

ORGANIZATION OF PUBLIC HEALTH AND MEDICAL  
SERVICE IN INDIA \*

BY

BREVET-COL. SIR R. N. CHOPRA

DURING the early times there was a relatively highly evolved system of curative medicine in vogue throughout India. This was particularly well developed during the heyday of Buddhism in the country, but the highly important preventive side was, as in almost all other countries during this period, non-existent. Contact with the West marked a material change, and one of the outstanding points of this change was that with the exception of a relatively small number of private practitioners of the indigenous systems of medicine, the State assumed almost the entire responsibility for providing medical relief to the country. Hospitals, dispensaries and other adjuncts, together with the necessary personnel, were provided on a fairly liberal scale, but these were far from sufficient for the teeming millions of this great land. Further, in essentials all this provision concerned itself for a long time with the curative rather than the preventive side of medical relief. Within recent years in a few of the larger towns some public-spirited people or communities have provided additional institutions of curative medicine, while the numbers of private practitioners have also materially increased. All the same, the present position is far from satisfactory, and in view of the impending constitutional changes it is proposed in this communication to take stock of

the situation and suggest what should be done for improving the existing conditions.

In a review of the Public Health Administration in India at least three landmarks in the history of its development have to be considered<sup>1</sup>:—

(i) The appointment of a Royal Commission to enquire into the health of the army in India in 1859. (ii) The report of the Plague Commission in 1904 following the outbreak of plague in 1896. (iii) The Reforms introduced by the Government of India Act of 1919.

The Royal Commission of 1859 was appointed to enquire into the extremely unsatisfactory conditions of the health of the army in the country. Between 1859 and 1863, the mortality rate among European troops was 69 per 1,000, while among European women in 'married quarters' it varied from 44 to 276 per 1,000. The Royal Commission recommended measures not only for the army but also for the civilian population. In accordance with its suggestions 'Commissions of Public Health' were established in Madras, Bombay and Bengal in 1864. The Commissions in Madras and Bengal, though they advocated far-reaching measures including the employment of trained public health staffs in the districts, did not lay down any definite policy. In the words of a former Sanitary Commissioner with the Government of India, 'Government had to deal with a population which was unwilling and unready to receive sanitation, which either frankly disbelieved in its efficacy and resented any change in established

\* From the Presidential Address delivered at the Annual Meeting of the National Institute of Sciences of India, held on the 2nd January 1941, at the Benares Hindu University.

<sup>1</sup> Ref. Raja, K.C.K.E., *Ind. Med. Gaz.*, July 1937.

customs or was too ignorant and apathetic to understand the goal at which it aimed. Sanitary measures were received not only by indifference but by active opposition.' Under the circumstances, very little advance was possible, but the outbreak of plague in 1896 raised issues of fundamental importance which can best be summed up in the words of the Sanitary Commissioner at that time:—

'When plague appeared it was not a new disease, but it was new to the present generation of Indians and it has exacted a very heavy toll of deaths all over the country. The strangeness of the disease, the unpopularity of the measures taken to control it and the importance of these measures have served to rouse the people from their apathy and concentrate the attention of all, but especially of the educated classes, on sanitation in a way that nothing else could have done.

'At the same time plague has not been without its effect on Government. Previous to the advent of this disease it had been the generally accepted opinion that sanitation was the work of any medical officer and required no special training. A special sanitary staff had, therefore, not been considered of any very great importance. When plague appeared the staff was inadequate and unprepared; action was taken on general principles and sanitary measures were adopted, which, with further study of the ætiology, we now know were unsuitable and could do little to check the spread of the disease. The waste of life, time, money and effort that resulted has impressed on Government the necessity of being prepared in future and large changes have been effected with that object.'

The report of the Plague Commission in 1904 advocated the reconstruction of the Sanitary Department on a wide imperial basis, with the provision of adequate laboratory accommodation for research, teaching and the production of sera and vaccines. The Indian Research Fund Association was formed in 1911 and a forward sanitary policy, with a devolution of powers to the local governments, was formulated in a resolution of the Government of India in 1914.

