

Central Technical Services of the World Health Organization

By **FREDERICK J. BRADY, M.D.**

SOME of the technical services of the World Health Organization, which are carried on primarily from the headquarters in Geneva, have importance to the whole world. These activities have come about as the result of over a hundred years of attempts at international cooperation in those health matters that must be undertaken by nations working in concert.

The first abortive activity took place in 1851, when representatives of 12 nations met together to find common solutions to limiting pestilential diseases that periodically swept through most of the world. Unfortunately, in those early days there was no tradition of international cooperation, and the views expressed by delegates regarding the need to cooperate on health matters were not upheld by their governments. This was the beginning of a series of international conferences that, with the growth of scientific knowledge, began to bear fruit after a half century.

In international negotiations each participant, to gain objectives, must be prepared to relinquish certain prerogatives. We are fortunate in that objectives in health are similar for

all nations and that there is a high degree of understanding of each others' problems. This fortunate position has borne fruit in the World Health Organization and has been of immeasurable benefit in protecting the health of the American people. At the same time, health authorities of the various countries have not had to make major compromises, owing to agreement on ends.

WHO programs are varied, evolving from the early negotiations among nations which were concerned almost exclusively with problems related to international quarantine.

International Sanitary Regulations

At present the governments of 132 nations and territories have agreed to abide by the WHO International Sanitary Regulations that became effective in 1952. Twenty-four more governments are bound by these regulations with specific reservations that are published and known to the rest of the world. Eleven nations are not bound, and the position is uncertain in 12 others.

The International Sanitary Regulations are confined to six pestilential diseases, namely, smallpox, cholera, plague, yellow fever, typhus, and relapsing fever. The regulations were drafted not to impose on countries an unnecessary burden of measures to take against these diseases but rather to limit the measures nations could take in order to prevent the disruption of trade and travel while at the same time providing maximum security.

Dr. Brady is assistant chief of the Division of International Health, Public Health Service. His speech, in essentially the same form, was delivered at the annual conference of the National Citizens' Committee for the World Health Organization, November 14, 1956. The conference met with other groups in Atlantic City, N. J., at the 84th annual meeting of the American Public Health Association.

Until the regulations were adopted, 13 treaties and covenants dealing with quarantine were in effect. None was comprehensive in scope: Some were of a regional nature, and some applied solely to one disease or one type of transport. None was ratified by a sufficiently large number of countries. With the exception of the Pan American Sanitary Code, the regulations have replaced all previous treaties.

The International Sanitary Regulations are of great benefit to travelers from the United States because they give advance knowledge of what measures quarantine authorities in various countries may apply and also prevent overzealous authorities from taking unduly restrictive measures.

International Disease Reporting

Related to work on quarantine are the epidemiological intelligence activities of the World Health Organization. WHO regularly receives notifications of cases of quarantinable diseases which it then analyzes and transmits to health administrations, by radio bulletins and in weekly reports, thus providing health authorities with up-to-date knowledge on the distribution of quarantinable diseases.

The reporting program has been extended to other important communicable diseases and even to the degenerative diseases, making it possible for WHO to publish analyses and reports on their prevalence throughout the world.

Soon after its organization, WHO established an international system to detect any unusual outbreak of influenza lest a pandemic such as that of 1917-18 reoccur. The highly competent virus laboratories of the world form a network for reporting any unusual prevalence or virulence of the influenza virus. It is hoped that with adequate notice, vaccines can be prepared from dangerous viruses to keep outbreaks from reaching epidemic or pandemic proportions.

With the degree of protection afforded by the Salk vaccine, the prevalence of various strains of poliomyelitis virus assumes a new importance. It is also important to know whether presently unknown strains of poliomyelitis virus exist in the world. To meet these problems, WHO is encouraging virus laboratories

to determine the strains of poliomyelitis virus endemic in their localities and to watch for previously unrecognized strains.

WHO, as the coordinating authority in international health, is unique in its ability to collect, analyze, and compare health data from various parts of the world. The Organization presently is studying a proposal to organize registries of pathological tissues into a worldwide network, thus permitting interchange of specimens and diagnoses for comparative purposes.

Our knowledge of pathology is based almost entirely on specimens from Europe and North America. In the past we have generalized from these materials, assuming that our knowledge has universal application. In several diseases thought to be the same throughout the world, detailed descriptions of pathology lead to speculation whether the diseases observed are the same or whether similar but different diseases exist.

At this time it is not known in what area the World Health Organization will make a modest beginning in these activities, but one would expect that any disease chosen for study would have an unexplained, bizarre distribution pattern. One could foresee in this proposal an opportunity to further knowledge of pathological processes and also to provide unique opportunities for training.

International Drug Programs

International cooperation in dealing with drugs and other therapeutic substances has become a necessity. WHO activities relate particularly to the recommendation of standards for establishing common names and determining the purity and potency of drugs moving in international commerce.

Because some therapeutic substances of great importance in medicine today cannot be tested for purity and potency by physical and chemical methods, their analyses must be based on biological procedures. Unfortunately, biological standardization does not lend itself to the niceties of chemical or physical determinations but must take into account the variations in the response of living organisms used in tests.

Standard or reference samples become of great importance.

With the assistance of experts and cooperating laboratories from all over the world, WHO has so far established 66 biological standards for vaccines, serums, hormones, antibiotics, and enzymes. Standardization has resulted in providing international units that assure physicians the world over of the dosages they are prescribing.

