World Health Organization, 1948-1958

At the Eleventh World Health Assembly in May 1958 in Minneapolis, the World Health Organization can look in retrospect at 10 productive years, each increasingly significant to mankind. Through its growing network of activities, whether they are part of the total war against malaria, eradication of yaws, or of environmental efforts less dramatic but equally vital, WHO has left its beneficial mark in the remotest corners of the world. Also high on the list of WHO contributions is an achievement outside the realm of health: the agency has demonstrated a working design for worldwide cooperative action on a common front.

On the occasion of the World Health Organization's tenth anniversary, the following pages are devoted to papers reflecting the agency's dynamic growth and accomplishments. Additional papers will be published following the assembly.

TEN YEARS OF WHO PROGRESS

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• THE WHOLE CONCEPT of the World Health Organization and all the principles included in its constitution are based on this simple truth: in our shrunken world, health, like peace and security, is indivisible, and mankind's fight to control and eradicate disease can be won only through the concerted efforts of all of us. Therefore, when WHO was created, arrangements were made for universal membership. Today, with 88 members and associated members, such universality has almost been obtained.

Their cooperative effort has already brought a number of benefits to all. Rapid pooling of information and experience makes it simpler to contend with diseases such as influenza and poliomyelitis, to meet the threat to mental health that grows from modern conditions of life, to adapt medical education to changing needs, and to study emerging problems such as health hazards of radiation or the mental health aspects of automation.

Countries that are struggling to conquer age-old diseases and to build up modern public health services have benefited further from the practical help given through the World Health Organization. Indeed it is for the successful fight against certain diseases widespread in the tropics and subtropics that the Organization is most widely known. Let me give you a

few examples. In the 1950–56 campaign against yaws in Indonesia, more than 23 million persons were examined and 3¼ million were treated during the initial surveys, and more than 31 million examined and 1.5 million treated during the re-surveys. In Haiti, until 1950, yaws affected almost a third of the rural population. By December 1954, a total of 2.8 million people had been treated. Observation in the southern region of the country, where the campaign had been initiated, showed that less than 1 percent of the population had contagious yaws.

Similarly with syphilis; in the Ghund Valley (Simla, India) control of this disease was achieved within a few months. When the entire population of this secluded valley was examined clinically and tested, 65 percent were shown to be positive. Penicillin was administered, and a checkup 5 months later showed that no new clinical cases had occurred.

Good results are being obtained by the use of antibiotics in mass campaigns conducted against trachoma and infectious conjunctivitis, which affect no less than 400 million people throughout the world.

Through the mass BCG vaccination campaigns (about 200 million people have been tested and around 90 million vaccinated) and the application of the new chemotherapeutic

agents, promising results are being achieved in reducing tuberculosis. As a result of action undertaken by national administrations, often assisted by WHO and other international and bilateral agencies, more than 350 million people can today be considered either freed from or protected against malaria.

Initiated or supported by WHO assistance, these campaigns have been carried out on every continent. One result is that, increasingly, babies are born to live, not to die. Increasingly, people can expect strength to live and capacity to work. In the past 10 years this great new promise has reached out to become reality to ever more millions of our fellow men.

Building Health Services

At the same time, the slower task of building up comprehensive health services is going forward in the member states with support from the Organization so that results achieved against communicable diseases can be consolidated. Most of the coordinating and leadership functions of WHO are directed towards this all-important objective. This fact is reflected in the growing development of intercountry education and training programs for medical and other health personnel and in the fact that today more than 40 percent of our projects in all regions are mainly concerned with education and training. In addition to providing assistance in the establishment or improvement of medical schools, nursing schools, and other training institutions, WHO experts and consultants are reviewing their curriculums and, what is even more important, their effectiveness in relation to local health needs. During the past years, it has been made clear that modern methods of combating disease and promoting health are useful only if their application is satisfactorily adjusted to widely differing stages of social, cultural, educational, and institutional development. Only in this way can the people for whom the measures are designed accept them and put them into practice as an integral part of their own ways of life.

It remains generally true, however, that experience gained in one area can be usefully applied in others. Seminars, conferences, and study tours arranged on a regional or interregional basis, in addition to providing inspiration and stimulus to their participants, are considered to be increasingly useful as vehicles for the exchange of scientific information and experience.