The Montague-Chelmsford Reforms of 1919 had a very marked effect on Public Health Administration; this was partly beneficial and in other respects detrimental. Provincial ministers responsible to the legislature were anxious to hasten the growth of education, medical relief and sanitation so far as funds

permitted. The organization of trained Public Health staffs for urban and rural areas, which the 'Commissions of Public Health' had recommended in the sixties of the last century, was at last taken up in earnest and in the years succeeding the introduction of the Reforms, the organization of health services became a marked feature in most Provinces. Since 1921 there has indeed been far greater public health activity in the Provinces than ever before.

All Civil Medical Services in Presidencies and Provinces were formerly under the control of a single administrative officer known as the Surgeon-General in the former and the Inspector-General of Civil Hospitals in the latter. Unfortunately, owing to an insistent demand for medical relief, which is what appeals most to the individual in a community with a relatively low standard of living, the available funds were expended in the main on increasing and improving hospitals and dispensaries, and the obvious need for more and yet more of these, associated with a chronic shortage of funds led to the neglect of preventive measures and particularly of those fundamental but costly ones comprised in the term 'Environmental Hygiene'. Relief of sickness and suffering was readily understood and appreciated by the public, while the application of sanitary measures, implying as it did interference in age-long habits, with restrictions which were regarded as irksome and trespassing upon vested interests or religious customs, was opposed on all hands by the people who are as conservative as any in the world. *En passant* it may be noted that the position in India at this time was generally very similar to that in England some hundred years ago.

Early in the present century the Secretary of State for India caused the separation of preventive from curative medicine by creating in each Presidency and Province a separate 'department' for preventive medicine, with an independent budget, and under an officer designated as the 'Sanitary Commissioner'; the name of the officer was changed in 1922 to the less appropriate one of 'Director of Public Health', and his department was also designated as the 'Public Health Department'. In many Provinces the division of duties as between the heads of the departments of curative and preventive medicine was not fully specified, and only a broad distinction of curative and preventive medicine was regarded as sufficient. The formation of separate departments for preventive medicine in the various Provinces provided a great impetus for this branch of medical

work, and far-reaching, much needed reforms were planned. These in many cases were well advanced when the Great War (1914-18) called a halt for the time being. After the war the young Public Health Department again got busy. They found themselves faced with the immense problem of Environmental Hygiene in a land where, even in towns, safe water supply and sanitary systems of sewage and rubbish disposal were, as a rule, conspicuous by their absence, the housing of the poorer classes was atrocious, and local administration, except in a few outstanding cases, was overshadowed by vested interests and correspondingly inefficient. In the rural areas sanitation simply did not exist, soil pollution was general, flies swarmed, malaria and hookworm infection were almost universal, leprosy and tuberculosis were widespread and smallpox, cholera and plague regularly took their periodic tolls uncontrolled by any environmental checks or preventive measures. The provision of properly qualified and trained staff for this work presented a serious difficulty. The Medical Department had its system of hospitals and dispensaries manned by Civil Surgeons, Assistant Surgeons, and Sub-Assistant Surgeons. In some Provinces the Civil Surgeons, originally *ex-officio* District Medical and Sanitary Officers, retained the dual charge, while the Public Health Department was building up a subordinate personnel of Sanitary Inspectors, epidemic Sub-Assistant Surgeons or Health Assistants to Civil Surgeons and later Health Visitors. All these worked under the Director of Public Health who had one or more Assistant Directors and other specialists, leaving the provision of the more costly full-time District Health Officers until the subordinate personnel had been trained and appointed. Other Provinces hastily appointed expensive District Sanitary Officers, whom in some cases they called Medical Officers of Health, although, owing to the fact that every district already had a District Medical Officer or the 'Civil Surgeon' as he is usually called throughout India, their duties were not comparable with those of Medical Officers of Health in England. Further, in the absence of a separate staff of subordinates the work of these new officers was limited to advising only. As an exception, however, the Presidency of Madras succeeded in creating a complete staff of Health Officers, Assistant Officers and Sanitary Inspectors.

