REPORTS
OF EXPERT COMMITTEES
TO THE INTERIM COMMISSION

These reports of expert committees are printed in the form in which they were presented to the Interim Commission at its fourth and fifth sessions. Publication does not imply acceptance by the Commission of any of the recommendations or implications of such reports.

The decisions of the Interim Commission on the reports are recorded in the Minutes of its sessions as published in the Official Records.
FOREWORD

This number of the *Official Records* contains all the reports presented by expert committees to the Interim Commission of the World Health Organization up to and including its fifth session.

One of the principal responsibilities of the Interim Commission has been to submit to the first World Health Assembly proposals on the programme of the World Health Organization in the first year after its establishment. Although the protracted life of the Commission has involved the assumption of some technical functions, it should be remembered that much of the work of the expert committees, as summarized in these reports, has been in the direction of surveying needs and requirements rather than of making recommendations on particular technical problems.

*Brock Chisholm, M.D.*

*Executive Secretary,*

*Interim Commission.*
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I. EXPERT COMMITTEE ON BIOLOGICAL STANDARDIZATION

REPORT ON THE FIRST SESSION

Held 9-13 June 1947, Palais des Nations, Geneva

(presented to the Interim Commission at its fourth session).

The Interim Commission of the World Health Organization inherited the functions of the League of Nations Health Organization with regard to biological standardization.

Desirous of giving this work an adequate international technical direction, the Interim Commission adopted the following resolution during its second session (November 1946):

"The Interim Commission requests its Chairman and its Executive Secretary to appoint a small body of experts, whose number is not to exceed eight, to form the nucleus of the future Committee on Biological Standardization.

"These experts will define the subjects which appear to be the most urgent for study, and will draw up a plan of work covering the setting up of international standards and units in the fields selected, to be submitted to the Interim Commission for approval."

Acting upon this resolution, the Chairman and Executive Secretary appointed the following seven members, a seat being reserved for an expert from the Union of Soviet Socialist Republics:

Dr. J. Ørskov, Director, State Serum Institute, Copenhagen, Denmark;
Professeur Jacques Tréfonnel, Directeur de l'Institut Pasteur, Paris, France;
Major-General Sir Sahib Singh Sokhey, Director, Haffkine Institute, Bombay, India;
Dr. W. Aeg. Timmerman, Director, Rijks Instituut voor de Volksgezondheid, Utrecht, Netherlands;
Professeur E. Grasset, Directeur de l'Institut d'Hygiène, Geneva, Switzerland;
Dr. A. A. Miles, Director, Department of Biological Standards, National Institute for Medical Research, London, United Kingdom;
Dr. M. V. Veldee, Chief, Biologics Control Laboratory, United States Public Health Service, Washington, D.C., United States of America.

In December 1946, a note by the Secretariat reviewing the position regarding existing international standards and suggesting new substances for standardization was circulated to these experts. On the basis of their comments, a provisional agenda was drafted, which was submitted to the Interim Commission at its third session (April 1947). At the opening meeting of its first session, held in Geneva 9-13 June 1947, the Expert Committee on Biological Standardization adopted this agenda, somewhat modified, and elected Dr. W. Aeg. Timmerman (Netherlands) to the Chair.

2 WHO. IC/BS/1, an unpublished working document.
3 WHO. IC/BS/2, an unpublished working document.

The report which follows is based on the decisions which were, without exception, unanimously taken by the Committee.

1. National Control Centres.

The Committee approved the principle of the recommendation of the Inter-Governmental Conference on Biological Standardization of 1935:

"That each country should have a national centre or centres, recognized by the competent authority, to take charge of the international standards and equivalent national standards; and that every such centre should have a qualified staff to control the application of the international standards in its own country, and thus to serve as the recognized national scientific authority in this field."

The Committee, however, considered that for simplicity and efficiency it was desirable to limit the number of control centres in each country to one, which would be solely responsible to the Committee for the custody and distribution of all international standards within its country's boundaries; the Committee also considered that such control centres should be established whether or not a particular country was able at the same time to maintain laboratories equipped to fulfil all the requirements laid down in the above resolution.

The Committee recommended that the Secretariat should:

(a) ascertain whether national control-centres designated before the war are still active,
(b) approach the health authorities of interested countries in which there are no national control-centres with a view to establishing such centres, and
(c) draw the attention of national control-centres to the need for all reasonable economy in the use of international standards and for establishing national standards in terms of international units.

2. Emergency Replacement of Standards.

The Committee approved the emergency action taken by the Department of Biological Standards of the National Institute for Medical Research, Hampstead, in replacing the following international standard preparations:

The Committee authorized the Department of Biological Standards, Hampstead, to proceed immediately with the selection of a suitable batch of sulpharsphenamine, and in altering the method of dispensing the solution of β-carotene as the standard for vitamin A.

It also approved the measures taken by the Department of Biological Standards of the State Serum Institute, Copenhagen, in replacing the following standard preparations:

1. 
2. 
3.

These three provisional standards were adopted as definitive international standards.

The Committee took note of the existence of a dry reference preparation of staphylococcus β-antitoxin, set up at the Copenhagen Institute, but decided to postpone the question of adopting it as an international standard.

The Committee wished to express its warmest thanks to the Directors of the Department of Biological Standards in Hampstead and Copenhagen for the initiative thus taken during the war emergency.


An an emergency measure, the Committee authorized the Department of Biological Standards, Hampstead, to proceed immediately with the preparation of the third international standard for digitalis to replace the second international standard, the stocks of which are almost exhausted. It also recommended that the new standard should consist of a mixture of a number of preparations of the powdered leaves of Digitalis purpurea, each preparation selected to conform as nearly as possible to the existing standard preparation, and that the final mixture of these preparations be subjected to comparative assays in a number of laboratories in various countries. The results of these assays should be submitted to the Committee with a view to the adoption of the final mixture of these preparations be subjected to comparative assays in a number of laboratories in various countries. The results of these assays should be submitted to the Committee with a view to the adoption of the final mixture of these preparations be subjected to comparative assays in a number of laboratories in various countries. The results of these assays should be submitted to the Committee with a view to the adoption of this preparation as the second international standard for sulpharsphenamine.

5. Replacement of Sulpharsphenamine Standard.

The Committee authorized the Department of Biological Standards, Hampstead, to proceed with the selection of a suitable batch of sulpharsphenamine to serve as the second international standard for that substance, and to arrange for its assay in comparison with the first international standard in laboratories of various countries. The results of these comparative assays would be submitted to the Committee, with a view to the adoption of this preparation as the second international standard for sulpharsphenamine.

### 6. Standardization of Antigenic Substances.

#### (1) Toxoids.

The Committee recommended that international preparations of diptheria and tetanus toxoids should be set up for reference in the biological assay of these antigens, and that the generous offer of Dr. Veldee to provide specimens of the highly purified toxoids recently prepared in the United States should be gratefully accepted. After a preliminary examination by the Department of Biological Standards, Copenhagen, these toxoids should be distributed to laboratories in interested countries for examination with a view to their suitability as international reference preparations. At the same time, opinions should be invited from interested workers on the desirability and possibility of adopting these preparations as international standards for diptheria toxoid and tetanus toxoid respectively and of defining their activity in terms of units.

#### (2) BCG.

The Committee agreed that it was at present impracticable to set up a standard for BCG vaccine. However, in order to meet the urgent need for uniformity of the BCG vaccines in current use, the Committee recommended that:

- (a) the original strain of BCG kept at the Pasteur Institute, Paris, should be made internationally available,
- (b) the State Serum Institute, Copenhagen, which already distributes on behalf of the Committee a number of the international preparations, should also distribute the BCG strain,
- (c) the preparation and use of the vaccine in each country should be centrally co-ordinated.

#### (3) Old Tuberculin and P.P.D.

The Committee recognized that, in addition to the existing international standard for Old Tuberculin, there was a definite need for an independent international standard for the Purified Protein Derivative (P.P.D.) derived from Mycobacterium tuberculosis. A preparation of P.P.D. originally obtained by Dr. Madsen and stored for the duration of the war at the National Institute of Health, Bethesda, is available and has already undergone preliminary comparative tests. The Committee recommended:

- (a) that funds should be made available for the transport of this preparation from Washington to the State Serum Institute, Copenhagen, and
- (b) that the State Serum Institute should organize a comparative trial of this preparation by various workers, with a view to its adoption as an international standard.
The Committee recommended that, when sufficient experimental data on the P.P.D. preparation were secured, interested workers should be invited to express their opinion upon the desirability and possibility of defining the biological activity both of P.P.D. and of Old Tuberculin in terms of international units.

(4) Other Antigenic Preparations.

After detailed discussion, the Committee considered that it was at present impracticable to set up standards for:

(a) Haemophilus pertussis vaccine,
(b) Vibrio cholerae vaccine,
(c) Pasteurella pestis vaccine,
(d) Smallpox vaccine,
(e) Yellow-fever vaccine.

The Committee was of the opinion, however, that progress in these fields would be greatly facilitated by exchange of the relevant strains of bacteria and viruses, and comparison of their antigenic potency and its methods of assay.

As regards yellow-fever vaccine, the Committee felt strongly that this vaccine, among others, should be standardized as soon as it is practicable to do so. In the meantime, close consultative liaison should be established between the Expert Yellow-Fever Panel (to be set up by the Expert Committee on Quarantine) and the Expert Committee on Biological Standardization, particularly with regard to the minimum requirements of yellow-fever vaccine intended for use in conformity with the international sanitary regulations.


(1) The ABO System.

The Committee recommended that international standards for Anti-A serum and Anti-B serum should be established. To this end, a pooled sample of high potency human Anti-A serum and one of Anti-B serum should be submitted to comparative tests by various workers and their potency expressed in appropriate units.

(2) The Rh System.

The Committee recognized two urgent problems concerning the Rh antigens, namely:

(a) The provision of an agreed international nomenclature;
(b) The establishment of standard antisera for those Rh antigens which are important in medical and obstetrical practice.

The Committee decided to create an Expert Sub-Committee on Rh Antigens to study these two subjects and report on them. This Sub-Committee is to consist of geneticists and hematologists, to be proposed after consultation with interested workers in the various countries.

8. Antibiotics.

(a) The Penicillins.

The Committee considered that recent progress in the identification and definition of the different penicillins does not at present justify any change in the International Standard for Penicillin (1944) or any redefinition of the unit of activity.

It was, however, considered desirable to set up as a reference preparation a substantially pure specimen of penicillin K (IV).

(b) Streptomycin.

The Committee considered that it was at present impracticable to establish an international standard for streptomycin.

Nevertheless, to promote uniformity in the assay of streptomycin potency, it is necessary to establish an international reference preparation. The activity of this preparation should be expressed both as milligram-equivalents of pure streptomycin base, according to current practice in the United States of America, and in provisional international units, which should have substantially the same value as the S-unit originally proposed by Dr. S. Waksman.


The Committee considered that the following problems in the domain of vitamins were the most urgent:

(a) The replacement of the present international standard for vitamin A, which is a preparation of β-carotene, by a standard consisting of a vitamin A ester.

The existing international preparation of β-carotene should then be established as an international standard for β-carotene, for agricultural purposes.

(b) The replacement of the existing international standards for vitamin D, which were respectively preparations of calciferol (vitamin D₃) and irradiated ergosterol, by an international standard consisting of vitamin D₂.

The Committee decided to create an Expert Sub-Committee on the Fat-soluble Vitamins to study these two subjects and report on them, the members of the Sub-Committee to include experts already at work on these problems.

