An Address

ON

SOME RECENT POLICIES REGARDING
PARTICULAR DISEASES*

BY

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From its earliest beginnings, organized public health has run general and special measures in harness. However much action to secure the better general health and physical fitness of a population, and all that this implies, may signify, there are always diseases the prevalence of which is little affected by the possession of a high standard of general, or even individual, healthiness. For them, special communal measures have to be devised in each case according to the nature of the disease and our knowledge of it, and these measures, perhaps more than any others in public health work, require periodically to be reviewed and modified as new facts are learnt or as new conditions of administration have to be reckoned with. A few topical examples will not come amiss.

PSITTACOSIS

My first topic, psittacosis, may seem a triviality, but it has a certain claim for notice. It very rarely happens that the policy of complete exclusion of the introduction of a particular infection into a country can be attempted with success, especially in these days of rapid transit and in the case of a nation with external communications like our own. We have adopted this policy for rabies, and to some extent for anthrax, and last year it was imposed as an emergency measure for psittacosis. The emergency arose from the discovery of cases of this disease in various parts of the country, all associated with parrot infection, mostly by birds of comparatively recent importation coming to a large extent, though not wholly, through one channel or another from the South American countries—"Amazon parrots," as they were more or less correctly called. Beginning with a few cases which one regarded merely as pathological and clinical curiosities, the number of people in England affected by this serious illness in a few months had exceeded 100, and at least 25 of these persons died. There were instances in which human case-to-case infection occurred without the intermediacy of the bird, and there were some striking examples of laboratory infection among those working at the pathology of the human and bird disease and trying to identify its virus.

Meanwhile, many countries on the Continent had a similar experience, and concluded, before we did in England, that the importation of all birds of the parrot tribe had better be stopped. They did this, since the period of infectivity seemed to be so indefinite and prolonged that no mere measure of temporary detention of the birds at the ports would meet the case, even if the necessary quarantine measures were administratively practicable. The additional risk thus arose that England would become the dumping-ground of new and possibly infectious parrots which could not be landed abroad at any European port. The Parrots (Prohibition of Importation) Regulations were the inevitable outcome of these circumstances; and, with one or two exceptions, possibly but not clearly traced to a breach of the order, they have been effective, and there has been no psittacosis in England since. So far good, but no one can contemplate without dismay the indefinite deprivation of our population from the luxury of parrots. Apart from their aesthetic qualities, they appear to create an intense domestic satisfaction, and it is their classical mission to supply material for anecdote.

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But the difficulty of choosing the safe moment to let them in again is considerable, mainly owing to the difficulty of obtaining facts regarding the prevalence of psittacosis infection, particularly in South American countries, both among the wild birds and at the entrepôts and aviaries at the ports from which they are dispatched to Europe.

It would certainly be desirable to have more evidence than we at present possess that the parrot infection of 1929 was only a passing and temporary epizootic. It does seem fairly certain, however, that the birds frequently transfer infection from one to another after their captivity in the aviaries in which they are kept before sale and in the cages in which they are shipped, and that the mortality in course of these shipments is sometimes extremely high and almost certainly preventable. One may commend in this respect such rules for healthy transport of birds as those enjoined by the Zoological Society—reprinted in Dr. Scott and Dr. Sturdee's report on Psittacosis to the Ministry of Health in 1930—which, if observed, should go far to reduce the risk. Importers who wish to see a speedy revival of the parrot trade—which is said to be considerable and profitable—might do much to enlist public and official sympathy with their aims by themselves undertaking that all cause for criticisms on this score would be removed if importation were again allowed. Such action on their part would, I feel sure, be welcomed also in other countries which are dealing with the same question. The administrative inconvenience of separate action at the different European ports was made plain in 1929-30, and attention is now being given to the practicability at the next stage of common and simultaneous action at them all.