Among the conferences held during the past 10 years to promote medical education was one in New Delhi, where 132 medical education experts gathered to examine the type of training needed to solve India's shortage of medical manpower. A conference held in Chile, and attended by deans and professors from 40 medical schools in South America, discussed the teaching of preventive and social medicine. Israeli medical officers have benefited from the pooled experience of visiting public health workers. Anesthetists from many countries have been and are being trained in special courses in Copenhagen. Physicians have been instructed, also in Copenhagen, in the management of acute bulbar forms of poliomyelitis by the application of Lassen's method. Sanitary engineers have had an opportunity to further their knowledge through seminars organized at Leiden, Milan, and other places. Treponematologists have been given similar opportunities in Stockholm and Bangkok. Malariologists have received training in Amani, Bukavu, Guatemala City, Lagos, Lisbon, London, Maracay, Mexico City, Rome, and Yaoundé. Many other medical and public health workers have received similar training in a number of countries.

An even more direct form of international training is that afforded by WHO fellowships which enable public health workers to attend, for periods ranging usually from 3 to 12 months and, occasionally, for even longer periods, public health schools or specialized institutions to obtain advanced training or observe new methods and techniques, and bring back to their countries the benefit of their new knowledge. During its first 10 years, WHO awarded 6,396 fellowships. The truly international character of this program is revealed by the fact that during a 1-year period 1,100 fellows were received by 577 institutions in 42 countries. A growing number of fellowships have been devoted to studies within regions, so that fellows can obtain training and become familiar with

As a medium for the spread of medical knowledge, WHO organizes teams of specialists for international tours during which they demonstrate new techniques and report on new developments in public health. Here, a member of such a team, an internationally known surgeon, performs a demonstration operation in Cairo.

advanced techniques under conditions as similar as possible to those prevailing in their own countries.

Fellowships provide opportunity for advanced training abroad in varied subjects such as the teaching of preventive medicine, anatomy, and physiology; the organization of public health laboratories; the standardization of biologics; the medical use of radioisotopes; cell metabolism in cancer; food additives; the organization of medical education; thoracic surgery; the control of malaria, tuberculosis, venereal diseases, and congenital heart disease; psychotherapy for juvenile delinquents; psychiatric aspects of asthma; tropical architecture for health institutions; and, of course, postgraduate training in public health, nursing, sanitation, health education of the public, and similar subjects.

A great deal of effort and money has been devoted to the fellowships program—not only the effort of the countries selecting and proposing candidates and that of WHO planning and administering the individual fellowships, but also, and most important, the effort contributed by countries and institutions of study, without whose goodwill and cooperation the program would not have been possible.

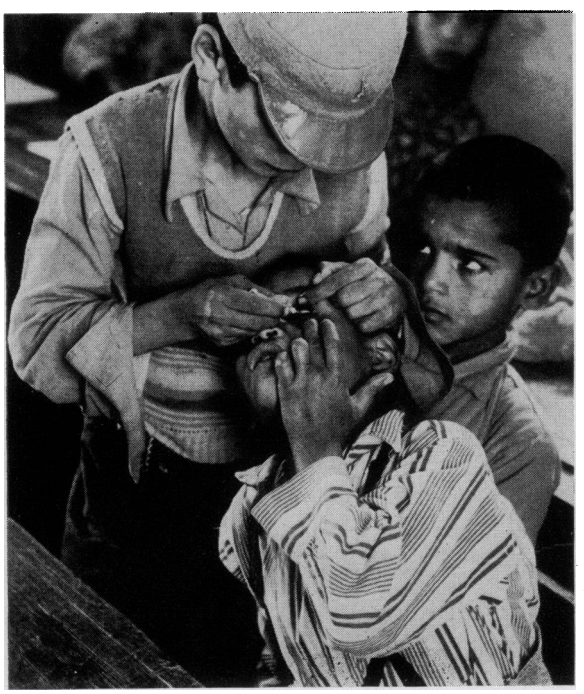
WHO Expert Advisory Panels and Committees

Expert advisory panels were established so that WHO could obtain the technical advice it needed on a particular subject either by correspondence with panel members or by inviting them to expert committee meetings. Tribute should be paid to the farsightedness of those whose idea it was to establish these panels and to those who, as members of them, have individually and collectively provided essential

technical advice for the development of the Organization's programs.