The question at the present time is the lack of co-operation and consequently of co-ordination obtaining in many parts of India between the

official Medical and Public Health Departments.<sup>2</sup> This is a problem peculiar to India, for it does not exist in Western countries nor in the Dominions and Colonies where the separation of the official Health Services into 'curative' and 'preventive' sections has never been effected. To some extent this is due to the unsuitable titles given to the respective Departments and still more to their administrative heads. In the Presidencies the head of the Medical Department, as has been remarked already, is known as the 'Surgeon-General': a passable appellation with an historical basis as it is applied to the Chief of the United States Public Health Service. In the Provinces, on the other hand, the head of the Medical Services is known as the 'Inspector-General of Civil Hospitals': an inadequate and misleading designation for one who is the adviser to Government on all matters connected with medical relief, administrator of all public medical institutions, head of the medical services in the Province, President of the Provincial Medical Council of Registration and Medical Education and President or Chairman of a host of other medical organizations and committees. The designation 'Director of Public Health' is equally inappropriate, since it implies extensive powers and a range of activities much wider than are possible under existing conditions. The two titles together are largely responsible for the confusion of functions pertaining to the two Departments and the consequent overlapping, duplication and wastage of their resources. Another factor contributing to this confusion has been the absence of orders laying down the exact policy and scope of work for each Department.

It has been asserted that the maintenance of separate departments for medical relief and preventive medicine is an advance upon the English System. Its advocates point out that it enables experts on each side to administer their own subjects. While the specialists in preventive medicine argue that those who have not taken a diploma in Public Health cannot appreciate the requirements and scope of their work, they seem to lose sight of the fact that Public Health personnel is so fully occupied with Environmental Hygiene that it loses all touch with clinical work and is, therefore, not the proper agency for the administration of medical relief. There is much to be said on both sides. Even in England similar views have been expressed by recognized leaders of the profession. But in actual practice the maintenance

<sup>2</sup> Ref. Jolly, G. G., *Ind. Med. Gaz.*, April 1940.

of two separate public medical services has not led to satisfactory results in India. So long as the Public Health Department limited its activities to Environmental Hygiene there was little or no difficulty. This subject offers so vast a field that it could well keep a large department fully occupied for many decades to come. As soon, however, as the separate Public Health Department proceeded to interest itself in individuals rather than communities, overlapping began to appear; this has been most marked in the fields of maternity and child welfare, leprosy and tuberculosis, and even rural medical relief. In regard to midwifery a tendency appears to be developing which, if it is not checked may lead to a conflict between the practising doctors and health visitors and midwives. Already with the peculiar social conditions prevailing in this country medical colleges and schools are finding it increasingly difficult to obtain the requisite number of 'cases' for training. The position in regard to such diseases as leprosy and tuberculosis is anomalous. In one Province the Inspector-General of Civil Hospitals is responsible for leprosy work, in another the Director of Public Health. The same is the case with tuberculosis.

There is sufficient evidence, where it occurs, of a lack of co-operation between the two official departments and of the development of 'exclusion' instead of an *esprit de corps* which can only be destructive in its effects. The situation requires to be met by a close *liaison* between the two branches, such as, for example, obtains in the Government of India, where the Director-General, Indian Medical Service, has the Public Health Commissioner working with him in his office as his principal staff colleague. Such an arrangement not only conduces to a close co-operation, but the distribution of work is facilitated. The urgent necessity for a friendly collaboration between the two departments, if the system is not to break down, is essential, and is recognized by experienced administrative officers of both departments. The Central Advisory Board of Health established in 1937, should prove a valuable agency in this direction. At its meeting in Madras in January 1939, it passed the following resolution for the establishment of similar Provincial Boards of Health:

'The Board stresses the desirability of establishing in each Province and State an Advisory Board of Health with the Minister-in-charge as Chairman.'

While in reference to Maternity and Child Welfare it adopted the following resolution:

'Co-ordination between the medical and public health departments is perhaps more vital in the field of Maternity and Child Welfare than in any other of medical and public health work.'

If a policy of close friendly collaboration obtains between the two departments in the Provinces and the relative spheres of each are defined, the existing system will continue to function tolerably well, but if friendly co-operation that should be sought and loyally observed by the workers in both the departments is replaced by a spirit of exclusion, and co-operation is stigmatized as a 'dual control', then a position in which the two departments are in opposition will arise sooner or later and the profession will be divided into two camps. Such a state of affairs will hardly be in the interest of either of the two departments, while the effects of such a controversy are bound to lead to a great deal of suffering for the poor public.

The best solution of the problem appears to be the establishment of Ministers of Health in various Provinces modelled on the English System with suitable modifications in regard to the local conditions.

