

include the substantial sums which the Unicef, in co-operation with W.H.O., has spent on child health activities. Requests for the assistance of W.H.O. in 1950 have far exceeded those in 1949. Approximately \$2,000,000 is available to meet these requests (roughly one-third of the total budget).

Because of financial limitations and the consequent necessity for making the best possible use of the funds allotted to the advisory services, certain guiding principles for the selection of projects have been set up by the Executive Board of W.H.O. The following criteria are used :

1. Programmes established by the World Health Assembly or by the United Nations and its specialized agencies.
2. Recommendations of expert committees.
3. The importance of the problem to the whole health programme of the requesting country, and inability of the country itself to provide the services required, as measured by the availability of trained personnel, the means of training personnel, or available foreign currency.
4. The probability of achieving successful and useful results.
5. Assurance of participation and co-operation on the part of the government throughout the programme, including contributions to the programme by meeting such costs within the country as can be met in domestic currency.
6. Reasonable assurance from the government, where appropriate, that the programme will be continued, especially that the government has established, or will establish, a health organization with personnel and financial support adequate to continue the programme.
7. Equitable distribution among the various countries seeking assistance when the requests exceed the available budget.

Requests and Approvals.—Requests for advisory services are submitted by Member Governments as part of a general programme for which aid is desired. Detailed proposals come later, after tentative allocations have been made and consultations have taken place with the W.H.O. Regional Director and with the technical advisers attached to the headquarters of the regional offices of W.H.O. In mapping out both general and specific programmes the assistance of special consultants or advisers from the regional office is usually required. Requests for assistance are forwarded by the countries to the Regional Directors, who, after any necessary consultation with the technical staff at Headquarters, make recommendations to the Director General with respect to approval and allocation of the necessary funds. The ultimate decision whether or not a specific project is approved rests with the Director General.

Conclusion

The current programme of W.H.O.'s advisory services to governments is based upon the constitutional provision that among many functions W.H.O. shall "assist governments, upon request, in strengthening health services." The scope of these advisory services could be as broad as the total health programme. Because of the limitation of funds, however, and the desirability of focusing attention on the most urgent problems, the World Health Assembly has given priority to certain major programmes, chosen because of their world-wide importance and because of the susceptibility of the conditions or diseases involved to well-established methods of approach.

This form of international service is relatively new. It can be expanded as the need for more services becomes apparent or as new knowledge is developed. Through it the nations of the world have a means of exchanging information with each other, of giving technical assistance to each other, and of pooling their knowledge and resources for world health.

ORIGINS OF INTERNATIONAL HEALTH WORK

BY

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The subject of this article is international health work in the restricted sense of intergovernmental action on health problems. As Sir George Buchanan (1943a) remarked some years ago in his Milroy Lectures : " Any suggestion that medicine, always amongst the most international of the learned professions, should henceforth first look to the League of Nations or any other intergovernmental office in order to maintain its proud tradition of internationalism would indeed be retrograde." In any complete account of international health work reference would also have to be made to the International Red Cross Organization, the International Health Division of the Rockefeller Foundation, and the various international medical congresses.

Nevertheless, in spite of technical improvements in facilities for communication, the last century has seen the growth of many obstacles to non-governmental internationalism in medicine. Latin no longer provides a common scientific language for physicians, and the excessive proliferation of periodical medical literature not only creates difficulties for the individual worker but makes it impossible for medical libraries in all but a few wealthy countries to maintain collections which are representative of the world's output.*

The rise of political and economic nationalism has seriously limited the individual's freedom to travel and study abroad, and the increasing responsibilities for health services undertaken by governments cannot be without effect on the fruitfulness of unofficial international relations in medicine. These factors, and the widening gap between the level of development of science and technology in the advanced and that in the less-advanced countries, necessarily increase the potential usefulness and range of activities of an intergovernmental health organization.