YELLOW FEVER

The risks of virus research to laboratory workers, just referred to, have nowhere been so tragically illustrated as in recent work on yellow fever by deaths which entailed such losses to science as those of Adrian Stokes, Noguchi, W. A. Young, and Paul Lewis. They have had an odd recent repercussion on public health policy in India, the Dutch East Indies, and elsewhere in the Far East, which is worth mentioning here. Several Eastern countries have forbidden, or are about to forbid, the importation of yellow fever virus or material capable of carrying it, for any experimental purposes, even to laboratories of the highest repute. Reactionary as this decision may appear, it has been initiated by the public health authorities themselves, on the ground that research must be sacrificed in view of the possibility of infection extending outside the laboratory and reaching the populations of vast regions in which yellow fever is unknown, but where its insect carrier, the *Aedes aegypti*, is common.

A more formidable risk of introducing yellow fever, by man or mosquito, into these populations has now also to be taken into account. It may soon be possible to make relatively short voyages by air to those countries across Africa from the West Coast, where yellow fever is known to be endemic, and the countries which consider themselves threatened are not inclined to take chances. Special attention to this position has been given in the draft international agreement for the prevention of spread of infectious diseases by aircraft, prepared last May by the Permanent Committee of the Office International d'Hygiène Publique. Its policy is based, *inter alia*, on prescribing a minimum of action in the yellow-fever-affected countries sufficient to secure that no person is embarked on an air journey to the other countries concerned if there is risk that he has been exposed to yellow fever infection within six days. On the face of it, this is a drastic requirement, but one which in present knowledge appears necessary in the interests alike of public health and of air navigation.

MALARIA

It is, however, rarely possible for the main line of policy directed against a particular disease to be one of national or international action for its exclusion. Public health policies are as a rule much more complex than that. The particular disease is there, and the collective action which ought to be taken about it does not admit of a single or simple formula. It depends on the nature and traditions of the community and its normal resources on the one hand, and the natural history of the disease on the other. To give another illustration from so-called tropical medicine, I would refer to the strides which, notwithstanding economic depression, have lately been made in many countries in combating malaria, the disease which, taking the world at large, probably causes more total sickness and invalidity than any other. Public health does not now offer a single policy based primarily on intensive local attack on the anopheline breeding place—successful as that method has been in limited areas specially favourable to its conduct, and impossible as it has proved as a practical proposition in most malaria-ridden regions. The modern method is to make a choice from several quite different policies according to the circumstances of the region. They have been made possible by a wholesome refusal to work on dogma, and by the practical application of the new knowledge acquired about malaria. Much of it, one may note, has come from the Horton Laboratory in this country, where special opportunities to study all phases of human malaria is afforded in course of the treatment of general paralysis by inducing malaria attacks. The latest work at Horton may well add another anti-malaria policy. It has not only shown scientifically that quinine, so powerful in its action on the malaria parasite in its vegetative, fever-producing form, has no power of arresting the development of the sporozoite which the mosquito inoculates with its bite. This was more than suspected before, on the evidence of the failure of quinine for malaria prophylaxis during the war. But now we have evidence that in this respect there are drugs which can do what quinine cannot, and that the temporary sojourn of a susceptible visitor to malarious areas may by their instrumentality be robbed of its danger.

I have just referred to the instance of yellow fever, in which medical requirements may put some obstacles in the way of aviation in some tropical countries. But if medicine is now going to make it possible for aviators to land in the far more numerous malaria-infested regions and be bitten with impunity, it will have made a very handsome compensation to the interests of air traffic.

In leprosy, too, a recent change of public health policy has lately been conspicuous; isolation of lepers is now being everywhere regarded like the isolation of the tuberculous, and not as an inevitable and fundamental necessity to prevent the spread of infection.