The Committee also discussed the vitamins not yet standardized and considered that they were either sufficiently well characterized by physical and chemical means or at this stage so ill-defined in their biological action as to preclude any attempt at standardization.

10. International Salmonella Centre.

The Committee discussed the proposal of Dr. J. Ørskov that the International Salmonella Centre established in 1938 at the State Serum Institute, Copenhagen, should be taken over by the World Health Organization and its scope extended, under the name of International Enteric Centre, to include the dysentery, coliform and Proteus groups of bacilli.

The Committee recommended that the International Salmonella Centre should be taken over as such by the WHO but that consideration of the proposed extension of its activity to include the dysentery and other intestinal bacilli should be deferred until the Committee had consulted other experts in these fields.
II. EXPERT COMMITTEE ON MALARIA

REPORT ON THE FIRST SESSION

Held 22-25 April 1947, Palais des Nations, Geneva

(presented to the Interim Commission at its fourth session). 1

Outline.

1. Introduction.
2. New Developments and Opportunities.
3. Recommendations for a Malaria Committee and Policy for the WHO.
4. The Darling Foundation and Prize.
5. The Fourth International Malaria Congress (1948).
7. DDT.
10. Recommended Resolutions for the Consideration of the Interim Commission, to be Placed before the World Health Assembly.

1. Introduction.

The Committee on Epidemiology and Quarantine of the Interim Commission, in its first report agreed "that the problem of malaria was sufficiently urgent and important to warrant immediate action". 2 It was decided to appoint a committee of five experts "to study and advise on this important problem". It was anticipated that subsequently it would be necessary for this committee to continue certain investigations and to submit a report in due course.

The report of the Committee on Epidemiology and Quarantine was adopted by the Interim Commission at its second session. 3 It was felt that the Malaria Committee should meet just before the third session of the Interim Commission and prepare a note for consideration of the Commission; but this was not possible.

At the third session of the Interim Commission (11 April 1947), the Committee was renamed "Expert Committee on Malaria". 4 The interpretation of the Secretariat of the terms of reference was that this Expert Malaria Committee "would advise the Interim Commission and also make recommendations to the World Health Assembly concerning the creation of a Malaria Committee, with the help of the draft constitution submitted by Dr. Gabaldón 5, and also concerning the programme of work for such a committee".

The necessity for giving expert direction to the field work to be carried out by the field missions of the World Health Organization was emphasized.

The first meetings of the Expert Committee on Malaria, appointed under its terms of reference, 6 were held in Geneva (22-25 April 1947), and the following were present:

Members:
Dr. Mihai Ciuka, Co-Director, Cantacuzene Institute, Professor of Bacteriology, University of Bucharest, Roumania;
Dr. N. Hamilton Fairley, Wellcome Professor, London School of Hygiene, London, United Kingdom;
Dr. Arnaldo Gabaldón, Chief, Malaria Division, Ministry of Health and Social Welfare, Maracay, Venezuela;
Dr. Paul F. Russell, International Health Division, Rockefeller Foundation, New York, United States of America.

Secretary:
Dr. E. J. Pampana (Interim Commission Secretariat).

Also present:
Dr. Brock Chisholm, Executive Secretary;
Dr. N. Goodman, Director of Field Services; and
Dr. J. M. Vine, Chief of the Interim Commission Mission in Greece.

At the time of the meeting, there had been no nomination of a member by the Union of Soviet Socialist Republics.

Dr. Arnaldo Gabaldón was elected Chairman.

3 Ibid., pages 32-33.
5 Off. Rec. WHO, No. 4, pages 164-166.
2. New Developments and Opportunities.

The period from 1939 to 1947 has been marked by world events which have had a profound effect on malariology, not only creating new problems but especially bringing up new opportunities for a degree of practical malaria control and even of practical malaria eradication impossible, in fact, unthinkable, in pre-war days. As regards malaria, it is now possible for the WHO to go a considerable way towards its objective, "the attainment by all peoples of the highest possible level of health.

In many regions of the world, malaria is still, by all standards, the greatest obstacle in the way of the objective of the WHO. The Second World War intensified the incidence of and increased mortality from malaria in many regions, and there have been in each of the war and post-war years—and there will doubtless be in 1947—severe epidemics of malaria. UNRRA helped to meet emergency post-war needs, but now the only international agency which can furnish appropriate aid and technical assistance is the WHO or its Interim Commission. It must be remembered that malaria is still—as it has been in the past—the most important preventable disease in the tropics and sub-tropics, East and West.

Malariology has come of age, and it is not an exaggeration to say that a new era has begun in malaria treatment and control. War-needs stimulated notable advances, and we now have, in the new antimalarials (see Section 6 below) and in DDT (see Section 7) weapons of great practical value.

But the war, which brought about these advances, at the same time greatly restricted dissemination of knowledge about them, so that there is a real need for the WHO to spread information and to make it possible through fellowships and travel grants to send malaria officers to areas where the new measures are in active use.

In particular, DDT-spraying at last offers a method of controlling malaria in many areas at costs within the economic means of the people. It will sometimes require the initiative, technical advice and assistance of the WHO to start such a programme and to bring it to a point where Governments can carry it forward.

Although the new weapons are much more effective, they still have important limitations, so that there are research needs which the WHO can profitably explore.

The Committee believes that never before has an international body faced such great opportunities over wide areas for the practical control of one of the world's greatest afflictions.

3. Recommendations for a Malaria Committee and Policy for the WHO.

In view of the great importance of malaria in the world today and the fact that many aspects of the disease require highly specialized and technical handling, the Expert Committee on Malaria of the Interim Commission strongly advises the Commission to recommend to the Health Assembly at its first meeting that the Executive Board be directed to establish at once in the WHO a committee of experts to be called the "Malaria Committee of the World Health Organization." The basic objective of this Committee should be to assist the WHO and the United Nations in carrying out their international public-health functions in the specialized fields of malaria research and the epidemiology, therapy, control and eradication of malaria in different parts of the world.

Functions.

The ways and means by which such a Malaria Committee could most effectively aid the WHO have been carefully considered, and the Expert Committee recommends that the general functions of the proposed Malaria Committee of the World Health Organization should be along the following lines:

(1) The first and primary function of the proposed committee should be to act as an expert malaria advisory group to the WHO and, as requested by the Director-General, to other agencies of the United Nations.

It would seem to be highly desirable, if any other body of the United Nations contemplates a project which involves some aspect of malaria—such as, for example, education, treatment or control—that advantage be taken of the expert advice of the proposed Malaria Committee and also that there be only one malaria advisory board within the United Nations specialized agencies.

(2) A second basic function of the Malaria Committee should be to initiate and develop international co-ordinating and intelligence centres, collecting pertinent data, disseminating useful information, suggesting new methods, providing practical advice in respect of all phases of malariology. Furthermore, it should concern itself with the developing of an informed public opinion in regard to the incidence, treatment, control, prevention and eradication of malaria.

(3) The Malaria Committee should give technical assistance to Governments, upon request, in order to strengthen national malaria treatment, control, research, or training services; and, where appropriate, it should be prepared to recommend to the WHO that the latter provide such facilities to special groups.

With the new insecticides and antimalarials, malaria epidemics can be stopped effectively and quickly when a suitable organization and the supplies are available. Therefore, the Committee should be specially alert regarding possibilities of assisting in the control of epidemic malaria, which in the recent past and even today is so disastrous in certain areas.

(4) Although great advances have been made, there is still need for fundamental research in the field of malaria. It is advised that the proposed Malaria Committee plan and stimulate research and, where appropriate, recommend the financing of specific projects by the WHO.

1 See "Constitution of the WHO", Off. Rec. WHO, No. 2, Article 38, Section V B.
2 Ibid.
Another function which the Expert Committee believes should be undertaken by the Malaria Committee is the recommending of WHO malaria fellowships, upon request of Governments, either to enable senior malarialogists to make useful tours to other countries, or to provide younger men an opportunity to attend training courses at a school of malarialogy. It may be advisable for the proposed Committee to recommend plan and supervise one or more WHO international malaria courses along the lines of those set up by the Health Organization of the League of Nations, with special emphasis on malaria control.

The Expert Committee strongly recommends that provision be made so that the proposed Malaria Committee or its individual members as indicated may make tours from time to time in order to give help to a malaria programme, or to obtain a clear understanding of a problem or project, or to obtain new and useful information. Such tours should be subject to agreement with the Governments concerned and to approval by the Director-General.

Finally, the Expert Committee believes that a most important function of the proposed Committee should be to promote co-operation and agreement between nations in regard to malaria nomenclature, standards, indices, epidemiological procedures, laws and regulations. It is specially important that the proposed Committee consider most carefully what further steps might be recommended to prevent the inadvertent transportation of malaria vectors across national boundaries and into areas where they are not now present.

Organisation.

The Expert Committee considered at some length the question of the membership of the proposed Malaria Committee. It would seem essential that such a Committee be large enough to ensure that there is, in the first place, proper geographical representation so that all parts of the world where malaria is a problem will have the intelligent understanding of the Committee. Secondly, since malarialogy is a very wide subject ranging from engineering to entomology and from pathology to therapeutics, appropriate technical representation is also essential.

Budgetary needs must be considered, and the Expert Committee has therefore decided to recommend that the proposed Malaria Committee of the World Health Organization consist of not less than nine members. The Expert Committee strongly advises that this is a minimum number below which the proposed Committee could probably not function with efficiency. The Expert Committee advises that the members of the proposed committee be appointed for terms of three years and that they be eligible for reappointment without reference to previous terms of service. It is also recommended that the members be appointed by the Chairman of the Executive Board and the Director-General, from a list of names of individuals actively engaged and well known in some phase of malarialogy, the list to be prepared in the first instance by the present Expert Committee and thereafter by the Malaria Committee of the World Health Organization, each list to contain at least twice as many names as there are appointments to be made.

The Expert Committee further recommends that the Malaria Committee of the World Health Organization should be provided with a secretary thoroughly familiar with and competent in the field of malarialogy and appointed by the Director-General, who may delegate to him the Director's functions as ex-officio Secretary of the Committee.

The Expert Committee believes that normally two sessions of the proposed Committee each year will be necessary in order for it to carry out its functions properly. But conditions will vary from time to time, and it is therefore recommended simply that the proposed Committee meet at places and times decided by the Committee, with approval by the Director-General, and that, if a sudden meeting is necessary, it may be called by the Director-General and the Chairman of the Malaria Committee.

The Expert Committee recommends that the proposed Malaria Committee be empowered to elect its own Chairman and adopt its own rules of procedure.

The Expert Committee further recommends that the Malaria Committee, with the approval of the Director-General, be empowered to invite to its meetings technical experts, when it seems essential to a proper understanding of a problem at hand.

Finally, the Expert Committee calls attention to the Pan American Malaria Commission, and it recommends that, when the Health Assembly defines geographic areas for regional organizations, there be established at once, if malaria is a problem, regional malaria commissions appointed by the regional directors. It is recommended that the Organization of the Pan American Malaria Commission be used as a guide for the formation of such regional Malaria Commissions. Particular attention is called to the system of sub-committees within the Pan American Commission.

It is further recommended that there should be established very close relationships between these regional commissions and the Malaria Committee of the World Health Organization and that the latter be empowered, with the approval of the Director-General, to invite one or more chairmen of regional malaria commissions or sub-committees to attend its meetings as observers.

4. The Darling Foundation and Prize.

The Expert Committee on Malaria supports the request of the Interim Commission to the Secretary-General of the United Nations that the funds of the Darling Foundation be transferred to the World Health Organization or to its Interim Commission, according to the resolution of the Interim Commission adopted during its third session.