Early Quarantine Measures

The first intergovernmental health measures depended upon the theory of the contagiousness of certain diseases, and originated with precautions, often excessive, designed to restrict the importation of such diseases from one country into another. Although the segregation of lepers had long been common, maritime quarantine measures were first instituted when the pandemic of bubonic plague—the Black Death—devastated Europe in the fourteenth century. There is little agreement among writers concerning the date and place of the first introduction of maritime quarantine, and such agreement as exists is probably more correctly regarded as the product of faithful emulation than as the weight of cumulative testimony.

Some writers attribute this distinction to the Republic of Ragusa, on the eastern shore of the Adriatic, in 1377. It is said that seafarers suspected of being affected by plague were isolated for 30 days at a place distant from the

*As late as 1834, William McMichael, in his evidence to the Select Committee on Medical Education, said : " Most of our best treatises on physic are written in Latin; it is not possible to read them without a knowledge of this language." McMichael also said : " The science [of medicine] is advanced so much, that it is not expected that we should have voluminous publications."

harbour. Other writers credit the Republic of Venice with the introduction of maritime quarantine, but, as Beckmann (1846) showed, the accounts contained in earlier histories are completely at variance. Nevertheless, all are agreed that a 40-day period, or *quarantaria*, became established as the usual period of isolation of suspected seafarers and sea-borne merchandise. As Beckmann points out, this period was probably chosen because the fortieth day of many diseases was held to be critical, and was also related to "various astrological conceits."

The first English quarantine regulations were drawn up in 1663, and provided for the isolation of suspected ships and their crews for 40 days in the Thames estuary (Simon, 1897). These measures did not, however, suffice to prevent the last and worst visitation in the form of the Great Plague of 1665-6, which is vividly recorded in the diary of Samuel Pepys and elsewhere.

The epidemic of plague which broke out in 1720 in Marseilles and ravaged the Mediterranean seaboard of France caused considerable apprehension in England, and the Government called upon Richard Mead (1673-1754) for advice, which he published as *A short discourse concerning the Pestilential Contagion and the methods used to prevent it* (1720). Mead declared his opinion that plague was contagious, as a result of which quarantine measures were prescribed.

To the modern mind it seems strange that the communicable nature of plague (and later of cholera) was ever in doubt. But until almost the end of the nineteenth century this question was the subject of lively controversy. Schools of thought were broadly divided into: (a) contagionists, who believed that epidemic diseases were spread by absorption of a morbid principle (not necessarily living) following contact with persons or fomites; (b) miasmatisers, who believed in a neo-hippocratic mixture of cosmo-telluric and atmospheric causes, to which were added, by the English sanitarians of the nineteenth century, "dirt" and "filth"; and (c) the theurgists, who were content to regard Divine Providence as the principal aetiological agent, and the Old Testament as an appropriate technical reference work.

John Quincy, who in 1720 exploited the prevailing fear of plague by publishing an annotated translation into English of Nathaniel Hodges's *Loimologia* (first published in Latin in 1672), makes the following comment on the last-mentioned school: "Although too great a regard cannot be had to the Author of our Beings, yet care should likewise be taken, not to ascribe every Calamity to the immediate Exertion of the Almighty Power."

Cholera Reaches Europe

Fortunately, the plague epidemic in France did not extend to Britain. But in October, 1831, a new menace made its first appearance in the form of Asiatic cholera, which was imported into Sunderland by a ship from Hamburg (Hirsch, 1883). In the course of 1832 it spread over a great part of Britain, following commercial highways, coast routes, and rivers. Cholera had previously been known as a disease which was endemic in a few regions of India, but in the years of the first cholera pandemic (1817-23) it had spread far beyond India's frontiers. The second pandemic (1826-37) involved most of Europe, and in 1832 emigrants carried it to Canada and the U.S.A. The third pandemic (1846-63) reached Britain in 1848, and again in 1853, and there were further but limited outbreaks in Britain in later years. The extensive diffusion of cholera in Europe was one of the consequences of the increased speed of communication.

