CONFERENCE OF MEDICAL OFFICERS OF HEALTH.

ADDRESS.

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Sanitation and Sanitary Organization; their Significance and Value in Public Health Administration.

IN the first place it is my pleasant duty to welcome you to this Conference at which I have been asked to take the chair. I trust it will be an interesting meeting and one which will lead to practical results. I also take this opportunity of congratulating the chief medical officer of the Local Government Board on the well deserved honour he has recently received at the hands of Her Majesty.

Great changes have taken place during the past sixty years. Whether the progress of the future will be on similar lines no one will venture to forecast. But history shows unmistakably that there are times when we may with advantage record the meaning which is, or may be, or should be, attached to certain words in common use. Clearness of thought and meaning is one essential step in progress. One of the first desiderata therefore is to get rid of the ambiguity which is at present attached to the use of certain common expressions.

The expression Sanitation is common enough now-a-days. It may serve a useful purpose if we, who have a responsibility to the public, consider for a few minutes what the term properly connotes, and how far it is to be reckoned as one of the principal agencies in producing that sanitary betterment of which much has been said during this summer.

District cleanliness undoubtedly belongs to the sphere of sanitation. In fact the terms have been officially taken as synonymous. Quantity and quality of water supply, drainage, paving, scavenging, and the condition of the dwellings of any town or district may fairly be summed up under the description of its sanitation. If the condition of the subsoil and the regulation of the air space about dwellings are included, we are according to the word a fairly full signification. How far can these measures, which come within the scope of public ad-

ministration, have assisted in reducing the rates of sickness and mortality both at home and in the Colonies? Unquestionably, to a very large extent. The zymotic group of diseases has been that first affected. Those which have been properly denominated filth diseases, viz., cholera and typhus, have been practically eliminated, and typhoid has been brought under control. But, apparently, it has not appreciably affected for good or for harm measles, whooping cough, influenza, and other zymotic diseases. Furthermore, its relation to diphtheria prevalence is obscure; and as regards small-pox there is really no satisfactory evidence at present that it has contributed in any remarkable degree to the diminution of the disease.

The absence of alarming epidemics of cholera and typhus affords a striking illustration of the benefit of sanitation, guided and assisted by sanitary organization. It is, moreover, significant of much deeper and wider effects. In the reduction of pulmonary consumption, consequent on the improvement of dwellings (in respect of airiness, dryness, and cleanliness), we have the best evidence of the great value of Sanitation. Indeed, in England the diminished prevalence of this disabling form of sickness must in large measure be credited to this department of municipal administration.

With these limitations we may claim that among the chief glories of the Victorian Era is the enormous advance made in sanitation in England. We are apt to associate this advance in civilization with a few names which have become household words among those who attend Congresses of this kind. But far too little is thought of the work of the Local Sanitary Authorities, Municipalities, and Boards, especially those who have been in the van and who have had the raising and ordering of vast sums of money for the promotion of works, which for the most part form a legitimate source of pride and satisfaction. To those influential persons, Chairmen of Councils, Corporations, and Members of Committees, who promote these works with purely unselfish aims, and solely for the advantage of the public health, the highest honours are due. It has been my privilege to be associated in various capacities with gentlemen of this sort, to whom, at a similar meeting eleven years ago at York, I had the pleasure to offer a profound tribute of respect.

In the record of achievements during the Queen's reign reference was made to the hundreds of millions sterling which have been spent in this country alone in works of sanitation. No doubt there is urgent need for even further expenditure, for there are not a few backward authorities who, notwithstanding the excess of preventable disease which their returns exhibit, will remain inactive until some sort of compulsion is brought to

bear. I propose to refer to this point again as part of the whole question of sanitary compulsion.

In connection with the benefits of sanitation we may concede that greater attention to "district cleanliness" by the representatives of the people must have furnished a great stimulus to improved personal and domestic cleanliness, and that in various ways public and private effort acted and reacted on each other. So that the habits and character of the people must to a certain extent be included in the connotation of the term, the significance of which we are now discussing; for it is certain that in increasing the comfort of living they have materially helped to preserve health. But needless to say there are other habits (excesses of various kinds) which cannot be brought into the same category. Again the improvement of the health of the masses of the people must in a large measure have been due to political movements such as that which led to cheaper and more wholesome food supplies, the reduction of hours and improved conditions of factory labour. So that sanitary betterment, as it has been called, is the product of several co-operating factors. Furthermore, it is plain that a great deal has been due, not to sanitation, but rather to sanitary organization, that is to sanitary regulations directed by efficient local government rather than to district cleanliness.*

SANITARY ORGANIZATION.