1 The former Malaria Commission of the League of Nations consisted of some 50 members, 21 of whom constituted a study committee.

and no blackwater fever, provided an adequate plasma, the parasites were destroyed, and, in the blood of such volunteers, but, provided atebrin was present in sufficient concentration in the blood stream, the skin and being effective in one-half the therapeutic dosage. Like atebrin, aralen possesses the therapeutic effects by schizonticidal action and does not affect the exo-erythrocytic parasites. It is, however, a drug of great potentialities, and is being selected for very wide field-trials, both as a suppressive and for therapeutic purposes.

5. The Fourth International Malaria Congress.

The Fourth International Malaria Congress will be held in Washington, D.C., United States of America, 10-15 May 1948. An invitation has been received from the convener (Dr. M. F. Boyd) for the Malaria Committee to take active part in its sessions. It is expected that, by the time the Congress is held, the Malaria Committee of the WHO may already have been appointed, but also that, because of the shortness of time, it may be unable to accept such an invitation. Because of this fact, the Committee advises the Interim Commission to appoint an observer to represent the Committee in the said Congress.

6. Chemotherapeutic Control of Malaria.

The following report, bearing on the chemotherapeutic control of malaria, is included for purposes of supplying information to the Interim Commission regarding (1) recent anti-malaria drugs which have become available since the war, and (2) lines of investigation which, in the opinion of this Committee, might be undertaken in the future. Owing to the absence of funds for the purpose, no definite recommendations are made to the Commission at this juncture.

Malaria proved a grave menace to troops operating in malarious areas during the Second World War, and great national efforts were directed to the discovery of more effective drugs to suppress and cure malaria. These chemotherapeutic discoveries made during the war have greatly increased our capacity to control and eradicate malaria in times of peace.

Atebrin.

Though atebrin had been widely used before 1939 and was known to be capable of replacing quinine in the treatment of malaria, its value and correct dosage as a suppressant had not been worked out. Investigations in volunteers experimentally infected with both *falciparum* and *vivax* sporozoites while taking one tablet of atebrin (0.1 gramme) every day revealed that even the heaviest *falciparum* infections were suppressed and cured by this regimen, while *vivax* infections were completely suppressed though not radically cured. Subinoculation revealed that erythrocytic parasites appeared in submicroscopic numbers in the blood of such volunteers, but, provided atebrin was present in sufficient concentration in the plasma, the parasites were destroyed, and, in the case of *falciparum* infection, radical cure resulted. If correct, these experimental findings implied that there should be no deaths from *falciparum* malaria and no blackwater fever, provided an adequate daily dosage of atebrin is taken. Field results with few exceptions confirmed these findings. Atebrin administration became a matter of strict military discipline, and, following this, malaria was reduced to insignificant proportions, ceasing to be a disease of military importance.

The 4-Amino-Quinolines.

Much new work was also done on two new drugs—sontochin (SN 6911) and resochin (SN 7618)—which had been synthesized and patented by German chemists in 1939. The action of these drugs was found to be essentially similar to atebrin, but resochin, which is now called chloroquine or aralen, possessed the advantage of not discoloring the skin and being effective in one-half the therapeutic dosage. It is, however, a drug of great potentialities, and is being selected for very wide field-trials, both as a suppressive and for therapeutic purposes.

The 8-Amino-Quinolines.

The value of plasmoquine (1) as a gametocide, (2) as a causal prophylactic in *falciparum* malaria, and (3) in combination with quinine in radically curing *vivax* relapsing malaria has been recognized for many years. Recently, in the United States of America, new drugs of this series have been synthesized, the most promising of which is pentaquine. Pentaquine has a similar therapeutic action to plasmoquine; it can be given in slightly larger dosage, but unfortunately, like plasmoquine, may produce serious toxic complications. Haemolytic anaemia and haemoglobinuria have both been recorded in patients receiving pentaquine, and for this reason its therapeutic use is likely to be restricted to hospital patients.

The Biguanides.

A remarkable series of antimalarial drugs synthesized during the war were the biguanides, the most important of which is paludrine. This drug is an effective schizonticide; it possesses an action similar to quinine and atebrin in benign tertian malaria, producing clinical but not radical cure. It cures overt *falciparum* malaria with great regularity in a dosage of 0.3 gramme daily for ten days: in one series, 106 out of 107 *falciparum* infections were radically cured by this treatment. It also has a sterilizing action on gametocytes and later sexual stages, the sexual cycle not proceeding further than the early oocytes stage in mosquitoes fed on carriers while taking paludrine. Its most remarkable action, however, is as a suppressant drug: when given in suppressive doses either daily or two or three times a week, it acts as a true causal prophylactic in *falciparum* infections, and as a partial causal prophylactic in *vivax* infections. As a result of this action, *falciparum* infections are terminated in the pre-erythrocytic stage, so that erythrocytic parasites never reach the blood stream. A remarkable feature of paludrine is the latitude allowed between the effective therapeutic dose and the toxic dose. A daily dosage of 1.0 gramme...
has been frequently taken for three to four weeks with immunity. Yet a single dose of 50-100 mg. given from 20 to 131 hours after severe sporozoite \textit{falciparum} infection eradicates the disease. Similarly, a single dose of 0.2 gramme will often terminate a clinical attack of either \textit{vivax} or \textit{falciparum} malaria; generally, recrudescence follows a few weeks later. General Covell has recently reported that a single dose of 0.3 gramme of paludrine has been found to be very effective for treatment of overt malaria in Indian villages; he believes this to be the best treatment for village use.

Field-trials with Paludrine.

In the first field-trials with paludrine, only one tablet of 0.1 gramme weekly was given. Field-trials in India and Africa, arranged by the Malaria Sub-Committee of the Colonial Medical Research Council in England, indicate that a single tablet weekly is sometimes insufficient as a suppressive; for occasional overt attacks occur even in regions of low endemicity, and in hyperendemic areas this dosage is definitely insufficient. This failure is not surprising, as the results obtained in experimentally infected volunteers at Cairns indicated the minimal effective dosage to be 0.2 gramme, given at least twice weekly. General Covell reports that when the dosage is increased to two tablets of 0.2 gramme a week, given at three to four days' interval, paludrine appears to be entirely effective; but the series is so far too small to reach final conclusions. Arrangements have also been made to test in hyperendemic areas one dose of 0.3 gramme weekly, but no field results are yet to hand. Field-trials, arranged by the Malaria Sub-Committee of the Colonial Medical Research Council, are being made in Malaya by Dr. Field, in India and Ceylon and in many parts of Africa.

Projected Chemotherapeutic Investigations and Field-trials.

Two outstanding drugs are now available for field-trials:

(1) Aralen (chloroquine), produced by Winthrop in the United States;

(2) Paludrine, manufactured by Imperial Chemical Industries in England.

It is understood that supplies of both these drugs will be made available gratis by the manufacturers for field-trials undertaken under the direction of the WHO.

Aralen. — This is a most effective schizonticide both as a suppressant and for therapy. It gradually "builds up" in the blood, and the concentration is maintained for some time after medication ceases. This is an advantage in a suppressant drug, since occasional doses can be missed with impunity. On the other hand, it is more likely to be associated with occasional toxic features, as is the case with aterbin. The standard tablet contains 0.25 gramme of base.\footnote{Editor's Note: Today each tablet of Aralen diphosphate — the Winthrop brand of chloroquine diphosphate — contains 0.25 gms of the salt equivalent to 0.155 of the chloroquine base. Consequently, all the dosages of this report should be modified accordingly.}

Paludrine. — This drug has a direct action both as a schizonticide and as a causal prophylactic. It is also a primary gametocide and should directly affect the carrier-rate, quite apart from any secondary effects dependent on early termination of the primary trophozoite wave in malaria infection. The standard tablet contains 0.1 gramme of paludrine.

The potentiality of these two drugs when given in suppressive dosage should be fully explored (\textit{a}) in volunteers or patients needing therapeutic malaria, and (\textit{b}) in highly malarious villages. These investigations should be undertaken not only from the standpoint of suppressing malaria fever, but also from the standpoint of prevention of infection and radical cure. Following chemotherapeutic control, the ensuing loss of premunition in village populations might increase the tendency to epidemics, but this is a risk which can now be taken, since the means at our disposal for controlling epidemics have so vastly improved.

(a) Chemotherapeutic investigation on volunteers or patients needing therapeutic malaria.

(1) Chemotherapeutic suppression: Volunteers or selected patients needing treatment with indirect malaria are generally infected with \textit{falciparum} or \textit{vivax} sporozoites either by the bites of infected mosquitoes or by intravenous injection of sporozoites derived from the salivary glands of infected anophelines. For the purposes outlined here, repeated infection could be made with \textit{vivax} and \textit{falciparum} sporozoites, while such selected patients were receiving one of the various regimens of paludrine or aralen.

When such investigations are undertaken, it is suggested that they be planned as follows:

\textbf{Series I} — Receives one tablet of aralen (0.25 gramme of base) once weekly, exposure to infection commencing 4 weeks after administration of the drug has been initiated.

\textbf{Series II} — Receives 0.3 gramme of paludrine once weekly, administration commencing 2 days after the first exposure to infection.

\textbf{Series III} — Receives 0.1 gramme of paludrine twice weekly at 3-4 days' interval, drug administration commencing 2 days after first exposure to infection.

\textbf{Series IV} — Receives one-half tablet of aralen (0.125 gramme of base) twice weekly at 3-4 days' interval, drug administration commencing 4 weeks before exposure to infection.

\textbf{Series V} — Receives 0.1 gramme of paludrine three times in each week — \textit{i.e.}, at 2 or 3 days' interval, drug administration commencing 2 days after first exposure to infection.
In all these experiments, the drugs should be continued for two weeks after last exposure to infection.

Patients developing clinical attacks of malaria during the period of drug administration or thereafter should be treated with standard therapeutic doses of the same drug—i.e., paludrine or aralen—which was being used for suppressive purposes. In this way, the development of paludrine-resistant or aralen-resistant strains would be detected.

(2) Gametocyte carriers: Mackerras found at Cairns that (1) the sexual cycle was inhibited and did not proceed beyond the small oocyst stage in the mosquito if paludrine was present in the blood of the carrier; (2) the action was reversible since *Plasmodium falciparum* gametocyte-carriers later regained their capacity to infect mosquitoes normally, the time depending on the dosage of paludrine administered to the carrier.

Additional experiments on gametocyte carriers should, in our opinion, be carried out when they are receiving paludrine as follows:

Series I — 0.3 gramme once weekly.
Series II — 0.1 gramme twice weekly.
Series III — 0.1 gramme thrice weekly.

It would be most important to determine whether sporozoite infection of the salivary glands can occur under these regimens, and, if so, on what days of the week the carrier becomes infective.

(b) Chemotherapeutic Field-trials.

Two types of experiments are visualized:

(1) A comparison of the efficacy of aralen and paludrine in adjacent villages or in the same village.

(2) The eradication of malaria entirely in a given area by chemotherapeutic means.

Throughout, it would be essential to select villages and areas where DDT or Gammexane will not be used.

(2) Comparison of the efficiency of aralen and paludrine in adjacent villages with similar spleen and parasite rates.

In the ideal field-trial, the value of the two drugs would be determined for a cross-section of the whole village community, including (2) infants and young children without premunity and (2) older children and adults who had developed premunity as a result of repeated infections.

Two adjacent highly malarious villages would need to be selected. In village "A", one-half of the population, comprising approximately 50% of all age-groups, would receive paludrine in appropriate dosage once weekly, while the other 50% would be given a placebo. Adults would receive 0.3 gramme of paludrine once weekly, while the dosage in the age-groups under 15 years would be scaled down according to age.