The Publications Program

It is important that the new facts obtained by scientists working under the auspices of WHO should find as wide an audience as possible, and the Organization, therefore, has emphasized its publications program. Besides the Technical Report Series (in which the reports of the expert committees appear), the program includes the *Bulletin*, which is a scientific periodical; the *Chronicle*, which contains a monthly account of work carried out under the auspices of WHO in various parts of the world; the *International Digest of Health Legislation*, which contains health legislation texts in full or in summary form; the *Epidemiological and Vital Statistics Report*, and the *Annual Epidemiological and Vital Statistics*, which contain mortality and morbidity statistics from many countries. There are also the individual books such as monographs on maternal care and mental health, plague, influenza, poliomyelitis, biology of treponematosis, meat hygiene, and toxic hazards of certain pesticides to man, to list only a few. These publications contain not only results of work undertaken under WHO auspices but also material from outside contributors concerning facts and studies which may be usefully disseminated to public health workers in all countries.



One of the features of the campaign in Egypt against trachoma, a disease usually contracted in childhood, is a pilot project run by the government with the aid of WHO and UNICEF in which school children in a selected area are taught to treat themselves with antibiotics.

The publications program forms part of WHO's worldwide services from which even the most advanced countries can benefit. These services comprise the recommendation of international standards for biological substances; establishment of specifications and the selection of nonproprietary names for the more important pharmaceutical preparations coming on the market; and control of air, land, and sea traffic from the point of view of health. The collection and study of comparable health statistics from as many countries as possible and technical advice concerning addiction-producing drugs and their control are also WHO services.

International Standardization

The publication of the first volume of the Pharmacopoea Internationalis and the adoption of the International Sanitary Regulations—both historic events occurred during 1951—are examples of the benefits which can derive from an international health organization, and which scarcely could have been achieved without it.

Approving the publication of the International Pharmacopoeia in May 1950, the Third World Health Assembly recommended "the eventual inclusion of its provisions in the national pharmacopoeias after the adoption of the said provisions by the authorities responsible for the pharmacopoeias." It is thus recognized that the International Pharmacopoeia (of which the second volume was published in 1955) constitutes only a recommendation: its specifications are not intended to be legal in any country but are intended mainly to serve for reference purposes when national specifications are established.

The specifications for pharmaceutical prep-

Senior officers of the Mexican Army direct a nationwide effort to eliminate malaria, deploying spray teams as they would troops. To reach remote villages, the spray team, like that shown above, may ride for hours on horseback—part of a veritable antimalarial cavalry.

arations published in the International Pharmacopoeia are all the more useful these days when international travel is on the increase, when one new medical advance follows another in rapid succession, and when countries want to take the maximum advantage of the therapeutic progress in other countries.

The biological standards for which WHO is responsible already cover scores of substances, and new ones come continually under review by the Expert Committee on Biological Standardization and by the research institutes charged with making assays.

The Organization has a special duty to discourage unnecessary use of drugs which are likely to produce addiction. It is the authority which advises whether a new substance is addiction producing or not, and its advice is given legal force by nations that are parties to the international conventions as set up by the League of Nations and the United Nations. WHO can, and does, issue warnings about substances liable to lead to harmful habits and recommends that appropriate safeguards be applied until it can be finally established to what extent they are dangerous to public health. For example, the Organization's continual watch on the abuse of the barbiturates, amphetamines and, more recently, the so-called tranquilizers resulted in relevant resolutions of the United Nations Commission on Narcotic Drugs.

New Sanitary Regulations

The new International Sanitary Regulations drawn up by WHO represent the first overall agreement between the countries on effective and uniform means of preventing the spread of disease across frontiers. They have reduced a confused and conflicting mass of cumbersome conventions to a single, international, legal in-

strument applied to trade and travelers. They have tested a flexible technique of acceptance of international regulations through adoption by the World Health Assembly, as a replacement for the old, slow negotiation of many separate treaties. They have achieved some measure of harmony with modern epidemiological and public health practice. And they have contributed to the abandonment of a number of questionable technical and administrative requirements.

The epidemiological intelligence service is another example of what can be achieved through international cooperation. Governments communicate regularly to WHO information concerning cases of and deaths from quarantinable diseases. This is re-transmitted by a worldwide network of radio stations at WHO's disposal. In addition to radio messages, a printed bulletin, the *Weekly Epidemiological Record*, is sent to more than a thousand quarantine and health officers in various parts of the world. More complete notifications of particular interest to certain areas are also distributed weekly in printed or mimeographed form from Singapore, Alexandria, and Washington. This system enables maritime and airport officers anywhere to institute the necessary measures of protection, without interfering unduly with international traffic.