Koch's announcement of his discovery of the cholera vibrio was not to come until 1884, and there was within the medical profession no agreement on the means by which the disease was contracted or could be prevented. Contagionists and miasmatisers represented completely opposing points of view, and there were eclectics, among them Hirsch (1883), who took the middle course of combining elements of both schools.

The appearance in Europe of this new and frightening visitation prompted some international exchanges of experience. Early in 1831, when fears arose that cholera might invade Britain, the Government sent Dr. William Russell and Dr. David Barry to St. Petersburg to study the manifestations of the disease. Later in the year, when these fears were realized, the great French physiologist, François Magendie, asked the Académie des Sciences to send him to Britain to study the epidemic.* The Academy assented, and Magendie arrived in Sunderland on December 2, 1831. On his return he deprecated the value of quarantine measures, and, when cholera struck Paris, proposed that samples of air from different parts of the city should be analysed. Later, a committee of Italian physicians arrived from Rome to study cholera in Paris. All these visits of investigation were fruitless.

The official British standpoint was unswervingly miasmatiser and anti-quarantine. In a *Report on Quarantine*, published by the General Board of Health in 1849, the specificity of epidemic diseases was discredited and the conclusion was reached (Masters, 1947) that "the only real security against epidemic disease is an abundant and constant supply of pure air." Typical also of the British point of view was the comment of the joint editors of the fourth edition of Beckmann's *History of Inventions* (Beckmann, 1846), Dr. William Francis, editor of the *Chemical Gazette*, and Dr. J. W. Griffith, a physician:

"It is a disputed point whether the plague is *even* contagious; and the mass of evidence is in favour of its being so occasionally, but that the plague is usually not propagated in this manner. The disappearance of this pest from our own and most other countries of Europe is undoubtedly owing to the much greater attention paid to drainage, ventilation, and the prevention of the accumulation of filth in the streets, etc. When the peculiar atmospheric conditions upon which its diffusion depends are present, quarantine has proved insufficient to prevent its propagation."

In the report referred to above, the General Board of Health, which at the time included no medical member, expressed the view that the effectiveness of quarantine was "not a technical question, but one of evidence, on which a person capable of observation is as competent a judge as any physician." Considering the complete absence of scientifically based information on the aetiology of cholera at the time, this last contention was doubtless amply justified. In fact, the views of medical experts on cholera and other epidemic diseases were hardly more consistent than the present-day testimony of medical witnesses called by rival parties to a lawsuit.

Two circumstances had an important influence on the British tradition of opposition to quarantine measures. The first was the influence of the English sanitarian movement, which focused attention on the relation of poverty and squalor to the spread of disease. The second was the natural reluctance of a great maritime nation to countenance precautionary measures which imposed a severe handicap on shipping. In a study commissioned by the Fabian Society, Woolf (1916) said: "It became a plank in British foreign policy that her national interests required an

*Olmstead, J. M. D. (1944). *François Magendie*. New York.

unbending resistance to any interference with shipping." But he also pointed out that "cholera entered equally the closed ports of Greece and the open ports of Britain." Although the theoretical views of the contagionists have now been largely vindicated, it is also true that the practical quarantine measures adopted were often both onerous and futile.

International Sanitary Conferences and Conventions

The complete lack of agreement on the mode by which cholera and other epidemic diseases were contracted entailed a corresponding lack of agreement on means of prevention. There was no consistency in the different quarantine requirements—or lack of them—of the different nations, or even of different parts of the same nation, and in some cases the restrictions imposed constituted an intolerable hindrance to international communications and commerce.