In village "B", a similar experiment would be conducted except that aralen would be substituted for paludrine in 50% of all age-groups. The dose of aralen would be 0.25 gramme for adults, and this would again need to be scaled down in the lower age-groups. The control half of the population in each village who were taking the placebo would (1) afford an accurate index to malaria transmission, and (2) ensure a reservoir of gametocyte carriers, provided individuals without premunity—i.e., infants and young children—were adequately represented. As overt attacks would be immediately treated, the health of the group taking the placebo would be adequately cared for.

Field-trials of this type are more readily planned than carried out. The difficulties associated with the administration of a placebo may be not inconsiderable, and with new drugs it is at first difficult to determine the appropriate dosage in the lower age-groups, and, having determined it, to ensure that it is properly administered. For these reasons, the simpler field-trials outlined below may be preferable—at least in the first instance.

(a) Children under 5 years of age who would receive no suppressant drug, but clinical attacks would be immediately treated as they arose. Parasite rates and spleen rates would be determined at stated intervals; where possible, this would be monthly, otherwise every two months. The remainder of the population—i.e., those over 5 years—would once weekly receive aralen in one village and paludrine in the other village. The dosage of aralen for adults would be one tablet (0.25 gramme of base) and for children 6-15 years of age one half-tablet (0.125 gramme of base) once weekly. The dosage for paludrine would be three tablets (0.3 gramme) for adults and two tablets (0.2 gramme) for children aged 6-15 years once weekly.

Drug administration should start one month before the malaria season commences and be continued for one month after transmission ceases. Drugs would need to be administered under strict supervision and an accurate roster kept for the purpose.

In all suspected febrile attacks, blood examinations would be made. When possible, spleen and parasite rates would be determined at monthly or two-monthly intervals. Whenever feasible, the sporozoite rates of mosquitoes trapped in the villages should be made for purposes of comparison. It is possible that the sporozoite rate in the paludrine-treated villages would be lower than in the aralen-treated villages.

Observation should be continued throughout the period of non-transmission to determine the general health of the village population and the incidence of vivax relapses.

(b) A comparison in two other similar malarial-infected villages should be made, the population over 5 years of age receiving drugs as follows:

(1) One village should receive one half-tablet of aralen (0.125 gramme of base) twice a week.

(2) Another village should receive paludrine (0.2 gramme) twice a week—i.e., Wednesdays and Sundays.

Similar parasite and spleen surveys should be made in the children under 5 years and in the other
age-groups as have already been described. A
similar follow-up during the period of non-trans-
mission should be instituted.

**Therapy.** Throughout, overt attacks in both
children and adults should be treated with ther-
peutic doses of the same drug as was used for
suppressive purposes—i.e., aralen or paludrine.
This would afford an index to the possible develop-
ment of aralen-resistant and paludrine-resistant
strains.

(c) In two other villages of high endemicty
similar drug-regimens would be instituted, but
here paludrine or aralen would be compared in the
same village. Children under 5 years would
receive no drugs unless they developed overt
attacks of malaria. The other age-groups would be
divided into two halves and receive suppressive
drugs as follows:

**Village 1** — One-half of the adults would
receive 0.3 gramme of paludrine once weekly,
and the other half 0.25 of aralen once a week.
Children would receive 0.2 gramme of pala-
drine, or 0.125 gramme of aralen base.

**Village 2** — One-half of the adults would
receive 0.1 gramme of paludrine twice a week,
and the other half, 0.125 gramme of aralen
base twice a week—i.e., at 3-4 day intervals.
Children 6-15 years old could receive the adult
dose of paludrine—i.e., 0.1 gramme twice weekly.
The adult dosage of aralen would probably be
regarded as excessive for children; one quarter
of a tablet—i.e., 62.5 mg. twice weekly might be
substituted.

(2) Extirpation of malaria from village areas by
chemotherapy.

Two areas with similar parasite and spleen rates
should be selected. In one area, "A", all the
population should receive paludrine except one
control village on the periphery of the area; in
the other area, "B", all should receive aralen
except one village used as a control located on the
periphery of the area.

Details regarding this type of field-trial and
dosage to be adopted could be considered later.

7. DDT.

The discovery of the insecticidal properties of
DDT has meant the introduction of a very power-
ful arm in the control of malaria. It has been
used as a larvicide and as a mosquitoicide and
found very effective. The final general use of this
insecticide as larvicide or as mosquitoicide will
depend on future research.

As a larvicide, DDT may probably be of rest-
icted use in ordinary anti-anopheline work, as
compared to its employment as a mosquitoicide.
As a larvicide, it may result in being a more expen-
sive measure; and therefore its effects, in compa-

## MALARIA

**Attention should be given, therefore, to stimu-
la ting efforts in this direction in the different areas
of the world.**

In reference to cost, the Committee wants to
call attention to the recently observed trend in
the market to increase the price of DDT, which at
present is hard to understand. It should be
recalled that in industry it generally happens that
effect, which may reduce its economic use. Also,
and especially when used from aeroplanes, it may
interfere with the normal biological cycles of the
treated environment, which may upset the economy
of the region, not only from the standpoint of animals but also of plants, both crops and trees.

There is no doubt that, as an emergency measure,
DDT, as larvicide, has a wide usefulness. A great
deach of study should be given to these points, and
special care should be taken not to carry on expe-
riments with DDT as a larvicide in districts where
it is also used as a mosquitoicide, because a decrease
of density of anophelines has been observed in places where it has been used only as a mosquito-
icide.

It is probable that the widest use of DDT will
be based on its utilization as a mosquitoicide to
control malaria by the destruction of the adult
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the larger the amounts of a given material, the lower the prices of its production. Steps should be taken to advise those concerned to give consideration to this problem, as it is suspected that an artificial increase in price of DDT may be seen in the near future, which may be a hindrance to its wider use.

It is suspected, as mentioned above, that a decrease in morbidity and mortality from diseases other than malaria may be obtained by the wide use of DDT, in a similar way as was observed after the introduction of better water-supplies and chlorine when a reduction was noticed in diseases other than typhoid, diarrhoea and dysentery. DDT probably will have to be used as a recurring measure—as chlorine is used in water-supplies—and therefore expenditures may be expected to be maintained. Because of this fact, special attention should be paid to the collateral benefits on general morbidity and mortality just mentioned, to avoid the possibility of budgetary reduction which over-optimistic health authorities may impose.


There will perforce be a considerable time interval between the present session of the Expert Committee and the first meeting of the definitive Malaria Committee of the World Health Organization, recommended in this report. Therefore, it is urged that the Interim Commission at its next session authorize and provide for a second session of this Committee, to be held in November 1947. Such a meeting is essential if the World Health Organization desires the advice and guidance of its malaria experts in regard to its 1948 malaria programme, which involves the expenditure of a considerable sum of money. It is strongly felt that all malaria projects of the WHO should be reviewed by its Malaria Committee, as a matter of sound policy. There has been no opportunity for the Expert Committee to study the 1948 malaria programme, and it would seem advisable to make provision for such a review before the end of this year. Moreover, there are other matters which should receive attention without delay. These include the preparation and dissemination of reports regarding new antimalarials and insecticides and the inauguration of a WHO malaria fellowship programme.


Draft Resolution presented by Dr. Ciucu.

The Committee draws attention to the serious malaria epidemic in Tulcea (Roumania), where the supply of antimalarial drugs and insecticides is grossly inadequate. This epidemic threatens to extend also to neighbouring regions in the country and even to cross the border into adjacent countries.

The Committee recommends that the Secretariat collect more complete information and that it approach the League of Red Cross Societies with a view to supplying the necessary antimalarial drugs and insecticides to combat this serious emergency.

10. Recommended Resolutions.

The Expert Committee on Malaria submits the following recommended resolutions for the consideration of the Interim Commission, to be placed before the World Health Assembly:

I. Whereas the World Health Organization, for the application of its statutory functions in the field of malaria, would benefit from the advice of a group of outstanding malariologists conversant with the many aspects of the malaria problem in the different parts of the world, as regards malaria research, epidemiology, therapy, control and eradication,

The first Health Assembly resolves:

1. That the Executive Board be instructed to establish, during its first session, a Malaria Committee of the World Health Organization with the following terms of reference:

(a) to act as an expert malaria advisory body to the World Health Organization and, when requested by the Director-General, to other specialized agencies of the United Nations and to Governments requesting advice or technical assistance in the field of malaria;

(b) to act as an international co-ordinating and intelligence centre in the field of malaria;

(c) to study and stimulate and, where appropriate, to recommend the financing of malaria research and field investigations, to develop specialized malaria training through fellowships or otherwise and to promote co-operation and agreement among the nations in the fields of malaria research, epidemiology, legislation, therapy, prevention, control or eradication;

2. That the Malaria Committee of the World Health Organization shall consist of no fewer than nine experts, appointed for three years and eligible for reappointment;

3. That the Malaria Committee of the World Health Organization be empowered to elect its own Chairman, adopt its own rules of procedure, and, with the approval of the Director-General, to invite to its meetings technical experts when deemed necessary;

4. That the Chairman of the Executive Board, in agreement with the Director-General, appoint the first nine members, selecting them from the list presented by the Expert Committee on Malaria of the Interim Commission, and that henceforward the selection for new appointments be made from a list, including two candidates for each nomination, presented by the Malaria Committee of the World Health Organization;
5. That, when the World Health Assembly defines geographic areas for Regional Organizations, there be established at once, if malaria is a problem, regional malaria commissions appointed by the regional director.

II.

Whereas the Darling Foundation was created by private funds with a view to honouring the memory of Dr. S. T. Darling, killed by accident during a study mission of the Malaria Commission of the League of Nations;

Whereas the Darling Foundation had the purpose of granting periodically a medal and a prize to a malarialogist who particularly distinguished himself with his work;

Whereas, with the liquidation of the League of Nations, the Statutes of the Darling Foundation are no longer applicable;

The first Health Assembly resolves:

I. That the Malaria Committee of the World Health Organization, in consultation with the Director-General, draft the new statutes of the Foundation and submit these for approval to the Executive Board;

2. That such Statutes should entrust the Malaria Committee with the selection of the candidate to whom the medal and the prize should be attributed;

3. That the medal should be solemnly awarded by the World Health Organization and that the Director-General should be the administrator of the Fund of the Darling Foundation.
III. EXPERT COMMITTEE FOR THE PREPARATION OF THE SIXTH DECAENIAL
REVISION OF THE INTERNATIONAL LISTS OF DISEASES AND CAUSES OF DEATH

(a) REPORT ON THE FIRST SESSION

Held 10-21 March 1947, Ottawa, Canada

(presented to the Interim Commission at its fourth session) ¹

1. Summary of Developments prior to the First Session.

1. The Interim Commission was entrusted by Article 2 (k) of the Arrangement establishing it, with the task of "reviewing the existing machinery and of undertaking such preparatory work as may be necessary in connexion with :

"(i) the next decennial revision of the International Lists of Causes of Death ; and
"(ii) the establishment of International Lists of Causes of Morbidity "; ²

2. To meet this responsibility, the Interim Commission decided at its second session, in November 1946, to set up a committee of experts.³

The Chairman and Executive Secretary of the Interim Commission, acting jointly upon this resolution, appointed the International ⁴ Committee for the Preparation of the Sixth Decennial Revision of the International Lists of Diseases and Causes of Death, composed of the following members :

J. E. Backer, Sc. D., Chief, Demographic, Section, Central Bureau of Statistics, Oslo, Norway ;
Dr. S. T. Bok, Professor of Medicine, University of Leiden ; Chief, Section for Statistics, Institute for Preventive Medicine, Leiden, Netherlands ;
Dr. D. Curiel, Medical Chief, Division of Epidemiology and Vital Statistics, Caracas, Venezuela ;
W. Thumber Fales, Sc. D., Director, Statistical Section, City Health Department, Baltimore, Maryland, United States of America ;
Dr. M. Kacprzak, President of the National Health Council, Warsaw, Poland ;
Dr. P. Stocks, Chief Statistician (Medical), General Register Office, London, United Kingdom ;
Dr. J. Wyllie, Professor of Preventive Medicine, Queen's University, Kingston, Ontario, Canada.