If it is taken for granted that in the above term we include the medical element which is essential to its existence, we may confidently assert that it has been the motive power and the

* The concern of the medical profession in sanitation was, at the outset, that of arousing public attention to its importance and explaining the conditions which made its neglect dangerous. The results of this pioneer work, like that which is constantly being carried out in the medical societies at the present day, were freely given in accordance with the traditions of the profession. Subsequently its relation became more direct, and this class of unofficial but public service ceased to be unremunerated. Just half a century ago Duncan was appointed Medical Officer of Health for Liverpool. Similar appointments were made in London and one or two other centres. Then the office became general throughout England in 1872. But it should be noted that it was as *one* of the circumstances affecting or threatening to affect the public health that neglect of sanitation came to be a matter of immediate official concern to the medical profession. In this respect, as well as in other ways, Medical Officers were placed in positions of trust and responsibility to the *population of a district*. We need not discuss the conditions under which the positions have sometimes had to be sustained. But as bearing on our present subject it deserves to be specially remarked that among the solid advantages accruing to the public in the administration of health matters during the past twenty-five years has been the direction of sanitation by professional men, who were able to estimate its real value and necessity, and who at the same time were absolutely independent of any commercial interest in its promotion. The importance of this consideration will be obvious to

controlling influence of sanitation to which the credit of its influence and action has been generally ascribed. Whenever sanitation has been promoted indiscriminately and without the advantage of medical direction, it has been rudely checked. In the days of Mead, the recommendation of sanitation was received because it came from those who knew the habits of the plague, and who could speak with the knowledge of professional men who personally directed the treatment and care of the sick. A century later under the regime of the General Board of Health, measures failed for want of that knowledge which alone can satisfactorily explain the reasons for incurring expenditure and for altering a state of things which has long been in existence. Contrast the condition of things during the cholera epidemic in 1849 with that under which cholera was successfully controlled in 1893, and we have a good illustration of what efficient sanitary organization can achieve in a country which, though in advance of others, is still far from perfect in its sanitation.

The prevention of small-pox has been so much discussed of late, that reference to it might well be omitted on this occasion were it possible. Recognizing, as we all do, the protective power of vaccination for children, we must rank systematic vaccination of infants among the most essential part of sanitary organization. Moderate compulsion as regards parents has been found necessary for this.

The central part of the vaccination Commissioner's Report last year is that which deals with the change of age incidence in small-pox fatality, which has been so remarkable, and which has been graphically represented by our colleague, Arthur Newsholme. The conclusion to which this evidence points is quite irresistible. When the Gloucester epidemic last year was at its height, I visited the place in order to see for myself the so-called isolation hospital provision, which was said in the public prints to have proved a failure. Incidentally I had the opportunity of noting what a very large proportion of the sufferers in the small-pox huts or sheds were young children.

practised administrators. There are not only recalcitrants and obstinate opponents of sanitation to be reckoned with, but there are those who counsel perfection. Such are apt to over estimate sanitation, and their enthusiasm may sometimes be a source of embarrassment to authorities who have to do their best for their town or district. Sanitation systems soon become superseded and out of date in these times. But the question for Authorities is not always whether they are capable of improvement by the light of present-day knowledge, but whether from an impartial point of view of the whole circumstances, and especially in regard of other administrative provision which has to be made for the protection and improvement of the public health, the expenditure necessitated by changes of system is advisable. Here also the independent judgment of experienced professional medical officers may be distinctly valuable to the authorities and the ratepayers.

In the discussion which took place at the Society of Medical Officers of Health this year upon this epidemic, the conclusion arrived at was that systematic vaccination is an indispensable safeguard to the community.

The reports of the Vaccination Commissioners refer to sanitary organization, but do not sufficiently explain what it should comprise.

One of the most vital points in the system of sanitary organization is the proper constitution of the office of Health Officer. That officer must, to a certain extent, be the representative of the medical profession, which is itself an organized preventive force, upon whose high sense of honour and public spirit, the success of preventive measures chiefly depend. With such a vigilance system, with ambulance arrangements, and with available means of early hospital isolation of initial cases, disinfection, &c., a well vaccinated town or district may be said to be thoroughly equipped in respect of small-pox prevention.

Is the town population of England sufficiently protected at the present day? Certainly not. In the first place a clear understanding is necessary as to the position a Medical Officer of Health should have in sanitary organization.

The intentions of the office are or were that he should fulfil a dual function. As an expert he is an "assistant" properly speaking of the authority, in his other capacity he is a public servant holding a position of responsibility to the community for whom he is the Medical Officer of Health, an office in which he should be as amply protected as any public servant entrusted with the highest duties in connection with the administration of the Law. The actual conditions of things is testified to by the fact that the main body of medical officers feels called upon to protest against the injustice to them, arising from their insecurity of tenure. Admitting that to some extent the responsibility rests with those who are and have been too willing to accept, and even to compete for, office without any proper stipulations, we may yet ask is there no authority whose business it is to take up the question of sanitary organization.