ISOLATION, CARRIERS, AND IMMUNIZATION

Coming nearer home in regard to infectious diseases, one may note, if not the adoption of new policies in place of those which have served us so long and on the whole so well, at least some new outlooks which are producing a considerable change in modern practice. Consider in this connexion isolation, carriers, and active immunization. Some six years ago I took part in an elaborate inquiry at the Ministry of Health into the effect of isolation hospitals on the spread of scarlet fever.¹ Most of the 30,000 beds in our isolation hospitals up and down England were then in use for that disease, and it is doubtful whether many of these hospitals would have been provided at all without faith in their necessity for scarlet fever prevention. With

all the resources at our disposal we could only say in favour of the hospital isolation of scarlet fever that it represented a social convenience that no local area which has once possessed it would willingly dispense with, and that it usually offered facilities for treatment of the individual case not otherwise available. We could not say on any evidence that would stand examination that it has checked the spread of scarlet fever or that it has been responsible for its diminution in severity and mortality. This finding, come to rather reluctantly, confirms from practical experience the conceptions of scarlet fever infectivity and susceptibility which the immunologists have for some time been pressing on us from their side. To scarlet fever, in this connexion, we may add diphtheria; there is in both abundant justification of the isolation hospital as a place of treatment and a place of study, but much less as providing a principal method of preventing the spread of these diseases in the community. I will not enlarge on this matter save to draw attention to the repercussion of these conclusions on the modern use of the isolation hospital. The accent is shifted from isolation to hospital, and these special institutions require more than ever to be places which prove their medical advantage by supplying the most effective possible treatment, by saving life in the individual case, and by doing everything possible during the hospital treatment and by applying a following-up system to prevent the invalidity due to kidney and middle ear troubles and the like, which now forms the most serious part of the mischief done by these diseases. They afford, moreover, a means of clinical research on a large scale which is invaluable and cannot be elsewhere obtained; the testing of serum reactions of susceptibility to scarlet fever is a noteworthy example.

The same considerations have made it easier in recent years to extend the use of isolation hospitals to a variety of different diseases. The Metropolitan Asylums Board, now merged in the London County Council, found no difficulty in using parts of its infectious diseases hospitals when it desired to have units for dealing with the mental after-effects of encephalitis lethargica, and for the radiological treatment of cancer of the cervix. In the case of cerebro-spinal meningitis—to give one of many examples—the justification of the hospital by the facilities it gives for special treatment is particularly noteworthy. I would like to use this opportunity to plead in this connexion for full co-operation in the scheme now being put out at the Ministry of Health for collecting facts from all hospitals in the country, which will permit of the much-needed assessment of the curative value of different anti-meningococcus serums and of the different ways of administering them. In conclusion on this topic, I would not be thought to imply that the close association of isolation hospitals with bacteriological and clinical research is a new policy, but it is undoubtedly one which is coming into greater prominence and it is still full of promise.

Healthy Carriers

I have referred to bacteriological research rather than to bacteriological routine. With regard to the latter, there is a distinct tendency in infectious disease work to be critical of, or discontinue, what one may call the automatic use of bacteriological tests for the ascertainment of healthy carriers. It has now for some time been realized that carrier hunting adopted as an indispensable ritual in connexion with notified clinical diphtheria cases—with the object of the special treatment or segregation of the healthy carrier—may easily produce more embarrassment to administration and general inconvenience than is warranted by any advantages which it offers—unless, of course, in special circumstances under the fullest and most up-to-date laboratory control. Even more is this the case with

¹ Ministry of Health Reports on Public Health and Medical Subjects, No. 35, 1927.

the abundance of meningococcus carriers who can be found in connexion with the occurrence of cerebro-spinal meningitis; no one has seriously considered adopting the practice for the pneumococcus.