The agreement of the French authorities on the French expert suggested was not obtained, and at the time of the meeting there had been no nomination of a member by the Union of Soviet Socialist Republics.

The secretariat of the International Committee included :

Dr. Marie Cakrtova, Medical Officer of the Interim Commission, and
J. T. Marshall, Assistant Dominion Statistician, Ottawa, Canada,

who was appointed co-secretary to the International Committee.

The terms of reference of the International Committee were defined as follows :

(a) To review the developments as regards morbidity and mortality classification which have taken place since the Fifth Decennial Revision in 1938;
(b) To formulate proposals to be submitted through the Interim Commission to Governments;
(c) To consider suggestions from Governments and agencies interested in the problem of morbidity and mortality classification;
(d) To prepare recommendations regarding the International Conference for the Sixth Decennial Revision of International Lists of Diseases and Causes of Death.

It had been realized that, in facing this task, the International Committee would have the advantage of the very large amount of preparatory work accomplished by the United States Committee on Joint Causes of Death. This Committee had been appointed in 1945 by the Secretary of State of the United States, in compliance with a resolution of the Fifth International Revision Conference in 1938, including among its members and consultants representatives of the Canadian and British Governments and the Health Section of the League of Nations.

The United States Committee decided that, before taking up the matter of joint causes, it would be advantageous to consider classification from the point of view of morbidity and mortality, since the joint-cause problem belongs to both types of statistics.

In approaching the problem of morbidity classification, the Committee acted upon another

¹ Off. Rec. WHO, No. 6, pages 12, 45, 190, 214.
² Off. Rec. WHO, No. 2, Section VC.
³ For the resolutions, see Off. Rec. WHO, No. 4, page 161.
⁴ This Expert Committee of the Interim Commission is referred to, in this and other documents of the same series, as the "International Committee", in order to differentiate it from the expert United States Committee.
resolution of the Fifth Decennial Conference, which recommended that the "various National Lists in use should, as far as possible, be brought into line with the detailed International List of Causes of Death". With this objective in mind, the United States Committee, utilizing the experience in morbidity classification accumulated in the last decade in Canada, the United Kingdom and the United States, and keeping to the framework of the International List of Causes of Death, prepared, in a series of working sessions, a single classification suitable for both morbidity and mortality statistics.

The United States Committee presented the results of its work in the "Proposed Statistical Classification of Diseases, Injuries and Causes of Death", consisting of two volumes:


This document was then submitted for criticism and review to various agencies and individuals in Canada, England and the United States. The Minister of Health in the United Kingdom appointed for this purpose a special investigating body — namely, the Medical Advisory Committee on the Sixth Decennial Revision of the International List of Causes of Death — composed of experts in medical statistics and in the various fields of medicine. After making further modifications based on the amendments suggested by the Medical Advisory Committee and other agencies, the United States Committee met in Ottawa on 10 March 1947 and approved a final draft of the proposed classification.

2. First Session of the International Committee in Ottawa, Canada, 10-21 March 1947.

A. Arrangement of Session.

It was considered advisable for the first session of the International Committee to be convened on 10 March in Ottawa, since it would thus be possible to arrange combined meetings with the United States Committee on Joint Causes of Death, meeting there for the final revision of its document. These combined meetings were arranged, upon the invitation of the Executive Secretary of the Interim Commission to the United States Committee to take part in the discussions of the session and thus to give the International Committee the benefit of its wide experience.

In addition, two members of the United States Committee — namely, Dr. Selwyn D. Collins, Head Statistician, Public Health Service and Secretary for Morbidity Code; and Dr. Halbert L. Dunn, Director, National Office of Vital Statistics and Secretary for Mortality Code — were invited to participate in the work of the International Committee during its first session, as Rapporteurs of the United States Committee. The same invitation was extended to Dr. A. H. T. Robb-Smith, Nuffield Reader in Pathology, University of Oxford, and also member of the United States Committee, to take part in the session as Rapporteur of the above mentioned Medical Advisory Committee in the United Kingdom.

B. Persons attending the First Session of the International Committee.

International Committee:

Dr. Percy Stocks (elected Chairman), W. Thurber Fales (elected Vice-Chairman), J. E. Backer, Dr. S. T. Bok, Dr. Dario Curiel, Dr. J. Wyllie.

(Dr. M. Kacprzak and the expert in medical statistics from the USSR were unable to attend the first session.)

Rapporteurs: Dr. S. D. Collins Dr. H. L. Dunn Dr. A. H. T. Robb-Smith


United States Committee on Joint Causes of Death:

Dr. George Baehr, Mount Sinai Hospital, New York;
Dr. F. S. Burke, Chief of Blindness Control, Department of Health and Welfare, Ottawa, Canada;
Dr. Edwin L. Crosby, Director, The Johns Hopkins Hospital, Baltimore, Maryland;
Dr. Paul M. Densen, United States Veterans' Administration, Washington, D.C.;
Dr. Harold F. Dorn, United States Public Health Service, Bethesda, Maryland;
Eugene L. Hamilton, United States War Department, Washington, D.C.;
Dr. Lowell J. Reed, Professor of Biostatistics and Vice-President, The Johns Hopkins University, Baltimore, Maryland (Chairman);
Dr. Edward S. Rogers, Dean, School of Public Health, University of California, Berkeley, California;
Dr. Robert L. Ware, United States Navy Department, Washington, D.C.;
Dr. Iwao M. Moriyama, United States Public Health Service, Washington, D.C.;
Winifred O'Brien, Vital Statistics Branch, Dominion Bureau of Statistics, Ottawa, Canada; as well as Dr. Percy Stocks, Dr. W. T. Fales, Dr. J. Wyllie, Mr. J. T. Marshall, Dr. S. D. Collins
Dr. H. L. Dunn, and Dr. A. H. T. Robb-Smith, already listed under the International Committee; Dr. Yves M. Biraud, Deputy Executive Secretary of the Interim Commission, and Dr. J. C. Meakins, Professor of Medicine and Dean of the Faculty of Medicine, McGill University, Montreal, Quebec, Canada, also members of the United States Committee, were unable to attend the session.

C. Progress of the Session.

As stated in the draft Minutes, the session consisted of twenty-two meetings, the first being attended by the International Committee only, to elect its officers; the second to the sixth meetings were also attended by the full United States Committee; and the seventh to the twenty-second by the Working Sub-Committee of the United Kingdom.

Documents WHO.IC/MS/Min/1-22, unpublished working documents.
United States Committee, which was authorized by its parent body to continue in session with the International Committee.

D. Summary of the Work of the Session, and Recommendation to the Interim Commission as to Action to be taken.

The International Committee and its Chairman summarized the work of the session as follows:

"The International Committee for the Preparation of the Sixth Decennial Revision of International Lists of Diseases and Causes of Death was entrusted by the Interim Commission through its Chairman and Executive Secretary with the responsibility of:

"(a) reviewing the developments as regards morbidity and mortality classification which have taken place since the Fifth Decennial Revision in 1938;
"(b) formulating proposals to be submitted through the Interim Commission to Governments;
"(c) considering suggestions from Governments and agencies interested in the problem of morbidity and mortality classification;
"(d) preparing recommendations to the International Conference for the Sixth Decennial Revision of International Lists of Diseases and Causes of Death."

During the first session of the International Committee held in Ottawa, Canada, from 10-27 March 1947, parts (a) and (b) of the above functions were fulfilled.

(a) Review and Study of Developments since 1938.

The Chairman of the International Committee, in order to carry out the responsibility as listed under (a), asked the Chairman of the United States Committee on Joint Causes of Death to make the work of his Committee available for review and study by the International Committee.

The Chairman of the United States Committee on Joint Causes of Death took action to transfer these documents to the International Committee:

(i) Proposed Statistical Classification of Diseases, Injuries and Causes of Death (Introduction and List of Categories) in its final form, as approved by the United States Committee at its meeting in Ottawa, 20 March 1947.
(ii) Tabular List of Inclusions (Tentative Edition) under the respective categories of the classification in provisional form as prepared by the United States Committee.

The International Committee, during its first session, reviewed and amended the List of Categories and reached agreement on the final version. It also prepared a Preface, revised the Introduction and adopted for the classification the following title: "International Statistical Classification of Diseases, Injuries and Causes of Death".

In combined meetings with the working sub-committee of the United States Committee, discussions on the Tabular List of Inclusions have been carried out on the tentative version, giving proper consideration to amendments suggested from various sources.

The International Committee considered the desirability of preparing a list of Latin equivalents of the terms appearing in the Tabular List, and appointed a sub-committee to prepare such a list.

The International Committee also devoted time to consideration of the need for intermediate and abridged lists for use where tabulations based on the detailed list were not practicable. A sub-committee was appointed to prepare such lists during the session.

The International Committee summarized its work and deliberations during the session in the following statements:

(i) There is an ever-increasing need for a uniform classification of causes of sickness similar to the International List of Causes of Death.
(ii) A single statistical classification applicable to both causes of sickness and causes of death would permit parallel presentation of morbidity and mortality statistics.
(iii) In order to achieve comparable morbidity and mortality statistics, there should also be available a uniform list of inclusion terms for each title of the list.
(iv) There should be agreement on condensed forms of the list suitable for comparative tabulations of morbidity and mortality statistics by such characteristics as age and geographical region.

In view of these conclusions, the International Committee is submitting to the Interim Commission the following documents prepared during the first sessions:

(i) List of Categories (including the Preface and Introduction) of the International Statistical Classification of Diseases, Injuries and Causes of Death.1
(ii) Tabular Lists of Inclusions, in an amended version.2
(iii) Drafts of an Intermediate and an Abridged List, as prepared by the Sub-Committee and submitted to the International Committee.3

(b) Recommendations to Interim Commission as to action to be taken.

The International Committee proposes to the Interim Commission that:

(i) The List of Categories of the International Statistical Classification of Diseases, Injuries and Causes of Death should be submitted to Governments, with the recommendation that this classification be adopted as a basis for the Sixth Decennial Revision of the International List of Causes of Death.

1 Document WHO.IC/MS/1, unpublished working document.
2 Document WHO.IC/MS/7, unpublished working document.
3 Document WHO.IC/MS/8, unpublished working document.
The amended version of the *Tabular List of Inclusions* should be circulated among participants in the Ottawa session for study and further consideration.

The amended version of the *Tabular List of Inclusions* should be forwarded to the Governments of Canada and the United States, with the recommendation that this version be used as the basis in the preparation of an alphabetical index of inclusion terms. This recommendation is based on the belief that the highly technical work of preparing an index should be entrusted to those agencies which, having produced such alphabetical lists in the past, are equipped with machinery and personnel to perform this task.

In view of the above recommendation, a Technical Sub-Committee for the preparation of an alphabetical index should be established, which would include persons in these two countries actually in charge of such work. This Sub-Committee should be given the responsibility of co-operating with representatives of governmental and other agencies in the two countries in order to produce a uniform index in English, to report to the International Committee about the progress of the work, and submit additional terms for inclusion in the tabular list or index.