This subject has to be regarded from the educational as well as an official point of view. The General Medical Council of Great Britain and Ireland has concentrated its efforts on securing a fairly high standard of examination, so that at the present day the D.P.H. is regarded as an academic distinction. The number who have passed this examination during three years is given in the table on p. 344, from which it will be seen that the number who have thus qualified themselves according to a fairly high standard are in proportion to the

appointments of professional Medical Officers of Health as about fifteen to one. Probably most of those who obtain the qualifications only intend to combine them with successful general practice. This which is still the prevailing system apparently grows in favour with the medical profession.*

The Medical Council and the Universities have been desirous of making it a condition for the diploma that the candidates should furnish proof of having actually had six months' experience in the details and practical working of sanitary organization, besides six months of special laboratory training. Now, if we take £1,000 as representing the outlay required for each individual who becomes qualified for ordinary practice under the present regime (five years' curriculum) an additional sum of £250, at least, would be required for the D.P.H. So that six years' of preparation and a sum of £1,250 would represent the outlay required for an individual who elected to start as a professional Medical Officer of Health. The conditions and examination may be made even more exacting, especially as regards pupilage or apprenticeship in the work we are now discussing. But surely before any further step is taken in that direction the time has arrived when the Medical Council may with advantage have their attention drawn to the present and prospective condition of sanitary organization.

Let it not be supposed that the utility of good organization would be confined to what has been briefly referred to on this occasion. There is abundant scope for other work on similar lines. For example, in the prevention of tuberculous diseases there is probably even greater opportunity for the development of sanitary organization than in those of the zymotic class both in the supervision of food supplies and the regulation of tenement houses and the occupation of cottages rural and urban.

In this place I may refer to a thoughtful contribution by our colleague, Alfred Ashby, of Reading, on the relation of the Public Health Service to Pulmonary Consumption. After giving a most able and interesting account of the laboratory experiments on which our belief of the transmissibility of tuberculosis by food supplies is based, he insists on the need for strong measures in order to reduce tuberculosis among our food animals to a minimum. But, as a preliminary measure, we must furnish proof derived from etiological studies of

* The system apparently grows in favour with the medical profession for reasons of expediency, there being in the vast majority of cases no alternative offered by existing machinery of Government. But it must not be forgotten that the recognised organs of public opinion, viz., *The Lancet* and *The British Medical Journal*, long ago proclaimed with no uncertain note what is desirable as a matter of public policy.

cases, or groups of cases, of phthisis or tabes mesenterica of the mischief which may be caused. Without this we can hardly expect to create sufficient public opinion to render efficient measures at all practicable. Here, it would seem, is a favourable opportunity for an extension of the principles of the Notification Act. Those principles have on the whole been found to be unobjectionable. One of the chief benefits conferred by the Act is the opportunity for observing the relation of disease prevalence to food or water supplies. Excellent examples of the practical results of this system are afforded by the observations and reports of Shirley Murphy and Arthur Newsholme and others on Typhoid in relation to drinking water supplies and the eating of uncooked contaminated shell-fish. In these matters the whole medical profession constitutes part of the public health service. The cost of securing the valuable co-operation of medical practitioners to this limited extent has been trifling when compared with the work of sanitation. The annual expense of working the whole notification system in England is less than what it often costs to drain a single village. An extension of this principle, by suitably remunerating members of the profession for the sacrifice of time involved by such collective investigation, and the careful preparation of reports in the manner suggested, would, I think, make a valuable advance in our systems of sanitary organisation.

There are, of course, many other directions equally important, which will no doubt occur to you, in which immediately good results could be produced by the employment or extension of existing systems.

There are several considerations relating to our present subject, organization, from a practical point of view which I cannot even touch on in this brief address. It would be specially interesting at the present moment in regard of the recent address in Public Medicine by Dr. Herman M. Biggs at Montreal to contrast the possibilities in achievement of sanitary organization in England and America. But such a comparison would necessitate consideration of two systems of government essentially different in respect of health administration. Before, however, concluding, a few words may be said on the question of sanitary compulsion. It is obvious that without some sort of compulsion in public health matters improvement in the past would have been much less marked, and that if it is to be maintained, compulsory powers must be increased rather than diminished. Reference has been made to the necessity for powers which will force certain sanitary (?) or insanitary authorities who are callous to public opinion, to proceed with necessary works of

sanitation. In the matter of river pollution such powers have indeed already been conferred on the Thames Conservancy Board. If well directed they may do much good. Elsewhere powers of a similar or analogous kind are urgently called for. For example, drainage of houses, villages, encampments, and towns *into* the Chalk, Greensand, or other water-bearing strata without any precaution is a dangerous practice which should be stopped by law.