It was in these circumstances that the French Government convened the first International Sanitary Conference, which was held in Paris in 1851 and was attended by one diplomatic and one medical delegate from each of twelve nations. The immediate object of the conference was to reach agreement on prophylactic measures against cholera, plague, and yellow fever, particularly in regard to maritime communications in the Mediterranean and the Black Sea. An international convention was drawn up, but only France, Portugal, and Sardinia ratified it, and the two latter powers denounced it 14 years later. A second International Sanitary Conference, consisting only of diplomats, was convened in Paris by the French Government in 1859, but was barren of results. During the nineteenth century a third International Sanitary Conference was held in Constantinople (1866), a fourth in Vienna (1874), a fifth in Washington (1881), a sixth in Rome (1885), a seventh in Venice (1892), an eighth in Dresden (1893), a ninth in Paris (1894), and a tenth in Venice (1897). These conferences were, however, of an essentially diplomatic character, and at all but the most recent of them such medical testimony as was available was so conflicting as to be an obstacle rather than an aid to international agreement.

The first International Sanitary Convention was not signed until 1892, by which time seven conferences had been held and 40 years had elapsed. This convention, which was unanimously ratified in the following year by the 14 signatory Powers, provided for protection against the introduction of cholera via the Suez Canal, which had been opened in 1869. The eighth conference resulted in a convention designed to limit the spread of cholera by land, the ninth in a convention for the sanitary regulation of the Mecca pilgrimage, and the tenth in a convention to guard against the introduction of plague.

In 1903, on the initiative of the Italian Government, an eleventh International Sanitary Conference was convened in Paris. One of the main achievements of this conference was the unification of earlier conventions (1892, 1893, 1894, 1897) in the light of contemporary scientific knowledge, and the result was the International Sanitary Convention of 1903, which was ratified by most of the participating States in 1907. This was the first convention to introduce some measure of international uniformity against the importation of cholera and plague. It was superseded by the conventions relating to maritime traffic of 1912 and 1926, and the latter was modified in 1938 and again in 1944. In 1933 the International Sanitary Convention for Aerial Navigation was signed at The Hague, and this was amended by a new convention in 1944.

In addition to the international sanitary conferences described above there were several national or regional

health councils, which included diplomatic representatives of foreign powers. These were the Conseil Supérieur de Santé de Constantinople, which dated from 1839; the Conseil Sanitaire, Maritime et Quarantenaire d'Égypte, created in Alexandria in 1831; the Conseil Sanitaire International de Tanger, which had its beginnings in 1792 but was not constituted until 1840; and the Conseil Sanitaire de Teheran, created in 1867. The origins and functions of these regional bodies have been well summarized by Faivre (1908).

The history of the earlier international sanitary conferences is one of nations driven to international negotiation by a common danger but completely unable to reach agreement because of the limitations of scientific knowledge. As Sir Edward Mellanby* wrote: "The work of Government departments . . . in controlling disease can only be as good as knowledge allows it to be, and this knowledge has come, and can only come, by medical research."

It is amusing to read in the proceedings of the earlier conferences accounts of the voting taken on purely scientific questions—for example, whether cholera could be conveyed by water and foodstuffs. Beliefs are commonly most strongly held about matters on which the least information is available, and delegates who came to a conference with strong but unverifiable views on scientific questions were hardly likely to be influenced by a majority vote against them.

The difficulties and the failures of these earlier attempts of nations to reach agreement on health matters throw into relief the significance of the international health work in many fields that has been accomplished in later years and is now largely taken for granted. Yet the present International Sanitary Conventions are widely recognized as being imperfect instruments for the control of communicable diseases, especially as their signatories may delay ratification of their signatures for periods of years. On the authority of Articles 21 and 22 of its Constitution, much work has been done by the World Health Organization, and especially by its Expert Committee on International Epidemiology and Quarantine, on the replacement of the present conventions by International Sanitary Regulations which will automatically come into force for all Member States of W.H.O. after due notice of their adoption by the World Health Assembly (States may notify W.H.O. in writing of any reservations that they may wish to make).

The opposition of the English sanitarians to quarantine measures was based on speculative conceptions of the aetiology of epidemic diseases which were later shown to be false. But it is no uncommon happening in science for the right conclusions to be drawn for the wrong reasons, and the present tendency is to reduce quarantine measures to a minimum. In a paper presented at a recent session of the Expert Committee on International Epidemiology and Quarantine of W.H.O., the South African member, Dr. H. S. Gear, was repeating substantially what had been said by the English sanitarians more than a century ago when he commented that "quarantine barrier methods are of very limited value and . . . resistance of a community to infection is dependent upon its internal conditions."