Early action should be taken in effecting translations of the *List of Categories* into French and Spanish.

The International Committee further proposes that:

Drafts of the intermediate and abridged lists should be circulated among participants in the Ottawa session for study and further consideration.

The second session of the International Committee should be convened in September or October 1947, in order to:

1. fulfil part (c) and (d) of the functions as outlined by the Interim Commission;
2. receive a report of the Sub-Committee on the preparation of an alphabetical index and discuss further steps;
3. discuss action as to translations of the Tabular List and Index into French and Spanish;
4. consider the list of Latin equivalents prepared by the Sub-Committee;
5. further study the problem of intermediate and abridged lists;
6. deal with any other pertinent problems arising;
7. The second session should be held in Geneva.

**E. Assistance given to the Session by the Canadian Government.**

The International Committee is deeply indebted to the Canadian Government for the excellent services rendered by the secretarial staff of the Dominion Provincial Relations Organization and by the Dominion Bureau of Statistics in the preparation of the numerous documents during the session, the duplication of the final documents and their distribution to Governments.

**3. Documents referring to the Session.**

- WHO.IC/MS/Min. 1-22 — Draft Minutes of the Meetings;
- WHO.IC/MS/1 — International Statistical Classification of Diseases, Injuries and Causes of Death;
- WHO.IC/MS/2 — Agenda of the First Meeting;
- WHO.IC/MS/3 — Provisional Technical Agenda of the Session;
- WHO.IC/MS/4 — Composition of International Committee;
- WHO.IC/MS/5 — Composition of United States Committee on Joint Causes of Death;
- WHO.IC/MS/6/Rev. 1 — Amendments to List of Categories of United States Document;
- WHO.IC/MS/7 — Tabular List of Inclusions (Tentative Edition);
- WHO.IC/MS/8 — Drafts of two forms of Abbreviated Lists.

*1 Unpublished working documents.*
(b) REPORT ON THE SECOND SESSION

Held 21-29 October 1947, Palais des Nations, Geneva, in combined meetings with the Index Sub-Committee

(presented to the Interim Commission at its fifth session). ¹

Outline

1. Arrangement of the Session.
2. Persons attending.
3. Documents presented at the Session.
4. Summary of Developments since the First Session.
5. Discussions and Progress.
7. Documents resulting from the Session.
8. Recommendations:
   A. Sixth Decennial Revision Conference.
   B. Permanent Expert Committee on Health and Vital Statistics.
   C. Other.

1. Arrangement of Session.

The Expert Committee for the Preparation of the Sixth Decennial Revision of the International Lists of Diseases and Causes of Death (hereinafter called the "Committee") held its second session from 21 to 29 October 1947, in Geneva.

It was found desirable to arrange for combined meetings with the Index Sub-Committee, in order to receive the report on its work and to discuss steps in the preparation of the final Alphabetical Index. The Index Sub-Committee, having had two previous meetings in Washington and New York, held its third meeting in Geneva, on 18 and 20 October 1947, prior to the session of the Committee.

Dr. H. L. Dunn, Director of the National Office of Vital Statistics, Washington, D.C., was asked to attend the session as adviser, especially in view of the Joint Cause Problem included in the programme of the second session.

2. Persons attending.

Chairman: Dr. Percy Stocks, Chief Statistician (Medical), General Register Office of England and Wales, London, United Kingdom.

Members:

J. E. Backer, Sc.D., Chief, Demographic Section, Central Bureau of Statistics, Oslo, Norway;
Dr. S. T. Bok, Professor of Medicine, University of Leiden, Chief, Section for Statistics, Institute for Preventive Medicine, Leiden, Netherlands;

Index Sub-Committee:

S. D. Collins, Sc.D., Chairman, Head Statistician, United States Public Health Service, Bethesda, Md., United States of America;
J. T. Marshall, Assistant Dominion Statistician, Ottawa, Canada;
Iwao M. Moriyama, Ph.D., Chief, Mortality Analysis Section, National Office of Vital Statistics, United States Public Health Service, Washington, D.C., United States of America;
Dr. P. F. Denoix, Chef des Services techniques et de la Section du Cancer, Institut National d'Hygiène, Paris, France;
W. Thurber, Fales Sc.D., Vice-Chairman, Research Associate, School of Hygiene, Johns Hopkins University, Baltimore, Md., United States of America;
Dr. M. Kacprzak, Professor of Hygiene, Director, State School of Hygiene, President, National Health Council, Warsaw, Poland;
Dr. J. Wyllie, Professor of Preventive Medicine, Queen's University, Kingston, Ontario, Canada.

Adviser:


² Document WHO.IC/MS/20-WHO.IC/MS/Index/2, unpublished working document.
Observers:
Lucien Feraud, Ph.D., Actuarial Consultant, International Labour Organization, Geneva, Switzerland;

Secretariat:
Dr. Yves M. Biraud, Director of the Division of Epidemiology and Public Health Statistics;
Dr. Marie Cakrtova, Medical Officer, Secretary to Expert Committee.
(Dr. Dario Curiel, Medical Chief, Division of Epidemiology and Vital Statistics, Caracas, Venezuela, was not able to attend.)

3. Documents presented at the Session.1

WHO.IC/MS/1 Corr. 1 — Corrigendum to Introduction and List of Categories.
WHO.IC/MS/8 Corr. 1 — Corrigendum to Draft Minimum List and Abbreviated List.
WHO.IC/MS/8x — Report on the First Session.
WHO.IC/MS/10 — Report on the Preparatory Work.
WHO.IC/MS/10 Add. 1.
WHO.IC/MS/11 Add. 1.
WHO.IC/MS/11 Add. 2.
WHO.IC/MS/11 Add. 3.
WHO.IC/MS/12 — Intermediate and Abridged List (Analysis of Comments).
WHO.IC/MS/12 Add. 1.
WHO.IC/MS/13 Add. 1.
WHO.IC/MS/14 — General Recommendations submitted by Governments.
WHO.IC/MS/15 — Proposed Amendments to Introduction and List of Categories.
WHO.IC/MS/15 Add. 1.
WHO.IC/MS/16 — Problem of Joint Causes of Death, Recommendation submitted by Canada.
WHO.IC/MS/17 — Draft Agenda.
WHO.IC/MS/18 — List of Persons attending.
WHO.IC/MS/19 — List of Documents (Provisional).
WHO.IC/MS/20—
WHO.IC/MS/Index/2 — Report of the Subcommittee on the Preparation of an Alphabetical Index.
WHO.IC/MS/20—
WHO.IC/MS/Index/2 Add. 1.
WHO.IC/MS/Index/1 — Alphabetical Index (Tentative Edition).
WHO.IC/MS/Index/3 — Additional Terms for Alphabetical Index and Tabular List of Inclusions, submitted by the National Office of Vital Statistics, United States Public Health Service.

4. Summary of Developments since First Session.

As given in the Report on the Preparatory Work,2 action had been taken on all recommendations resulting from the first session.3

(2) Circulation of Introduction and List of Categories.

The Introduction and List of Categories of the International Statistical Classification of Diseases, Injuries and Causes of Death4, available in both English and French, had been given wide circulation.5 All Governments were asked to initiate action which would enable competent administrations to exchange views on the usefulness of the Classification and to formulate co-ordinated proposals. A supplementary distribution of the document had been carried out to national health administrations, to central statistical offices and social insurance agencies, in order to facilitate discussion of the proposal. Copies of the Spanish edition, prepared on the recommendation of the Committee, were put at the disposal of the World Statistical Congress held in September 1947, in Washington.

(2) Response.

Comments and suggestions had been received prior to the second session from thirty-three Governments and were correlated and analyzed.6 Two additional replies arrived during the session in time to be considered by the Committee.7 The views of the competent authorities of Poland were presented by Dr. M. Kacprzak during the session itself.

(3) Problems referred to the Committee.

In addition to the items outlined at Ottawa for the programme of the second session,8 two other

1 Unpublished working documents.
problems were referred to the Committee in the interval between the two sessions:

(a) Cancer registration and statistics, as outlined in the resolution adopted by the Conference on Cancer Statistics, Copenhagen, in September 1946;
(b) Joint Cause Problem, as presented in the Preliminary Report of the United States Committee on Joint Causes of Death.

5. Discussions and Progress.

The session, consisting of sixteen meetings, proceeded in accordance with the adopted draft agenda.


The Expert Committee and its Chairman summarized the work of the session as follows:

The Expert Committee for the Preparation of the Sixth Decennial Revision of the International Lists of Diseases and Causes of Death was entrusted by the Interim Commission with the responsibilities of:

(a) reviewing the developments as regards morbidity and mortality classification which have taken place since the Fifth Decennial Revision in 1938;
(b) formulating proposals to be submitted through the Interim Commission to Governments;
(c) considering suggestions from Governments and agencies interested in the problem of morbidity and mortality classification;
(d) preparing recommendations regarding the International Conference for the Sixth Decennial Revision of the International Lists of Diseases and Causes of Death.

The Expert Committee, during its first session at Ottawa, 10 to 21 March 1947, carried out parts (a) and (b) of the entrusted responsibilities.

During the second session, the Expert Committee continued in fulfilling parts (c) and (d) of the terms of reference. The Expert Committee also dealt with problems arising from the discussions during the first session and with additional subjects referred to it by the Interim Commission and its Secretariat. Specifically, the Expert Committee:

List of Categories. — (1) Considered the comments from Governments and agencies on the general structure of the International Statistical Classification of Diseases, Injuries and Causes of Death. The objections concerned, on one hand, the extent of the Classification as to the fourth-digit subdivisions and, on the other hand, the lack of useful meaning in some two-digit titles. The Committee, in view of these observations, agreed on the following modifications of the general structure:

(a) deletion of the two-digit list and replacement of the two-digit cross-headings in the Classification itself by significant group titles of three-digit categories;
(b) presentation of the detailed list in two sections, including, respectively:
(i) a list of three-digit categories for obligatory use in classification of morbidity and mortality data;
(ii) a list of four-digit categories for optional use by countries, to be shown as subdivisions of three-digit titles, together with the inclusion terms and with all necessary explanatory notes;

(2) Considered the amendments to the International Statistical Classification of Diseases, Injuries and Causes of Death; Introduction and List of Categories, proposed by Governments and experts, as well as others submitted verbally during the session;

Tabular List of Inclusions.

(3) Authorized the Chairman, Vice-Chairman, Secretary of the Committee and Miss O'Brien, member of the Index Sub-Committee, to revise the Tabular List of Inclusions according to those amendments to the List of Categories which were accepted by the Committee;

Alphabetical Index.

(4) Adopted the Report of the Index Sub-Committee.

(5) Approved the general structure of the Alphabetical Index (Tentative Edition) to the Tabular List of Inclusions as prepared by the Index Sub-Committee.