The modern Public Health Service in England is barely a quarter of a century old and, like so many of the English institutions it arose more by accident than by design. The dissolution of the monasteries left the destitute without any visible means of support until the year 1601, when the Elizabethan Poor Law established Parish Overseers and Workhouses; this system remained practically unchanged for over two centuries. Besides relieving destitution, these authorities carried out any measures that were necessary for the public health, such as the control of epidemics, the provision of sewers, or the abatement of sanitary nuisances. In 1834 the Poor Law Amendment Act was passed after a great deal of agitation and following the Report of the Poor Law Commission of 1832. This important Bill amalgamated the separate Parishes into Unions under the control of Boards of Guardians. District Medical Officers were appointed to attend to the sick poor, while the infirmaries were built to accommodate paupers who were too ill to be kept in the Workhouses. In 1835 the Municipal Corporations Act was placed on Statute Book to reform the chaotic state of the Borough Government.

Despite all these changes, the state of the public health was never taken very seriously until the cholera epidemics between 1830 and

1854 galvanized the Government into action. Edwin Chadwick, one of the Poor Law Commissioners, in his *Survey into the Sanitary Condition of the Labouring Classes of Great Britain*, exposed not only the insanitary evils of the towns and villages, the hideous legacy of the Industrial Revolution, but, by showing how closely disease was related to poverty, provided a convincing argument in favour of far-reaching reforms. His 'sanitary idea' led to the appointment in 1848 of the General Board of Health, which, after a stormy life, was superseded by the Local Government Board of 1871. In 1872 the country was divided into urban and sanitary districts, and medical officers of health and inspectors of nuisances were appointed for the first time. Credit is due to the authorities of the Liverpool Borough for having had the vision to appoint a Medical Officer of Health much earlier. Then followed the great Public Health Act of 1875 which is the bulwark of all sanitary laws.

A further Municipal Corporation Act was passed in 1882, while the year 1888 was conspicuous for the creation of County Councils and County Borough Councils. From this time onwards there has been an ever widening stream of health legislation. Statute after statute has swollen the ranks of the Public Health Service to such an extent that to-day there is scarcely any field of human activity in which the health officer does not play an important part. Another important landmark, the National Health Insurance Act of 1911, provided the adult manual worker with compulsory insurance against loss of health. The Bill was hotly contested during its passage through Parliament, but it was successfully piloted and passed into law through the efforts of Mr. Lloyd George.

Finally, the creation of a Ministry of Health in 1919 in place of the Local Government Board was the crowning recognition of the importance of health in the nation's life. This wise step was made inevitable by the Great War of 1914-18.

The general powers and duties of the Minister in relation to health are defined in the second clause of the *Ministry of Health Act, 1919*, as follows: To take all such steps as may be desirable to secure the preparation, effective carrying out and co-ordination of measures conducive to the health of the people, including measures for the prevention and cure of diseases, the avoidance of fraud in connection with alleged remedies therefor, the treatment of physical and mental defects, the treatment and care of the blind, the initiation and direction

of research, the collection, preparation, publication and dissemination of information and statistics relating thereto, and the training of persons for health services.

*Ministry of Health:* The Ministry of Health is the chief tribunal for Local Authorities. Broadly, it engages in the following activities:—

(1) Public Health. (2) Local Government and Local Finance. (3) Housing and Town Planning. (4) Poor Law Administration. (5) National Health Insurance.

'Power', remarked John Stuart Mill, 'may be localized, but knowledge to be most useful must be centralized'. Thus, while most executive functions are passed over to the Local Authorities, the Ministry seeks to maintain proper standards of efficiency amongst them. It supervises their methods of government, especially in regard to the public health matters. Certain too forward authorities have to be restrained, while other backward ones have to be spurred on to better achievement. One of its most important functions is the control of local expenditure by sanctioning loans after careful inquiry.

Its Medical Department, under the Chief Medical Officer, is divided up into the following sections:—

(1) Medical Intelligence, Infectious Diseases, International Health, etc.

(2) Maternity and Child Welfare.

(3) Tuberculosis, Venereal Disease and Institutional Therapy.

(4) Nutrition, Food and Drugs Administration, London Hospitals, Water Supplies, etc.

(5) General Practitioner Services and Insurance.

(6) Surveys, Hospitals, Environmental Hygiene, and Public Assistance.

(7) Medical Services, Emergency Hospital.

(8) Welsh Board of Health.