In the case of intestinal infections, I may note two recent examples suggesting the lengths to which one might be led by adopting the principle of treating all healthy carriers as a danger to the community. The first is the discovery during the last two Mecca pilgrimages that each time pilgrims returning by the quarantine station at El Tor have, on sampling, showed a material proportion of cholera vibrio carriers, some agglutinating according to ordinary standards, and this notwithstanding the fact that no clinical cholera was occurring among them or had occurred in any part of Arabia during the whole time of pilgrimage. The second is a recent experience of a paratyphoid outbreak due to milk in a district near London, where all known and notified cases were removed promptly to hospitals outside the district, which were on other sewerage systems. For eight weeks after it could be said that there was no known paratyphoid case in the district, it was possible at any time to find the implicated paratyphoid bacillus in the effluent from the sewage disposal works of that district. One does not know from how many temporary healthy carriers these bacilli came, but they must have been numerous and apparently did not spread infection in any case. One should perhaps add that although a general administrative policy for the routine hunting out of healthy carriers is now for good reasons less considered than was the case some years ago, it remains true that thorough concentrated search for carriers in particular cases, such as a food outbreak, may be essential for preventive work, and may be equally essential for particular epidemiological studies.

Active Immunization

The orientation towards the production of artificial immunity, which has resulted from the epidemiological and bacteriological studies of recent years, also must have some, if only passing, mention here. In this country it is too soon to speak of active immunization having been made the basis of a new public health policy, either nationally or locally, but there are tendencies in that direction. For diphtheria, systematic immunization is already an accepted policy in the case of the staffs of infectious diseases hospitals and in a few residential schools and institutions. As a systematic means of preventing diphtheria in the child community of a district, however, it has only been adopted here and there—so far with encouraging results—but on a scale far less extensive than in American cities. New York, which hitherto has had a diphtheria rate notably higher than that of any English city, claims that its immunization system, at present applied to some 300,000 children yearly, has brought incidence and mortality to a level below that of London. If immunization can be secured simply, with a minimum of inoculations (three separate inoculations seem too many for popular acceptance), without any material reaction, and without any danger—all postulates which seem capable of fulfilment—there seems no reason why systematic immunization against diphtheria, recommended to, and voluntarily accepted by, the population, should not before long become the main agency of diphtheria prevention in many areas. The same may be said for scarlet fever, though with less confidence until it can be shown that an immunizing agent is available which will do more than prevent the occurrence of uncomplicated scarlet fever, the mildness of which in these days makes it necessary to reckon with the argument that immunization is not worth while. If the anti-scarlet fever immunizing agent could be relied on to prevent the kidney and ear complications

of scarlet fever, or if, still better, it could also afford a measure of protection against other diseases associated with the haemolytic streptococcus, the reasons to be advanced for its systematic use in a given community would be much stronger—again always supposing the same postulates as for diphtheria.

VACCINATION AND SMALL-POX

In this country a good deal of attention has lately been directed to the position of vaccination against small-pox, our oldest example of successful immunization. Among the chief reasons for this have been the prevalence of small-pox of an apparently fixed low degree of virulence (*variola minor*); the Rolleston Committee's inquiries and recommendations, and especially in regard to the occurrence of post-vaccinal encephalitis; and the administrative questions arising in consequence of the transference of the administration of the Vaccination Acts to the major public health authorities. As this subject has been recently and fully discussed in a review issued in the Ministry of Health's public health series, I only make passing reference to it now. So far as methods of vaccinating are concerned, the recommendations of the Departmental Committee were in the direction of obtaining community protection against any variety of small-pox by repeated vaccinations in small dosage—for example, a single insertion of lymph, beginning in infancy. Meanwhile, the relative unimportance of *variola minor* as a cause of mortality or disfigurement on the one hand, and on the other the experience of post-vaccinal encephalitis, as a new though very rare risk to be reckoned with in the case of vaccination performed for the first time at school age or adolescence, have imposed a certain check on the policy of automatically advocating communal vaccination on an extensive scale when small-pox appears in a district. In the case of *variola minor* advocacy of vaccination is tending to be restricted to particular individuals at special risk.

