpox and to secure the differentiation of these two diseases. Chickenpox should be made temporarily notifiable, whenever necessary, as an emergency measure under Section 7 (6) of the Infectious Disease (Notification) Act, 1889.
- (c) Where cases are diagnosed or reported as cases of "varioid" or "alastrim," the term should be treated for all purposes of preventive action (including notification) as the equivalent of the term smallpox. It may be noted in this connection that, alike in the official International List of Causes of Death and in the Nomenclature of Diseases of the Royal College of Physicians, "varioid" is included under the generic head of smallpox. It may be observed that this rule is followed in the official weekly return of notified infectious diseases. The figures for smallpox in those returns include all notifications of varioid or alastrim, the fact that diagnosis has been made in either of the latter terms being indicated, for information, in a footnote.

* Some observations on the clinical characters to which the term "alastrim" has been applied will be found in the Annual Report of the Chief Medical Officer for 1919-20.

CORRESPONDENCE.

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

COLLECTIVE RESEARCH.

From Dr. J. F. BLACKETT.

Sir,—It has been felt for some time by members of the West of England Branch that what may be called "collective research" might well form one of the activities of a Society such as ours. After a good deal of preliminary work a sub-committee appointed to report on the matter came to the conclusion that the best thing to do in order to test the practicability of the idea would be to give detailed suggestions for some definite and specific investigations which might be undertaken.

At our last Branch Meeting the unanimous opinion was expressed that if you could see your way to publish in the Journal such particulars as I am sending herewith it might in the first place suggest interesting possibilities to other Branches, and, secondly, it might elicit hints or criticisms either from our own or from other Branch members.

The subject of "collective research" might of course be discussed at length in general terms. Perhaps, however, its possibilities and its limitations will be seen in better focus if consideration is directed to a specific example such as the sub-committee has here produced.

I should add that the Committee consisted of our President (Dr. Dunlop), Dr. E. Ward, and Dr. McCallum, and that I am merely forwarding suggestions for which they are responsible.

I remain, Sir,

Yours faithfully,

JAMES F. BLACKETT,

Hon. Secretary, West of England Branch.
The Guildhall,
Bath.

69265

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