Each of these Divisions is in charge of a Senior Medical Officer who is responsible to the Chief Medical Officer for the work carried on in his division. Furthermore, Regional Medical Officers are employed to supervise the work of the panel doctors and the pharmaceutical chemists under the National Health Insurance Scheme, while other officers are detailed to investigate serious epidemics of infectious diseases, outbreaks of food-poisoning, or make surveys of Local Government areas. These surveys are extremely valuable. Not only do they provide comparative indices to enable the

Ministry to issue reports, circulars, and memoranda for the information and guidance of Local Authorities, but, incidentally, they help the Medical Officer of Health to overcome some of the more difficult problems of administration.

PROPOSED FEDERAL MINISTRY OF HEALTH OF  
THE GOVERNMENT OF INDIA

In India a Federal Ministry of Health should be established at the centre to provide the necessary co-operation agency for the provincial local self-government departments, which are at present responsible for the supervision of local bodies and for public health administration in the provinces. This Ministry would also be responsible for the other health functions statutorily conferred on the Central Government by the Government of India Act of 1935. All problems in connection with curative and preventive medicine should be dealt with by one department divided into appropriate sections. The following sections are tentatively suggested for consideration:—

1. Prison medical service.
2. Port sanitation and quarantine service.
3. School medical service.
4. Public Health including:—
  - (a) Medical intelligence, infectious diseases and international health.
  - (b) Nutrition, Food and Drugs administration including biological products.
  - (c) Environmental Hygiene including housing, water supply, drainage, waste products.
  - (d) Industrial hygiene.
5. Medical relief including:—
  - (a) Maternity and Child Welfare, venereal diseases, tuberculosis, leprosy.
  - (b) General practitioner services with special reference to rural dispensaries.
  - (c) Hospitals.
  - (d) Drug addiction.
  - (e) Health Insurance.
6. Lunacy.
7. Scientific Research.

For these purposes, the Ministry should have a highly trained staff of expert advisers. The Director-General, Indian Medical Service, who as the Surgeon-General with the Government of India most nearly corresponds to the Chief Medical Officer of the Ministry of Health in England, has at present an insignificant number of specialists on his staff. In England though

public health administration is established on well-regulated lines, the Chief Medical Officer controls a strong team of workers in each special subject of medical health work, such as maternity and child welfare, tuberculosis, industrial hygiene and so on. In India, on the other hand, while the conditions are much more complex, and although the necessity for an expansion of the Central Government's technical staff has been repeatedly stressed by the Directors-General and Public Health Commissioners, the task is left to only two or three officers.

The materials for the establishment of a Ministry of Health at the centre in India are all available. Thus, though many of the bureaux are under private bodies, their directors act as advisers to the Director-General, Indian Medical Service, who, as a rule, is connected with such bodies as the Chairman of their Managing Committees. Thus with the Director-General at the top we have roughly:—

1. Public Health Commissioner: Bureau of Quarantine, Infectious Diseases and International Health.
2. Deputy Director-General: Personnel and Establishment, Medical Relief, Medical Education, etc.
3. Assistant Director-General (Stores): Medical Supplies.
4. Maternity and Child Welfare Bureau of the Indian Red Cross Society. The Director-General is the Chairman of the Bureau.
5. Medical Commissioner of the Tuberculosis Association of India. The Director-General is the Chairman of this Association.
6. Medical Research. The Director-General is head of the Medical Research Department and Chairman of the Scientific Advisory Board, Indian Research Fund Association, while the Public Health Commissioner acts as its Secretary.
7. Drugs Control. The Director-General has the Director of Drug Control Laboratories on his staff, and he is also the Chairman of the Advisory Board for Drug Control.
8. Nutrition. The Director of Nutrition Research Institute as the officer-in-charge of the Nutrition Enquiries of the Indian Research Fund Association, acts as the expert adviser to the Director-General.
9. Malaria. The Director of the Malaria Institute of India acts as the adviser to the Director-General.

Other loose connections exist or are being forged, e.g., Leprosy through B.E.L.R.A.: food standards through a standing committee to be set up by the Advisory Board of Health, while new connections have to be established with the Railway Medical Services, Prison Medical Services, School Medical Services, etc.