This notwithstanding, it is well to remember that the necessity of applying our well-tried methods of controlling small-pox, including the use of vaccination, remains undiminished in the event of the importation or appearance of small-pox of the epidemiological type which was familiar to us in this country before the war, and is still so extensively prevalent in many parts of the world. It is worth noting, indeed, how very extensively mass vaccination of communities has recently been practised in countries which are affected with this major variety of small-pox. Following a small-pox epidemic period in 1919-21 the vaccination system of Italy was overhauled in 1923, so as to secure systematic vaccination of the population in infancy and at eight years of age, with a further vaccination for military service and in other circumstances. This has now resulted in over one and a half million vaccinations being performed annually in Italy. Each year at the Office International d'Hygiène Publique in Paris one gets surprisingly large figures from representatives of Eastern and tropical countries to illustrate the progress of mass vaccination—for example, in the French African colonies, in the Dutch East Indies, and in India. The Russian figures also are striking, it being claimed that now for some years more than eight million vaccinations have been yearly performed in the Union of Socialist Soviet Republics. So far as the customary *variola major* is concerned, this country is probably deriving benefit from these extensive mass vaccinations in other countries where that disease is endemic, seeing that the risks of its importation here are thereby diminished. One may refer in this connexion to the attention now given to the vaccination of passengers and crews embarking at Indian ports. This practice is becoming systematized not because of any specific requirement made on their arrival in the United Kingdom,

but because there are such requirements on their arrival in other countries. Proof of vaccination within more than 12 days and less than 3 years, attested by a certificate, is now being so much expected at ports over-seas that the ordinary passenger to the United Kingdom will find vaccination to his practical advantage during the voyage. When ships arriving from the East carry passengers the great majority of whom have been effectively protected, the introduction of major small-pox through the wholesale infection of passengers, as occurred in the case of the *Tuscania* in 1929, is unlikely to be experienced.

Cholera prophylaxis

Before leaving this subject, the very considerable part now played by anti-cholera inoculation in the epidemic work of Eastern countries may be mentioned. There can seldom have been a more intensive use of mass anti-cholera vaccination than when it was applied systematically to pilgrims before they attended the great Magh Mela at Allahabad in January of last year. At this ceremony it was reckoned that more than two millions out of three and a half millions of pilgrims bathed in the Ganges on the same day, and the risks of cholera infection from their ablutions can be well imagined. The actual cases of cholera treated were no more than 168, and no extension of the disease followed the festival. This was in striking contrast to the widespread scattering of infection which previous experience of these colossal gatherings had given reason to apprehend. General community inoculation against cholera is now habitually being practised in many parts of the East on the appearance of an epidemic, a recent example being the inoculation of more than half a million persons at Shanghai last year on the first appearance of cholera.

COMMUNAL DETECTION AND CONTROL OF DISEASE

I have given, perhaps, too much time to recent policies in connexion with certain infectious diseases, and am not attempting to-day to touch on others of at least equal importance, notably the special systems of control over tuberculosis and venereal diseases which have been developed so fully in this country, and on each of which there would be many interesting recent developments or adjustments to chronicle. I may pass to a few special diseases which in recent years have been made the subject of communal action in which the question of preventing case-to-case infection hardly arises, and where the public health object has been to systematize and organize the resources of an area by detecting the disease at its earlier stages, and also by securing that, at whatever stage it is detected, the sufferer receives the most effective treatment, curative or palliative, which circumstances permit.

Rheumatic Fever Policies

Let us take in this connexion the prevention of acute rheumatism in children, or its treatment when it occurs to prevent the occurrence of heart disease, of which there are well-known examples in London, and of which the work of the Invalid Children's Aid Association and that of the Home of Recovery for Rheumatic Children in Birmingham are also conspicuous examples. Local schemes for dealing with acute rheumatic infection in children imply three factors—ascertainment, supervision, and treatment. Ascertainment depends in the main on the School Medical Service, but is freely supplemented by the hospitals in the area and by other organizations. Experience in Birmingham and London shows that these means of bringing cases to light are effective. The addition of compulsory notification is being experimentally tried in three Metropolitan boroughs. After ascertainment, which is represented by a local "rheumatic register" of children needing attention, come the supervisory centre and insti-