Sometimes we are inclined to overlook the importance of national pharmacopoeias. Prescriptions for drugs were issued in ancient Egypt as long ago as 2800 B.C. Pharmacopoeias began to appear in Europe in the 16th century. The United States has had an officially recognized pharmacopoeia since 1893, serving as the basis for the purity and potency of our drugs.

Today, with the spreading use of modern drugs, at least 40 nations have official pharmacopoeias, which they revise from time to time, and other countries are preparing pharmacopoeias or specifications. There is a resulting urgency to achieve greater uniformity of standards so that the drugs will have comparable composition and potency no matter where they are produced.

While this problem has been a matter of concern to pharmacopoeial authorities for many decades, it was only after the World Health Organization came into existence that an international pharmacopoeia was completed. The International Pharmacopoeia is a model for governments to use in drafting their own pharmacopoeias.

It is noteworthy that the chairman of the United States Pharmacopoeia Committee was active in developing the International Pharmacopoeia and that the second volume was widely circulated before publication to pharmacologists and drug firms in the United States. Reports from various sources indicate that pharmacopoeial committees in different countries are being guided by the specifications recommended in the International Pharmacopoeia.

A related problem is that of advising governments on acceptable names of drugs of international importance, names that nations are willing to protect against trademark rights.

Examples have come to light where a trade-

mark has been issued to a vested interest for a name in such common use as penicillin or cortisone. Royalties, of course, are then paid to the owner of the trademark by the manufacturer and importer of the drug even though the owner did not contribute to its preparation or importation.

To prevent such vicious practice, WHO, on the advice of experts, recommends a name for a drug to each country, asking that the country examine its trademark files to be sure that the name has not been preempted. If no objection is received within 4 months, WHO recommends that the name be protected against trademark rights throughout the world.

More than 200 nonproprietary names have been recommended by the World Health Organization and accepted by the governments as the official names of these drugs. This is no little accomplishment when it is realized that such names should be readily pronounceable in three languages and should not have been preempted by another product already trademarked in any of 80 countries. This activity has been a boon to manufacturers and consumers as well as to the prescribing physicians and research scientists who can specifically identify a drug whatever its origin or labeling.

WHO also has a role in the worldwide control of addiction-producing drugs. The United Nations, by virtue of international conventions, brings illicit traffic in addiction-producing drugs under international control. On behalf of the UN, the World Health Organization determines which drugs are addiction producing and therefore subject to control. To make such determinations, the organization is aided by experts, who in turn seek advice from research laboratories.

Vaccine Field Programs

Another major area in the central technical services of the World Health Organization is stimulation of research activities which, by their very nature, must be carried on by cooperation among countries.

An example is research on the effectiveness of typhoid vaccines prepared by each of several methods. The value of these vaccines became of concern to several Western countries when ty-

phoid fever appeared in individuals who, as a result of recent vaccinations, presumably were immune.

WHO selected a country with a high typhoid attack rate and assisted the country in setting up well-controlled experiments to ascertain not only the value of vaccine but also the effectiveness of several vaccines tested.

Similarly, WHO demonstrated the effectiveness of hyperimmune serum against human rabies and the effectiveness of canine vaccine in countries where the occurrence of rabies was sufficient to make valid comparisons. Both the hyperimmune serum and the vaccine were developed in the United States, but definitive tests could not be carried out because of relatively low attack rates.

In this discussion, I have tried to bring out some of the activities of the World Health Organization that cannot be carried out by single nations but that require collaborative effort among many. Each activity substantially benefits the United States even though the results are not as readily apparent or as tangible as those of a field program aimed at the control or eradication of disease. These are the activities in which there must be collaboration by many governments. We are indeed fortunate that this collaboration can be carried on through this effective international agency, the World Health Organization, in an atmosphere of understanding of the problems of each and of looking toward common goals.

Advisory Committee on Nurse Traineeships

Twelve leaders in nursing, hospital administration, and medicine will serve on the Expert Advisory Committee for the Professional Nurse Traineeship Program.

The committee will advise the Public Health Service on the new 3-year program which provides funds to enable graduate nurses to get advanced training in supervision, administration, and teaching.

Committee members are: Dr. Robert Berson, vice president in charge of medical affairs, University of Alabama, Birmingham; Lawrence J. Bradley, director, Genessee Hospital, Rochester, N. Y.; Miss Ann Burns, chief, division of nursing, Ohio State Health Department, Columbus; Rev. John J. Flanagan, executive director, Catholic Hospital Association, St. Louis, Mo.; Miss Ada Fort, dean, School of Nursing, Emory University, Atlanta, Ga.;

Miss Frances Frazier, in charge of graduate program in public health nursing, Teachers College, Columbia University, New York City; Mrs. Lulu W. Hassenplug, dean, School of Nursing, University of California, Los Angeles; Miss Katherine Hoffman, assistant dean, School of Nursing, University of Washington, Seattle; Miss Helen Nahm, director, department of baccalaureate and higher degree programs, National League for Nursing, New York City; Miss Agnes Ohlson, president, American Nurses' Association, and chief nursing examiner, State Examining Board, Hartford, Conn.; Miss Marguerite Paetznick, director, nursing service, Denver General Hospital, Colorado; Mrs. Margaret Filson Sheahan, director, nursing service, University of Chicago Clinics, Illinois.