Towards an International Health Agency

The idea of a permanent international agency to deal with health questions was seriously discussed for the first time at the fourth International Sanitary Conference at Vienna in 1874. Dr. A. Proust, a member of the French delegation, presented to the conference a plan drawn up

*Mellanby, E. (1943). *British Medical Journal*, 2, 351.

by a drafting committee for an international Permanent Commission on Epidemics (Commission Permanente des Epidémies). The responsibilities of this committee were to be "purely scientific," and its main task was to be the study of the aetiology and prophylaxis of cholera, although it would also pay attention to other epidemic diseases. Vienna was proposed as the seat of the commission, which would be composed of physicians appointed by participating governments. All these recommendations were adopted by the conference, which also endorsed as the first objects of research of the commission the study of the rainfall and telluric conditions in the Eastern Mediterranean and Black Sea regions, the epidemiology of cholera in ships and ports, and the period of incubation of cholera.

At the fifth International Sanitary Conference (Washington, 1881) the proposal for an international health agency was revived in a modified form. As a result of this conference the idea of a single international agency for studying epidemic diseases fell entirely into the background, and instead there emerged a proposal for "a permanent international Sanitary Agency of Notification," with offices in Vienna and Havana. The former office was to collect and distribute information from Europe, Asia, and Africa, and the latter was to do the same for the Americas. The possibility of a third office in Asia was also mentioned. The governments of Spain (Cuba then being a Spanish possession) and Austria-Hungary were to fix the annual budget of the agency and notify participating governments of their share of the expenses. However, at subsequent international sanitary conferences no enthusiasm for an international health agency was manifested, and it was not until the conference of 1903 in Paris that the project was again—and finally—endorsed. Proust, who had taken the initiative at the conference of 1874, was still pressing in 1896 for the creation of a "Bureau International de Santé," which would be the organ (without any executive powers) of a "Union Sanitaire." The main object of the sanitary union as advocated by Proust was to protect the public health of Europe.

Implicit in all these strivings towards the foundation of an international health agency was, not a wish for the general betterment of the health of the world, but the desire to protect certain favoured (especially European) nations from contamination by their less-favoured (especially Eastern) fellows. Half a century later the Constitution of the World Health Organization is a measure of the tremendous moral evolution which has made it impossible to accept as part of the natural order the existence of preventable disease and suffering over a large part of the habitable globe.

Office International d'Hygiène Publique

At the eleventh International Sanitary Conference (Paris, 1903) the creation of an international health office was agreed upon, and at the Rome Conference of 1907, at which thirteen governments* were represented, the French Government submitted a definite plan for its establishment. The conference resulted in the Rome Agreement of 1907, which determined Paris as the seat of the new office—the Office International d'Hygiène Publique (O.I.H.P.). The Agreement admonished the office not to interfere in any way in the administration of different States, and defined its principal functions as the collection and distribution of facts and documents of general public health interest, especially those which related to infectious diseases—in particular, cholera, plague, and yellow fever. The O.I.H.P. was also obliged to publish a monthly bulletin—well known

*Belgium, Brazil, Egypt, France, Great Britain, Italy, the Netherlands, Portugal, Roumania, Russia, Spain, Switzerland, and the U.S.A.

during the 40 years of its existence as the *Bulletin mensuel de l'Office international d'Hygiène publique*—which was to contain (i) legislation on communicable diseases, (ii) information on the spread of diseases, (iii) information on measures taken for environmental sanitation, (iv) public health statistics, (v) bibliographical notes. The number of governments adhering to the Rome Agreement increased until 55 were represented on its governing body—the Comité Permanent—which usually met twice a year.