Concerted Effort Against Disease

With present technical developments, the control of diseases has gained new impact. One may take as an example recent developments in malaria control.

Although 230 million people have been freed from or protected against malaria, further efforts to bring safety to the more than 370 million people still exposed must reckon with the fact that certain anopheline mosquitoes have become resistant to residual insecticides. The alarming growth of this problem may be illustrated by the steady increase of resistant species of public health importance from 2 in 1946 to 38 in 1956. The problem is increasing in complexity and magnitude more rapidly than progress is being made, and not a single practical solution has been forthcoming except switching from one insecticide to another.

The WHO Technical Conference on Insect Resistance, which met in Geneva during the summer of 1957 to consider an international collaborative program of research, agreed that such a program is not only urgently needed but is essential for practical solutions in the foreseeable future of the many resistance problems.

An important fact in this context is the dynamic nature of the resistance problem as opposed to the more static nature of many of the scientific and technical problems facing the world today. The problem of the common cold, for example, may not be solved within the next decade; the problem itself is unlikely, however, to become more serious on that account. The resistance problem, on the other hand, intensifies day by day, and, as a consequence, it would be irresponsible to dismiss the real possibility of a significant increase in the incidence of vectorborne diseases of man.

Since the historic resolution on malaria eradication of the Eighth World Health Assembly (1955), more and more countries have accepted the objective of eradication as the goal of their antimalaria activities and, by the end of 1957, 76 countries and territories were either implementing or planning a program of malaria eradication. Their aggregate population represents 73 percent of the total population of all countries and territories where malaria is, or has recently been, present. There is no alternative to this course since the eradication of malaria from a single country can only be partially successful unless the same result is achieved by its neighbors and the danger of reinfestation thus eliminated.

What is true of malaria is equally true of other diseases, and there are signs that a concerted international attack on tuberculosis, leprosy, poliomyelitis, influenza, rabies, and many other diseases may turn out to be not only the most efficient, but ultimately also the most economical approach to the control of these diseases.

WHO as a Coordinator

Among examples of international coordination benefiting all countries are the International Treponematoses Laboratory Center, es-

Teams working in the WHO campaign for the eradication of yaws have examined, up to 1957, more than 60 million people in tropical regions and treated some 15 million. Typical is this Nigerian child, who, 10 days after receiving an injection of penicillin, is almost completely rid of sores.

tablished with WHO assistance at the Johns Hopkins University in Baltimore, Md., and the WHO Serological Reference Laboratories in Copenhagen, Denmark, and Chamblee, Ga. These laboratories are currently collaborating with many national laboratories on a number of thorny problems with WHO as coordinator. Worthwhile results have been obtained in connection with the new treponemal agglutination test, the immunological relation between the various treponematoses, penicillin sensitivity of treponemal strains received from various WHO field projects; the production and standardization of cardiolipin antigens, establishment of standard test serums, the evaluation of antigens for the serodiagnosis of syphilis, and many other subjects of research. An internationally assisted project against endemic syphilis in Bosnia has yielded new and valuable epidemiological knowledge.

The International Salmonella and Escherichia Center in Copenhagen receives cultures for identification from all parts of the world and distributes cultures and diagnostic serums to national laboratories. The worldwide network of WHO Influenza Centers regularly examine strains of influenza virus from all countries and communicate valuable information on the types

of strains which have to be used at particular times and in particular places in the national production of vaccine.

The influenza epidemic in 1957 subjected this network to its most serious test since its inception in 1947. However, it successfully performed the functions for which it was designed with the result that further development seems justified. In just less than 3 weeks after WHO received the first news that a significant epidemic was occurring, the Organization was able to inform health authorities and vaccine-producing laboratories that the responsible virus was unrelated to all previously isolated strains and that existing vaccines were unlikely to give protection. The warning was given in time for several countries to prepare their health services to face the impending epidemic and, in some countries, significant quantities of vaccine were produced in time for use before the epidemic struck.

Because of the uncertain status of domestic animals in the epidemiology of human influenza, steps were taken early in last year's epidemic to have serum specimens collected from swine and horses in 25 countries before and after the human epidemic struck. These specimens are being examined at the WHO Influenza Centers and it is hoped that valuable information will be gained concerning the epidemiology of human influenza.