tutional treatment. The rheumatism supervisory centre is worked in liaison with the School Medical Service, Care Committees, the Invalid Children's Aid Association, and with the hospitals. Its functions are first those of exact diagnosis, then to arrange for appropriate treatment or regulation of school or home life, for continuous supervision to detect relapse, and instruction to parents and for scientific investigation. There are now some fifteen rheumatism centres in London, eight of these being at hospitals, and parallel work is being done in other parts of the country. The success of the rheumatic clinic and supervisory centre is bound up with the provision of institutional treatment. The scheme has to envisage not only hospital beds for acute cases, but prolonged convalescent treatment, consisting mainly of rest under good hygienic conditions, largely in the open air, followed by the most carefully graduated resumption of activity. It seems too soon to form an estimate of the number of convalescent heart beds necessary for a large city; the New York standard is stated to be 1 such bed for 10,000 population, a fifth of the beds being reserved for adults. Such a standard proportion is hardly at present of great consequence. An essential point of present local schemes is the possession of elasticity. The general requirements just outlined can be met by many methods according to the conditions of the area, so long as they secure the general medical co-operation necessary and the best utilization of the different agencies available.

Cancer Policies

Another illustration is afforded by local policies in regard to cancer. In this country deaths attributed to cancer form over 10 per cent. of the total deaths at all ages and 14 per cent. at ages over 50, and cancer death rates tend to increase rather than decrease. The question of communal action—whether by State and municipal effort or by organized voluntary effort, or both—has of late years received considerable attention in many countries. The establishment in France of twelve large provincial anti-cancer centres, with others in Paris, all supported by State contributions and based on the Fondation Curie, is an example, as is also the setting up of large cancer hospitals associated with research centres in Italy, Spain, and the United States. The British local policies to which I would like to direct attention represent something that is complementary to the work of our different cancer hospitals, new and old, to the investigatory work of our Imperial Cancer Research Fund, and to the various investigations facilitated by the British Empire Cancer Campaign. I refer to the attention recently directed to the question whether some of the larger public health authorities—county boroughs, notably those in relation with universities and medical schools, and possibly also county councils—ought not to utilize their own resources and their own special opportunities to organize the combating of cancer. The local policy means that in some suitable manner cancer cases that go to hospitals for treatment are regularly classified and their histories ascertained. Something must be done systematically to ensure that the local population receives, and at the proper time, the different forms of medical examination and treatment which are necessary. There is an educational policy in regard to pre-cancerous conditions. And, finally, in the case of operative or radiological treatment, the results are methodically assessed by means of observations of the patient continued over a number of years.

This kind of work can hardly be made at present the subject of a general national scheme. It wants local effort and local enthusiasm, and requires some definite local nucleus whose work will receive the encouragement and support of all the different agencies which directly or in-

directly may be concerned with cancer cases. This nucleus in one locality may be most conveniently based on the Public Health Department, but in another may best be executed through some hospital or voluntary association with which the Public Health Department co-operates. In respect of some kinds of cancer, particularly uterine, its nature may depend upon the extent to which the region is served by special departments or special hospitals at which radium treatment is given, and it results from this that local effort against cancer is now likely to be particularly active in connexion with those institutions to which supplies of radium have been allotted by the Radium Commission from the purchases of the Radium Trust. The kind of local action to which I refer in this summary way was lately reviewed rather fully in one of the memorandums (Cancer VII) of the Departmental Committee on Cancer at the Ministry of Health, the issue of which followed the transfer to the larger public health authorities of the many cases of cancer which were previously the responsibility of the Poor Law Institutions.

It has also been largely with the object of facilitating organized local action that the Departmental Committee has, over a series of years, recommended official circulars, and produced monographs on the causes and treatment of cancer of accessible sites. We owe to that Committee and its workers the determination of the average natural duration of the different varieties of cancer in different parts of the body, and various assessments of the extent to which appropriate operative treatment is being made use of, and facilities for early diagnosis are available. And its work has been specially useful when it has provided a reasoned judgement, obtained from home and from foreign sources, of the suitability of particular operative and radiological treatments, as judged by survival rates at defined intervals after those treatments. A city or region, therefore, which desires to consolidate its cancer work and settle a local cancer policy can, with the aid of these reports, start its work with some useful measures of the degree of achievement which can be reached by medical, surgical, and radiological skill.