The provision of a suitable staff of experts must devolve on the Federal Government and cannot be relegated to the provinces. The Royal Commission on Health in Australia (1925) emphasized that, as 'the success of health administration is more dependent on the personality and capability of the officers directing it than on any other single factor, the Commonwealth Government should be responsible for the maintenance of highly trained experts to advise and help local authorities when desired by State Health Administrations'. If such an arrangement has succeeded in Australia, I agree with Raja (1937) that a similar plan might be equally successful in India. Moreover, a carefully selected central staff would, to some extent, avoid the duplication of posts of highly specialized men in the component States of the Federation, while the position and prestige of the Federal Administration should enable it to attract the proper type of men.

The selection of the Federal Chief Medical Officer should, however, be dependent on his having both Medical and Public Health experience, and his deputies must be given a chance to familiarize themselves with the wide range of the curative, preventive and constructive aspects of medicine in the country.

Each province should have a Chief Medical Officer responsible to the Minister of Health of the province for the administration of the whole of the Medical subject with a number of deputies in charge of the various departments, e.g., prisons, schools, medical and public health problems. The deputies should be given a chance to work in different departments so that the Chief Medical Officer of the future would have men available with first hand experience of individual and Environmental Hygiene, while Regional Medical Officers should be appointed to look after various areas or zones.

A Provincial Board of Health under the Chairmanship of the Minister of Health should be constituted in each province. The members should be drawn from the Medical and Public Health specialists and suitable persons should be co-opted for different problems. The help of the Revenue, Education and Public Works Departments would be needed to shape the

health policy of the Provinces. Suitable persons may be constituted into *ad hoc* committees to tackle important problems of general and local interest, while the co-operation and advice of the specialists on the staff of the Federal Ministry of Health should be available to the Provincial Governments in connection with problems of an all-India nature.

In the districts, District Health Committees should be formed for the same purpose. These should be presided over by the Collector of the district or the President of the District Board; the co-operation of both agencies is essential, and this alone will make it possible for these committees to work efficiently.

So far as the rural population is concerned, medical men engaged in curative work should be able to undertake public health duties as well. Their education and training should be of such a nature as to enable them to do so without difficulty. The doctors engaged in combating epidemic diseases should be expected to undertake public health work when not dealing with outbreaks of infectious diseases. The rural doctor, who is the final link between the Health Services in this country and the people, should also be responsible for giving an elementary health education to the patients in connection with their immediate surroundings. Such instruction would be much more effective than general lectures and demonstrations to large audiences.

#### CONCLUSIONS

To sum up the views expressed above, I consider that, under the conditions prevailing in India at present, the State is essentially responsible for providing the necessary agencies for both preventive and curative medicine. Curative medicine forms an integral part of the public health services of a country inasmuch as very often the sick man is the source of infection and no constructive medicine is possible unless the population is rendered free from disease by treating the individuals. Again, according to the newer conceptions of a State, it is necessary that disablement whether temporary or permanent should through intensive use of curative medicine be cut down to the barest minimum. Moreover, it is through curative medicine alone that it is possible to win the confidence of the public in a country like India and bring home to the people the advantages accruing both from preventive and constructive medicine.

Starting from the bottom, I consider that to meet the requirements of public health of the

population there should be a combined establishment which should form the basis of preventive, curative and constructive medicine in each village. This should be linked up with a more organized central agency discharging these combined duties and catering for a convenient sized population, the bulk of which will depend upon various factors such as communications, incidence of disease, etc. These primary organized centres will have to be supervised and assisted by a district centre in which there should be a specialized staff for the main medical subjects. These district centres in turn should be in touch with a larger provincial organization in which the staff consisting of specialists in various branches of medical science should work under a senior and experienced medical man. This latter should constitute the administrative head of the medical service in the province under the Provincial Ministry of Public Health. He should have a thorough training in the methods of public health administration, community health organization, constructive medicine, etc. The staff of

the provincial organization should further be large enough to be utilized for medical and public health training both for under-graduate and post-graduate work.

The activities of the health organization in different provinces should be co-ordinated by a more elaborate and efficient Federal or an All-India organization working under the Federal Ministry of Health. The administrative head should be an officer with wide experience of preventive, curative and constructive medicine, and have on his staff expert advisers in as many of the important branches of medicine as possible. With the advice and help of these advisers, it should be his duty to deal with and co-ordinate the problems of public health which concern the country as a whole. Curative and preventive medicine must work as one single whole; to let them work separately in watertight compartments is sure to lead to confusion, while only an organization of the nature detailed above will be able to deal successfully with the multifarious problems of public health in this vast country.