New Public Health Activities

The example of influenza shows that, even in regard to what we may call the old, traditional disease problems, it is the duty of WHO to keep pace with current scientific developments and progressively to modify its approach to specific disease problems in the light of both new discoveries and the changes which may occur in epidemiological conditions. In our struggle to achieve worldwide health and prosperity, there is no room for complacency. We must be constantly alert and ready to attack any new problem which arises.

Increasingly in the years to come emphasis will be laid on the importance of certain new health activities in which the Organization is being called upon to collaborate with governments, such as chronic diseases, occupational health, mental health, food and drug services, and the health aspects of nuclear energy. In discharging its responsibilities with regard to the health aspects of atomic energy the Organization greatly benefits from methods and techniques already evolved in other fields for the training of personnel, the dissemination of scientific information, and the stimulation and coordination of research. This experience has been carefully applied to the two main types of activity WHO is required to carry out in developing a program on health in relation to atomic energy: The first relates to the use of radioisotopes in medicine and public health; the second aims at the protection of populations against the risks of radiation. From the directives of the World Health Assembly it is clear that WHO is concerned only with the health aspects of the peaceful use of atomic energy.

Training, especially of personnel from countries new to atomic energy, is considered as one of the most important functions of WHO in this field. An initial step was taken in 1955 when the first international training course ever held on radiation protection in relation to atomic energy was organized by WHO. This was held in Stockholm with the cooperation of the Swedish Government and the United States Atomic Energy Commission, and in 1957 a similar course was given at Mol in Belgium, with the cooperation of the Belgian Government as well as with the USAEC. Both courses were attended by physicists and physicians specializing in radiation work from a number of European countries, while in the case of the Mol course representatives of some Eastern Mediterranean countries also took part. WHO has also arranged rather shorter courses for public health administrators at Saclay, France, and Harwell, England.

Activities last year included two expert committees convened for the general purpose of providing more detailed recommendations on the type of training which doctors and other health workers would require in a world in which the peaceful use of atomic energy and radiation in general is likely to take a progressively more important place. One of these

committees dealt with the introduction of radiation medicine into the undergraduate curriculum, the other with the subject of postgraduate training in the public health aspects of atomic energy.

Training of medical men in the use of radioisotopes in countries new to this application of science is a subject where WHO's system of international fellowships is particularly useful, both to introduce a fellow to the requisite techniques and to give him clinical experience. Long-term individual fellowships are also most useful in training medical men or scientists in radiobiology.

The interest of the World Health Organization in radiation and human genetics was shown by the convening in 1956 of a study group on the effect of radiation on human heredity, and the report of this group has been recently published. The genetic effect of radiation is of course one of the factors to be considered in the disposal of radioactive waste or in the possible effects on populations of the widespread use of medical irradiation, and is therefore of direct concern to public health administrators.

The Future

During the first 10 years, the World Health Organization has fulfilled international tasks taken over from its predecessors; but it has also undertaken a program towards a healthier world beyond anything previously attempted. Together with other international agencies, WHO has helped reduce the gap that separates the people of the well-to-do countries from their less fortunate brethren. It has carried on and enriched the tradition of the universality and humanitarianism of medical science, and its modest achievements have at least shown some of the possibilities opening up for good and effective international health cooperation.

We realize, however, that much more is urgently needed before the whole world may enjoy the degree of health protection that is available to an increasing yet still far too small segment of mankind.

Manila Meeting on Social, Preventive Medicine Teaching

Deans of medical schools and professors of social and preventive medicine in Western Pacific countries met at the University of Manila during 2 weeks of October 1957 to discuss the teaching of social and preventive medicine to undergraduate students. Represented in the study group, which was sponsored by the World Health Organization, were Australia, Cambodia, China (Taiwan), Fiji, Hong Kong, Japan, New Zealand, Singapore, the Philippines, and Vietnam.

As stated by the group, social and preventive medicine courses should make students aware of social needs in medical services and of the role of social organization in the genesis, course, distribution, prevention, and treatment of disease.

Several recommendations emanated from the conference: the teaching of social and preventive medicine, which must vary according to the country's needs, should have a practical approach. Courses should extend throughout the medical curriculum and retain some traditional public health material. In research, applied and fundamental studies should be balanced.

Advantage should be taken of opportunities to teach through local health centers, teaching hospitals, and other community resources.

The medical school should teach comprehensive health care by using existing services of the government or other agencies, and under some circumstances, by using their own health clinics.

A full report will be issued by the study group.