The matters to be considered and co-ordinated at the local nucleus, which in general may be taken to be the Public Health Department, include the sufficiency of the local methods of securing that early and curable cases of cancer come to light at the right time and are treated in the right way. One is apt to forget how many different conditions are included under the name "cancer." Many of them, like cancer of the skin and lip, are so essentially curable that they only contribute a small proportion to cancer mortality. It is within the sphere of practical effort to bring cancer of the breast and cancer of the uterus into the same category. The local question is whether in fact these opportunities for cure are provided and used, and, if not, how the defect can be remedied through combined action of the local agencies available. There is again the large question of the sufficiency of palliative and nursing treatment in advanced cases of cancer, and, finally, the recording and following up of cases to which I have just referred. We can only wish well to those cities in which pioneer work is being done in these directions, not necessarily in the same way but always with the same object.

CONCLUSION

It seems, indeed, even from the random examples I have given, that in dealing with public health policies in regard to particular diseases we can hardly have enough local experiment. No one locality can attempt, or can be expected to attempt, to try out everything new that looks promising. But it is all to the good to find one particular area identifying itself, for example, with a carefully contrived effort to secure immunization against diphtheria,

another specially concerning itself with a policy to prevent heart disease, or a third with cancer. The same applies to many other forms of local effort, none the less valuable because it arises from circumstances that are fortuitous, like a local experiment for the communal treatment of chronic rheumatism and fibrositis, or the establishment of a foot clinic. Always the existence of such particular policies gives life and individuality to the local health work, and particularly when that work is not confined to the statutory public health authorities, but, as in the instances I have given, requires a combined action with which the whole medical profession of the place is identified. The position is much the same with the international work for health which is becoming so important. Uniformity is often desirable, and standardization is often essential to progress. One requires standards for statistics, terminology and for all kinds of purposes of comparison and research. They are essential also to facilitate a common understanding between nations in those instances where success must depend on united effort. But this is something quite different from the view that one should aim at conducting national health work on standardized international patterns or in pursuance of authoritative international doctrines. Room must be left for each community to develop its health policy on individualistic lines according to its own resources and the circumstances and genius of its own population. It is a healthy sign of progress in public health that this process can continue side by side with necessary consolidation and standardizing, and that communities, large and small, should still be ready to work out and apply new policies of their own or to reconsider and recast lines of effort so consecrated by tradition that they usually are not questioned. By so doing they help the world at large, certainly by success if it comes, but often hardly less usefully by learning the lessons of failure if they should be disappointed—which, after all, has been the essence of progress in true art and science from the beginning.

LATE RESULTS OF OPERATIVE TREATMENT IN TOXIC GOITRE

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The beneficial results of thyroidectomy in cases of toxic goitre have led to a steadily increasing number of these patients being referred to a surgeon for this operation, while the present pre-operative treatment with iodine has reduced considerably the mortality rate. There are comparatively few follow-up studies, but in the papers published the percentage of good results claimed has varied so widely that the average reader is left with the impression that, assuming the writer to be unbiased, either the criteria for judging results differ or the results depend on the clinic at which the operations took place; the former is probably correct. It seems probable that the average case operated on in the United States is milder than in England; this fact is no doubt the main reason for the difference in the immediate operative mortality rate. The apparent higher incidence of the disease in America cannot be due to earlier recognition by means of the more frequent examination of the basal metabolism, as, in my experience of 1,200 basal metabolic rate estimations in the past three and a half years, this test when properly done prevents many neurotic patients from receiving x-ray treatment. The test has to be repeated several times in these cases.

FOLLOW-UP RESULTS OF VARIOUS OBSERVERS

Before proceeding to give the details of my own cases I wish to mention the follow-up results of operative