(6) In discussion on the preparation of the final Alphabetical Index, the Committee:

(a) considered the problems outlined by the Index Sub-Committee;
(b) authorized the working group mentioned in paragraph 3 to clear problems as set out in the Report of the Sub-Committee, and any problems of a similar nature;
(c) entrusted the Index Sub-Committee with the responsibility of incorporating into the final version of the Alphabetical Index diagnostic terms not already in the provisional documents;

7 Given on pages 1-4 of document WHO.IC/MS/1.
8 Document WHO.IC/MS/2.
9 As given in documents WHO.IC/MS/15 and 15 Add. 1.
10 Document WHO.IC/MS/7.
11 As given in document WHO.IC/MS/20–WHO.IC/MS/Index/2.
12 Document WHO.IC/MS/Index/1.
13 In document WHO.IC/MS/20–WHO.IC/MS/Index/7/ (VII, items 48-[6].)
14 Appendices I–III of document WHO.IC/MS/20–WHO.IC/MS/Index/2.
15 Documents WHO.IC/MS/7 and WHO.IC/MS/Index/1.
16 A preliminary list of such terms is given in documents WHO.IC/MS/Indices/3 and 4.
(d) considered the recommendation of the Index Sub-Committee concerning the publication of the International Statistical Classification; 1 
(e) instructed the Index Sub-Committee to proceed with the preparation of the final Index so that a complete version would be available for use by 31 December 1948; 
(g) Re-stated its policy as to the inclusion of Latin equivalents of diagnostic terms in the Tabular List and in the Alphabetical Index. The discussion revealed that the need for Latin equivalents in certain countries could be satisfied in two ways, by: 
(a) providing Latin equivalents for terms in the English version which are not anglicized Latin expressions and thus not easily recognizable in the English form; 
(b) translating all English terms for which Latin terms, being few, could be easily blended into the English version, and instructed the Sub-Committee on Latin Equivalents, consisting of Dr. Backer and Dr. Bok, 2 to supply such terms to the Index Sub-Committee for incorporation into the final Index) 
(b) translating all English terms for which there are available Latin terms in common usage. 
(The Committee felt that the inclusion of such equivalents would lead to an undesirable inflation of the English Index without offering the benefit of fully satisfying any particular nation, in view of the quantitative differences in the usage of Latin terms, and adopted the suggestion of the Sub-Committee that countries not able to utilize the English, French and Spanish editions should be asked to prepare national versions incorporating the Latin terms used in these countries.) 
(8) Recognized the need for lists of selected categories for certain tabulations of mortality and morbidity data, and defined the respective uses of the detailed and shorter lists for such purposes; 
(g) Revised, accordingly, the draft Intermediate and Abbreviated Lists, 3 taking into consideration various suggestions and comments. 4 
(10) Revised the Selected List of Causes of Morbidity for Social Security Purposes, as adopted provisionally by the Inter-American Committee on Social Security 5 and submitted to the Expert Committee for study; 6 
(11) Expressed satisfaction with the action of the Secretariat of the Interim Commission on the recommendation of the first session, concerning the translation of the Introduction and List of Categories into French and Spanish, 7 It further stressed the need for preparing French and Spanish versions of the Tabular List of Inclusions and Alphabetical Index, such versions not being literal translations of the English document but including synonymous terms used in French- and Spanish-speaking countries; 
(12) Considered the problem of joint causes of death presented in the Preliminary Report of the United States Committee on Joint Causes of Death and submitted to the Committee for review and study. 8 The Committee discussed in detail the recommendations of the United States Committee; 9 and endorsed particularly the following: 
(a) the adoption of a standard international form of medical certificate of cause of death; 
(b) the adoption of the principle of selecting the underlying condition as the main cause; 
(c) the formulation of uniform rules for selecting the underlying cause of death; 
(d) tabulation and publication of multiple causes. 

The Committee entrusted a Sub-Committee, consisting of the Chairman, Vice-Chairman, Dr. Moriyama and Mr. Marshall, with the task of preparing by correspondence a draft Outline of Rules for Selecting the Underlying Cause of Death. 

(13) Studied recommendations as to problems of health and vital statistics either put forward by Governments in response to the circulated Classification 10 or referred to the Committee by the Interim Commission: 
(a) considered the request made by certain Governments for international co-ordination of definitions of stillbirth and immaturity and for uniform methods in the residence allocation of vital data; 11 
(The Committee agreed on the desirability of international co-operation on these and similar problems.) 
(b) discussed the recommendation on cancer research and registration. 12 
(The Committee felt that this problem could not, in the time available and without the co-operation of cancer experts receive the full consideration it deserved.) 

The Committee concluded its deliberations on the above-mentioned items with the conviction that there should be a permanent committee available to deal on an international level with the statistical aspects of cancer and of any other problem of public health importance.

1 As indicated in document WHO.IC/MS/2o-WHO.IC/MS/Index/2 (VII, item (3)).
2 Document WHO.IC/MS/9.
3 Document WHO.IC/MS/8.
4 Given in document WHO.IC/MS/12.
5 Document WHO.IC/MS/12, Appendix D.
6 Ibid., page 7.
7 Off. Rec. WHO, No. 5, pages 77-78.
The Committee suggested that, pending permanent provision to this effect, the Executive Secretary request the health and statistical authorities of Denmark, England and Wales, France and Norway and any other country which had signified interest in the problem of cancer registers and statistics:

(a) to undertake preliminary investigations along the lines indicated by the Conference on Cancer Statistics held in Copenhagen in September 1946, and

(b) to make available to the Expert Committee the results of their work for study and consideration;

considered, in fulfilling item (d) of the terms of reference, further steps in the international clearance of the International Statistical Classification of Diseases, Injuries and Causes of Death.

The Committee was convinced that an international conference such as the one alluded to in the International Agreement of 7 October 1938 provided a useful means for international collaboration in the field of health and vital statistics. Such a conference would contribute to the widespread adoption of International Lists of Diseases and Causes of Death and, generally, to improvement in the international comparability in health and vital statistics.

The Committee felt even more the desirability of bringing together at an international conference representatives of general statistical offices and health administrations, in view of the fact that the International Agreement signed in New York on 22 July 1946 entrusted the international responsibility and leadership in this field to the World Health Organization alone, instead of to a joint body composed of representatives from sanitary and statistical institutions, as in previous revisions.

The Expert Committee agreed that the Conference be convened in the spring of 1948, in order to ensure that manuals incorporating the new lists and procedures would be in the hands of vital registrars in time for their use in coding deaths as from 1 January 1949.

Further, the Committee was of the opinion that the Sixth Revision Conference should not only consider the proposed new lists as to their adoption but should devote special attention to other subjects bearing directly on the international comparability of health and vital statistics which have been largely neglected in previous conferences.

In view of the new purpose of the proposed “Detailed List of Categories” (three-digit classification) to serve as the basis for both mortality and morbidity statistics, the Committee concluded that provision should be made for the presentation of its viewpoint to the Conference and that the task of incorporating and editing the changes should be left to the Expert Committee, which should hold a third session immediately after the Revision Conference.

7. Documents resulting from the Session.

The Expert Committee submitted to the Interim Commission the results of the second session in the following documents:

1. Adopted Amendments to the List of Categories (WHO.IC/MS/22);
2. Suggested Uses of Detailed and Shorter Lists of Categories (WHO.IC/MS/23);
3. Intermediate List of 150 Selected Categories for Tabulation of Diseases and Causes of Death (WHO.IC/MS/24);
4. Abbreviated List of 50 Selected Categories for Tabulation of Causes of Death (WHO.IC/MS/25);
5. Selected List for Tabulation of Morbidity Statistics for Social Security Purposes (WHO.IC/MS/26);
6. Preparation of a Final Alphabetical Index (WHO.IC/MS/29);
7. Suggested Form of Medical Certificate of Cause of Death for International Adoption (WHO.IC/MS/28);
8. Suggested Form of Multiple Cause Tabulation Around the Census Year (WHO.IC/MS/29);
9. International Statistical Classification of Diseases, Injuries and Causes of Death; Introduction and List of Categories (Amended) (WHO.IC/MS/31/Rev.1);
10. International Statistical Classification of Diseases, Injuries and Causes of Death; Tabular List of Inclusions (Amended) (WHO.IC/MS/37/Rev.1);
11. Report on the Second Session (WHO.IC/MS/20);
12. Summary of Discussions (WHO.IC/MS/31);

8. Recommendations.

As a result of its deliberations, the Expert Committee proposes to the Interim Commission and its Secretariat a series of recommendations grouped under three broad headings:


A. International Revision Conference.

1. that arrangements be made for convening an International Conference for the Sixth Decennial Revision of the International Lists of Diseases and Causes of Death, said Conference to be held not later than the end of April 1948;
2. that the International Statistical Classification of Diseases, Injuries and Causes of Death,2 as amended during the second session of the Expert Committee, be placed on the agenda of the Revision Conference as the Committee’s proposal for the Sixth Revision;
4. Documents WHO.IC/MS/1 and 7.
(3) that the agenda of the Revision Conference include consideration of the following items, in addition to the review and adoption of the proposal for the Sixth Revision:

(a) Medical certificate of cause of death;
(b) Joint-cause problem;
(c) Structure and uses of Intermediate and Abbreviated Lists;
(d) Uniform definitions of stillbirth and immaturity;
(e) Size of age-groups for tabulation of vital data;
(f) Methods for standardization of rates;
(g) Residence allocation of vital data;
(h) Technical machinery for future revision of the International Classification of Diseases, Injuries and Causes of Death;

(4) that the viewpoint of the Expert Committee be presented to the Conference by its Chairman, Vice-Chairman and Rapporteur;

(5) that a third session of the Expert Committee be held immediately after the Revision Conference in order to incorporate and edit the changes in the Lists as approved by the Revision Conference;

(6) that the International Statistical Classification of Diseases, Injuries and Causes of Death, as adopted for the Sixth Revision by the Revision Conference, be published in two parts, consisting of:

Part I. — 1. Introduction and Detailed List of Three-digit Categories.
2. Tabular List of Inclusions under the Three- and Four-digit Categories, together with explanatory notes.
3. Appendices containing selected lists for Tabulations of Mortality and Morbidity Data and Rules for Joint Cause Selection.

Part II. — Alphabetical Index.

(7) that the Executive Secretary draft “International Regulations” under which the World Health Organization may put into practice the recommendations of the Expert Committee and the International Revision Conference.

B. Permanent Expert Committee on Health and Vital Statistics.

(8) that the Interim Commission propose to the World Health Assembly the establishment within the WHO of a permanent Expert Committee on Health and Vital Statistics;

(9) that the scope of work of this Committee be:

(a) to provide technical advice to Governments, health and other administrations interested in the practical application and possible developments of the International Lists of Diseases and Causes of Death;

(b) to make interim adjustment and prepare for future revision of such lists;

(c) to stimulate, co-ordinate and direct studies required for the improvement of the international comparability of health and vital statistics;

(d) to act as the consulting body to the WHO and its various technical committees and Secretariat on statistical methods which may facilitate their work and better the results;

(10) that the members of the proposed committee of experts and advisers be so selected as to include experience and specialized knowledge in the following fields:

(a) scientific statistical methods (including sampling) applicable to medical research and public-health work;

(b) medical nomenclature and statistics;

(c) vital registration and other statistical administrations;

(11) that the proposed committee be in a position to recommend the formation of sub-committees through the adjunction of specialized experts, to deal with special subjects such as the definition of stillbirths, hospital statistics and cancer registration.

C. Other Specific Recommendations.

(12) That the amended Introduction and List of Categories¹ and the amended Tabular List of Inclusions* be republished before the Revision Conference.

(13) that the amended List of Categories be circulated to Governments prior to the International Revision Conference, and that the amended Tabular List of Inclusions be distributed for information at the Conference itself;

(14) that the work of the Index Sub-Committee continue according to a time schedule which will make available a complete Index by 31 December 1948;

(15) that financial assistance be given to the Sub-Committee on Latin Equivalents for securing expert advice and covering secretarial expenses;

(16) The Expert Committee further proposes the preparation of the French and Spanish versions of the final complete document, with the recommendations that the help of Vital Statistics Offices of the South American countries be enlisted through the Pan American Sanitary Bureau and the Inter-American Statistical Institute for the Spanish version and that co-operation be established with the Institut National d’Hygiène of France for the preparation of the French version.