The O.I.H.P. was not the first international health agency to represent many different governments, as the first Pan-American Sanitary Conference in 1902 resulted in the establishment of the Pan-American Sanitary Bureau (these conferences, and the Bureau, were originally designated "international" instead of "Pan-American"), but it was the first to acquire a truly international character. The O.I.H.P. was finally constituted in 1908, and in 1909 its seat and its secretariat were established in Paris.

However, even the long-delayed establishment of an international health office did not symbolize the desire of nations to unite in a common effort against disease. When Sir George Buchanan was nominated in 1914 to be the British delegate to the Permanent Committee of O.I.H.P., "its importance in British eyes was . . . mainly diplomatic."

The achievements of the O.I.H.P. during its first 25 years have been ably summarized by its former director, Dr. G. Abt (Office International d'Hygiène Publique, 1933). Its main preoccupation was with the administration and revision of the International Sanitary Conventions, and as a result of its efforts a new convention, replacing that of 1903, and including cholera, plague, and yellow fever within its provisions, was signed by 41 Member States. However, the outbreak of the 1914–18 war delayed the coming into force of the convention, and it was not until 1920 that 16 of the signatory governments ratified their signatures, other Powers adhering in later years.

The International Sanitary Convention of 1926, which replaced the 1912 convention, brought typhus and smallpox within its provisions and also made possible improvements in epidemiological reporting. It also established an international system for the control of rat-infestation of ships. Another important international convention for which O.I.H.P. was responsible was the Brussels Agreement of 1924, which dealt with facilities for the free treatment of venereal diseases in merchant seamen at sea- and river-ports.

Health Organization of the League of Nations

The disruption of life in Eastern Europe as a result of the 1914–18 war was accompanied by widespread epidemics, especially of typhus in Russia, which threatened to spread through Poland to Western Europe. The newly created League of Nations was empowered by Article 23f of the Covenant to "take steps in matters of concern for the prevention and control of disease," and in May, 1920, it established a temporary Epidemic Commission, which co-ordinated and helped to direct the work of health administrations in afflicted countries, and provided much-needed funds and medical supplies.

In the meantime discussions had been initiated on the creation of a single international health agency, under the League of Nations, and a plan for such an agency was accepted by the first Assembly of the League on December 10, 1920. Unfortunately, this ideal did not materialize until after a quarter of a century and another world war. Several signatories of the Rome Agreement of 1907—notably the U.S.A.—were not members of the

League, and this was the main reason for the continued independent existence of O.I.H.P. after the definitive establishment in 1923 of the Health Organization of the League of Nations. This organization consisted of (i) a Health Committee of 15 members; (ii) as an Advisory Council, the Permanent Committee of O.I.H.P., which appointed a proportion of the members of the Health Committee and was asked to advise on certain health problems; and (iii) the Health Section of the League of Nations secretariat, consisting of public health specialists assisted by auxiliary staff. The fact that the Permanent Committee of O.I.H.P. was at the same time the Advisory Council of the Health Organization ensured co-ordination of the work of these two international health agencies. In 1925 the Health Organization established an Eastern Bureau at Singapore—a development which had been foreshadowed in the plan for an international health agency adopted at the International Sanitary Conference of 1881.

The earlier activities of the Health Organization were characterized by a traditional preoccupation with the limitation of the spread of epidemic diseases, of which the epidemiological intelligence centres at Geneva and Singapore were a product. As the post-war wave of epidemics subsided, attention was turned also to methods of active immunization against communicable diseases and to the improvement of serodiagnostic tests, and later to wider aspects of the biological standardization of diagnostic, prophylactic, and therapeutic agents.

In 1934 the Health Committee decided to take up the study of nutrition, housing, and physical culture, and the work of the Technical Commission on Nutrition is perhaps one of the most widely known and understood examples of the health work of the League. Among the other Technical Commissions established were those on malaria and biological standardization (both of these permanent) and on cancer, housing, physical fitness, typhus, leprosy, medical and public health training, rural hygiene, and unification of pharmacopoeias.