Again: In the matter of house sanitation, although an immense amount has been accomplished, especially in large towns, by the operation of clauses of the Public Health and other Acts relating to Nuisances, it is well to remember that the benefits of the Acts have been chiefly confined to houses of the artisan class let at weekly rents. Elsewhere improvement has been largely due to voluntary effort and a spirit of emulation, and is, generally speaking, of a spasmodic and irregular kind. Some advances have been made by means of local Acts, as at Eastbourne, and there the *vis a tergo* of indirectly compulsory powers to have the drains of a house let on lease, "put in order," as the phrase goes, was supplemented by a system of certification of houses by the Corporation, which in the case of health resorts may work advantageously to all parties. But what seems generally wanted at the present day is more equal treatment of houses of all classes. If the law operates in such a manner that an owner of small houses let at weekly rents is practically compelled to fall in with a certain standard of sanitary requirements, why should the owner of larger houses, let on lease, frequently be subject to little or no interference from the Public Authorities?

In considering the question of sanitary compulsion it is always useful to keep well to the front the principles of legislation so far as they relate to food which is adulterated or which is deemed to be unwholesome. There the offender is treated, comparatively-speaking, severely. The way in which an offence is regarded must of course always depend on the state of *public knowledge*. The state of *public knowledge* in health matters is very different now to what it was twenty years ago, when the Public Health Act came into operation. Therefore it may well be argued that as injury or danger to public health is the reason for punishment or compulsion in all cases some more just and equal treatment is required now for the numerous offences which are or may be brought within the purview of the law.

Most of the "powers" of authorities, though nominally compulsory are virtually permissive. The councils *may* do this; the justices *may* do that. In many instances the application of the

very moderate powers of indirect compulsion depend on the executive which may as we have seen be rendered practically inoperative. Believing in the principles of local self-government in the main, I think that it is by increasing the powers of councils which are representative of wide areas and interests that advance must be looked for. The excellent and economical management of some of our large English counties and cities in health matters is an object lesson to be studied.

In close connection with the question of compulsion comes the relation of sanitary science to administration. Sanitary science comprises a knowledge of several sciences, Clinical medicine, Epidemiology, Etiology, Bacteriology, Physics, and Chemistry, all of which are concerned in questions or problems relating to public health. An accomplished medical officer must know enough to be able to correctly appreciate the bearings of any of these branches of scientific knowledge on the practical work of maintaining and improving the public health. This is not pure science, which, strictly speaking, consists in the advancement of knowledge. But it is a highly useful adaptation of scientific knowledge, together with an application of the faculty of impartial criticism. The medical assistant of a sanitary authority has not only to acquaint the authority with the meaning of new discoveries as to channels of disease, &c., but to appreciate and explain to them their true import, that is to say the proportion such a discovery bears in the field of general observation. The man of science must be constantly advancing knowledge. It is necessary that he should keep his confrères informed by means of papers and communications on the subject of his work, and respecting different stages of discovery. New facts are thus revealed before the time has arrived for generalization. Such communications now-a-days cannot be confined to experts. Frequently, as we know they are treated as subjects for popular discussion, and may be used as arguments against almost any form of sanitary compulsion.

Now one of the principal functions of a sound system of sanitary organisation should be both to promote the advancement of knowledge and to keep the public informed of the bearings of new observations as affecting practical questions of administration. For this purpose it is eminently desirable that central and local systems of administration should co-operate, and that all who contribute to the improvement and successful working of sanitary organisation should be fairly considered.

If by means of this Conference a clearer and better understanding should be arrived at on subjects which are now recognised to be of great social importance, I feel sure you will agree that it has not been one of the least useful of the pleasant meetings inaugurated by the Sanitary Institute.

DIPLOMAS IN SANITARY SCIENCE, PUBLIC HEALTH, &c.

	1893.		1894.		1895.	
	Part I.	Part II.	Part I.	Part II.	Part I.	Part II.
Royal College of Physicians and Surgeons, London.	12	38	26	32	21	28
University of Oxford	...	...	...	...	...	4
University of Cambridge	15	55	21	58	12	31
University of Durham	...	...	...	2	...	8
University of London	...	...	...	4	...	2
Victoria University	2	4	1	3	7	2
Triple Board of Scotland	1	6	...	6	2	4
University of Edinburgh	3	10	7	15	...	4
University of Aberdeen	...	...	2	3	...	1
University of Glasgow	...	...	...	...	...	...
Royal College of Physicians and Surgeons, Dublin.	...	...	...	7	...	8
University of Dublin	...	...	1	2	...	2
Royal University of Ireland	...	...	...	...	...	...
	33	113	58	132*	39	94*
					82	94*

* This number represents the Diplomas and Degrees granted in each year.