The Health Organization marked a new departure in international health work, which was no longer concerned merely with the erection of sanitary barriers, but embraced a wide and ever-growing range of medical subjects upon which international agreement was desirable or in relation to which the more advanced countries could, through an international agency, confer benefits upon countries whose technical resources were more limited. The volume and range of the work can best be gauged by reference to the *Bibliography of the Technical Work of the Health Organization of the League of Nations, 1920-45* (League of Nations, 1945a). An especially valuable feature of the League's work was the award of travelling fellowships and the organization of collective study-tours.

World War II and After

On the outbreak of war in 1939 many of the activities of the Health Organization had to be suspended, although some—including the publication of the *Weekly Epidemiological Record*—were maintained in spite of great difficulties. The Health Committee appointed an emergency subcommittee, consisting of its chairman (Professor J. Parisot, France) and four members (Professor J. Balteanu, Roumania; Dr. N. M. Goodman, United Kingdom; Dr. B. Johan, Hungary; and Professor R. Sand, Belgium), and this subcommittee met in March, 1940.

By June, 1940, the staff of the Health Section had been so depleted by resignations and departures for national service that it included only two medically qualified members—Dr. R. Gautier, the officer in charge of the Health

Section, and Dr. Y. Biraud,* head of the Epidemiological Intelligence Service. During the war Dr. Gautier visited both London and Washington to advise on plans for the post-war relief of occupied countries. In March, 1944, the Director-General of Unrra proposed that the Health Section should establish an epidemiological "research unit" in Washington, and in May, 1944, such a unit began work under the direction of Dr. Gautier, assisted by Mr. Z. Deutschman,† a former member of the Health Section of the League at the Eastern Bureau (the activities of which were suspended owing to the Japanese occupation), and later at Geneva. On January 1, 1945, this "research unit" was transferred to the staff of the Health Division of Unrra to form the nucleus of its epidemiological intelligence service. At the same time, duties relating to the administration of the International Sanitary Conventions which O.I.H.P. was now unable to perform were also transferred to Unrra. In October, 1944, Dr. Gautier had again visited London to participate in the International Conference on the Standardization of Penicillin, which was convened on the initiative of the Health Section.

Thus was the continuity of the Health Organization's work preserved under conditions of extraordinary difficulty, which included the deportation to Germany of Professor J. Parisot, the chairman of the Health Committee, and of one of its members, Professor René Sand.

In 1945 the San Francisco Conference, which led to the establishment of the United Nations Organization, approved the declaration calling for the creation of an international health agency, and the Economic and Social Council of the U.N. at its first session established a Technical Preparatory Committee, which met in Paris from March 18 to April 5, 1946, to prepare plans for an International Health Conference. The conference opened in New York on June 19, 1946, and on July 22 representatives of 61 States signed the Constitution of the World Health Organization. By its Constitution W.H.O. is the single international health agency, which not only inherits the functions of its precursors—including O.I.H.P.—but also has new responsibilities.

Only two of the States participating in the International Health Conference—China and the United Kingdom—signed the Constitution without reservation, and, as it could not come into force until a total of 26 Member States of United Nations had ratified their signatures, an Arrangement was concluded establishing an Interim Commission to continue essential international health functions and to prepare for the First World Health Assembly.

On April 7, 1948, the Constitution came into force, the First World Health Assembly opened on June 24, 1948, and the World Health Organization was established in its definitive form on September 1, 1948.

Note on W.H.O. Publications

For the general reader the best source of information on W.H.O. activities is the *Chronicle of the World Health Organization*, which has been published monthly since the beginning of 1947 and gives short accounts of conferences, meetings of expert committees, and field activities.

Full accounts of the proceedings of conferences, and especially of the annual World Health Assembly, are published in the series *Official Records of the World Health Organization*, which includes also the annual report of the director-general. The series was started during the time of the Interim Commission of W.H.O., and No. 1 contains the proceedings of the

*Secretary of the International Health Conference, New York, 1946.

†Assistant secretary of the International Health Conference, New York, 1946.

Technical Preparatory Committee; No. 2 is the proceedings of the International Health Conference; and Nos. 3 to 7 inclusive contain the proceedings of the five sessions of the Interim Commission. No. 9 is Part I of the Interim Commission's Report to the First World Health Assembly, and contains a detailed account of the work of the Commission from the date of its establishment in 1946 to the end of April, 1948. A Supplementary Report, including information on the later phases of the Commission's work, was issued as No. 12. No. 10 was the Provisional Agenda, with recommendations for programme activities, presented by the Commission to the First World Health Assembly. The proceedings of the First and Second World Health Assemblies are printed as Nos. 13 and 21 of the series, and the reports of the first five sessions of the executive board appear in Nos. 14, 17, 22, 25, and 26. No. 16 is the *Annual Report of the Director-General to the World Health Assembly to the United Nations, 1948*, and covers the first four months' (September to December, 1948) work of the permanent Organization. The annual report for 1949 is No. 24.

Reports of expert committees and other advisory bodies were until the end of 1949 also published in the *Official Records* series (Nos. 8, 11, 15, and 19). At the beginning of 1950 these technical reports were published in a new series—*World Health Organization: Technical Report Series*—of which twenty-one have now either been printed or are being prepared for press.

Scientific papers relating to the work of the Organization are published in the *Bulletin of the World Health Organization*, and laws and regulations relating to health are reproduced, abstracted, or indexed in a separate publication—the *International Digest of Health Legislation*.

The *Weekly Epidemiological Record* contains notifications of first cases of pestilential diseases and other information of interest principally to quarantine authorities. The *Epidemiological and Vital Statistics Report*, which is published monthly, contains epidemiological and statistical information of wider interest. Non-serial publications, such as the *Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death* and the *International Pharmacopoeia*, are also published. All W.H.O. publications are published in the English and French languages, and there are also Chinese, Russian, and Spanish editions of the *Chronicle*.

The Public Information Division issues a monthly *W.H.O. Newsletter*, an occasional Special Features series, and numerous Press Releases.

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THERAPEUTIC SUBSTANCES IN THEIR INTERNATIONAL ASPECTS

BY

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In its work in connexion with therapeutic substances the World Health Organization is undertaking duties that could be performed only by an international body. For this work a Division of Therapeutic Substances has been established within the Department of Central Technical Services of the World Health Organization (which also includes the Divisions of Epidemiology, Health Statistics, and Editorial and Reference Services), and this Division comprises sections for biological standardization, unification of pharmacopoeias, drugs apt to produce addiction, and co-ordination of research. All these activities call for the pooling of knowledge and experience obtained in various countries and a study of standards or control measures applicable and acceptable to all governments.

The work of the first three sections is described below. "Co-ordination of research"—a rather unsatisfactory designation which has been adopted for want of a better one—includes at present the activities of W.H.O.'s Tuberculosis Research Office at Copenhagen, which is also described below, and some work on antibiotics. Because the latter work is only in its initial stages of development, no account of it has been included here. The first meeting of the Expert Committee on Antibiotics of the World Health Organization took place only in April of this year, and the committee's report will be presented at the Third World Health Assembly in May. If approved it will later be published in the *World Health Organization: Technical Report Series*.

Biological Standardization

A comprehensive account of international work on biological standardization has been given by Gautier.* In 1921 the Health Organization of the League of Nations decided to study the possibilities of establishing international standards for certain substances which could be assayed only by biological methods. A permanent commission was appointed in 1924 to adopt international standard preparations and to define units of activity. In 1935 an inter-governmental conference was attended by members from 24 countries, and the obligatory use by all countries of international standard preparations and units was recommended. A year later no fewer than 36 countries had officially adopted these standards. The conference also considered it essential that each country should possess an officially recognized centre with a trained staff in charge of the storage and distribution

*R. Gautier, *Bull. Hlth Org. L.o.N.*, 1935, 4, 497; 1945, 12, 1.