¹ Document WHO.IC/MS/1/Rev. 1.
* Document WHO.IC/MS/77/Rev. 1.
IV. EXPERT COMMITTEE ON QUARANTINE

REPORT ON THE FIRST SESSION

Held 13-16 October 1947, Palais des Nations, Geneva

(presented to the Interim Commission at its fifth session).1

The Expert Committee on Quarantine met at Geneva from 13 to 16 October 1947. The session was attended by:

Chairman: Dr. P. G. Stock, Medical Adviser, Ministry of Health, London, United Kingdom.

Members:

Dr. Dujarric de la Rivière, Sous-Directeur de l’Institut Pasteur, Paris, France;
Dr. G. L. Dunnahoo, Medical Director, Chief, Foreign Quarantine Division of the United States Public Health Service, Washington, D.C., United States of America;
Dr. G. D. Hemmes, Inspector of Public Health, Utrecht, Netherlands;
Dr. Mohammed Nazif Bey, Under-Secretary of State for Quarantine, Ministry of Public Health, Cairo, Egypt;
Dr. W. W. Yung,2 Director, Department of Epidemic Prevention, National Health Administration, Nanking, China.

Observer:

Dr. M. Gaud, Président de la Commission des Finances et du Transfert, Office International d’Hygiène Publique, Paris, France.

Secretariat:

Dr. Y. Biraud, Director of Epidemiology and Public Health Statistics;
Dr. G. Stuart, Chief of the Sanitary Conventions and Quarantine Service, Secretary of the Committee.

Dr. C. Mani (New Delhi), Professor G. H. de Paula Souza (São Paulo), the USSR member and the observer from the International Civil Aviation Organization were unable to attend.

Dr. Biraud, on behalf of the Executive Secretary, welcomed the members and explained that the cholera epidemic in Egypt, in its international aspects, had necessitated the advancement of the Committee’s first meeting from 24 November to October.

The Committee, on the proposal of Dr. Dujarric de la Rivière, seconded by Dr. Nazif Bey, elected Dr. Stock as Chairman.

The Committee adopted the agenda prepared by the Secretariat,3 adding as a further item “the disinfection of aircraft.”

1. Cholera Epidemic in Egypt.

The Committee heard from Dr. Nazif Bey a comprehensive statement on the origin, development and present state of the cholera epidemic, which, making its first appearance on 22 September 1947 in El Qurein village, Sharkiya Province, had, by 11 October, extended to several provinces in the Nile Delta, more particularly to Dakahlia and Kaliubiya.4

Dr. Nazif Bey detailed the measures taken to prevent the spread of the disease throughout Egypt and to other countries.

The Committee was impressed by the extent and thoroughness of the action taken by the Egyptian public-health authorities.

With regard to the Mecca Pilgrimage now taking place, Dr. Nazif Bey informed the Committee that 7,000 Egyptian pilgrims had already left Egypt by ship before the outbreak, but that 15,000 others had been prevented from sailing. Foreign pilgrims were allowed to proceed by ship through the Suez Canal in quarantine, medical inspection being carried out at Port Said and Suez. Foreign pilgrims arriving in Egypt in transit by air were allowed to proceed after the sixth day following anticholera vaccination.

Dr. Nazif Bey invited opinion on the source of the outbreak and stressed the need for a hundred ambulances to transport patients and suspected cases to isolation hospitals. He sought the advice of the Committee on measures against the epidemic in general and on dosage of anticholera vaccine in particular. There were apparently considerable differences in the concentration of the vaccines received by Egypt from the various countries.

While the Committee considered that for practical purposes, and in view of the urgency, indications given by the producing institutes as regards dosage of the vaccines should be followed, it recommended that the question of the standardization of anticholera vaccines be referred to the Expert Committee on Biological Standardization of the WHO. It further suggested that the Egyptian health authorities should test the antigenic efficacy of the various vaccines received.

Among other points considered by the Committee as requiring scientific elucidation were the length of the cholera vibrio’s viability:

(a) on flies; and the latter’s potentialities as vectors, particularly when carried by aircraft.

(b) in sewage, whether crude or during treatment on sewage-farms, due regard being paid to the presence or absence of the cholera bacteriophage as well as the vibrio.

The Committee decided to bring to the attention of Governments, of the League of Red Cross

2 Attended as from 15 October.
3 Document WHO.IC/Q/7, unpublished working document.
4 Document WHO.IC/Q/12, unpublished working document.
Societies and the general public, the urgent need of Egypt for ambulances.

The Committee considered the statement prepared by the Secretariat on the quarantine measures imposed by various countries on travellers from Egypt, and noted that in many cases such measures greatly exceeded the provisions of existing international sanitary conventions. The Committee was, however, unanimously of the opinion that these provisions—Articles 29 to 34 of the 1926 and 1944 Maritime Sanitary Conventions and Articles 30 to 33 of the 1933 and 1944 Conventions for Aerial Navigation—were in every way adequate.

The Committee emphasized the fact that Article 15 of the 1926 and 1944 Maritime Conventions could not be construed as empowering countries to impose quarantine measures more rigorous than those laid down in the previously mentioned articles dealing specifically with cholera control:

(i) surveillance for travellers adequately protected by vaccination;
(ii) surveillance and medical examination for those unvaccinated; medical examination in revealing suspected cases enables health authorities to submit them to any supplementary investigation necessary (including bacteriological examination of the stools) and to observation.

The Committee agreed that the fears which inspired excessive quarantine measures largely arose from insufficient knowledge of the true epidemic situation, and that one of the best methods of allaying such fears was for infected countries promptly to provide information to the WHO—the international body responsible for the dissemination of epidemiological intelligence to national health authorities.

2. Disinfection of Aircraft.

The Committee, after an exchange of views on the practical difficulties of disinfecting aircraft, decided to ask the Secretariat to obtain technical information on the subject.

Pending an international agreement on standard methods of disinfecting aircraft, the Committee advised that as a routine:

(i) Water-tanks should be periodically cleaned out and disinfected.
(ii) Aircraft should carry disinfecting tablets (e.g., halazone) for the treatment of any water taken on at an infected port.

The Committee recommended that in the event of a true or suspected case of cholera on board, the following measures should be taken, in addition to those specified in the International Sanitary Conventions:

(a) Steam or other appropriate sterilization of movable furnishings;
(b) Incineration or sterilization of excreta and of vomitus and its receptacles; sterilization of excreta receptacles by means of a strong disinfecting solution;
(c) Thorough disinfection of toilets and washrooms with a strong disinfecting solution such as 4% cresol, and
(d) Swabbing with a strong disinfecting solution all parts of the aircraft's interior which might have been contaminated;
(e) Sterilization or incineration of all unsealed foodstuffs;
(f) Disinfection of all water;
(g) Sterilization of all galley (kitchen) equipment, crockery, etc.

The above measures of disinfection are additional to the routine disinsectization of aircraft coming from cholera-infected areas. It was decided that the subject of disinfection of aircraft should remain on the Committee's agenda.

3. International Certificates of Inoculation and Vaccination.

The Committee considered the protest by the Government of India in regard to the demand made by the health authorities of Hongkong, Singapore and the Malayan Union, that all smallpox vaccination certificates should be countersigned by a medical officer in government or municipal service.

The Committee could but observe that Article 42 of the 1926 and 1944 Maritime Conventions leave to the health authorities of the country of arrival the decision as to whether a traveller has been adequately vaccinated or not; it is therefore in the interest of the traveller to present as trustworthy a certificate as possible.

The Committee recommended that health authorities accept as valid, and consequently exempting the bearer from further revaccination and quarantine restrictions, the form of "International Certificate" when completed or authenticated by a medical officer in government or municipal service or in a government-approved institution.

The Committee recommended that certificates not so authenticated are not to be considered invalid but may be accepted, under the terms of Article 42 of the 1926 and 1944 International Sanitary Conventions, by the health authorities of the port of arrival.

The Committee further recommended that the forms of international certificates and the question of their endorsement should be referred to the Expert Committee on International Epidemic Control and that the question of simplifying the various forms of international certificates should be considered during the revision of the Sanitary Conventions.

The Committee agreed that no photograph or thumbmark should be required on the certificates when the holder was in possession of a passport or identity card.

The Committee considered it permissible for the forms of certificates to be drawn up in both the language of the issuing country and one of the official languages of the 1944 Conventions (English and French).

Taking into account the confusion arising from the use of the terms "reaction of immunity" and "no reaction" in the international form of smallpox vaccination certificate, the Committee considered a proposal made by Dr. Stock for an amended

form of certificate designed to overcome this confusion. The proposed form consists of three parts certifying respectively: I. Vaccination; II. Inspection of the results; and III. Revaccination and its results in the event of the first vaccination's proving unsuccessful.

This text of the proposed triple certificate was adopted, with the following amendments:

(i) "If any" to be inserted after the words "Official position" of the certifying person, in the three parts of the certificate.

(ii) "If possible" to be inserted before "Batch No. of vaccine", in parts I and III of the certificate.

(iii) "and in my opinion he is immune to vaccination" to be deleted from part III.

With one member dissenting, the Committee decided to submit the said certificate as amended to the Interim Commission, with a view to the latter recommending to Governments its recognition and adoption, pending the revision of the International Sanitary Conventions in force.

The dissenting member was of the opinion that, should there be no reaction after two vaccinations, any certificate to that effect should not be incorporated in the "International Certificate" but could be issued as a separate document.

The Committee decided against the issue of international interim certificates of inoculation or vaccination to persons travelling on urgent business.

The Committee endorsed the action taken by the Secretariat in printing fresh editions of "International Certificates" in response to requests received from public-health administrations.

4. Inoculation against Plague and Typhus.

The Committee endorsed the action taken by the Interim Commission on the protest by the Government of India against the restrictions imposed by the Government of Iraq against passengers from India on account of plague.

The Committee stressed the fact that inoculation against plague or typhus cannot be required under the International Sanitary Conventions in force. The dissenting member was of the opinion that, should there be no reaction after two vaccinations, any certificate to that effect should not be incorporated in the "International Certificate" but could be issued as a separate document.

The Committee decided against the issue of international interim certificates of inoculation or vaccination to persons travelling on urgent business.

The Committee endorsed the action taken by the Secretariat in printing fresh editions of "International Certificates" in response to requests received from public-health administrations.


The Committee considered the proposal for a standard method put forward by Dr. Mani, the report of the ad hoc sub-committee of the British West Indian Quarantine Conference and other documents.

The Committee accepted the recommendations of that Conference as a basis for further study, but felt that more technical information was necessary before laying down definite standards for international use. It therefore requested the Secretariat to obtain from Governments and other agencies as full information as possible, and decided to keep the subject on its agenda.

The Committee also emphasized the importance of keeping aerodromes and their surroundings free from mosquitos and other insect vectors of disease.

6. Authorities for the Issue of Valid International Certificates of Inoculation against Yellow Fever.

The Committee recommended that the Secretariat should obtain from Governments complete information on authorities empowered to issue yellow-fever certificates and in due course should publish such information.

7. Yellow Fever.

(a) Laboratories approved for testing the Activity of Yellow-fever Vaccines.

The Committee approved acceptance by the Interim Commission of the laboratories already approved by UNRRA for testing the activity of yellow-fever vaccines:

- Bogotá (Colombia) — Yellow Fever Laboratory, National Yellow Fever Service.
- Dakar (Senegal) — Pasteur Institute.
- Entebbe (Uganda) — Yellow Fever Institute.
- Hamilton (Montana, United States of America) — Rocky Mountain Laboratory (United States Public Health Service).
- Johannesburg (Union of South Africa) — South African Institute for Medical Research.
- Lagos (Nigeria) — Yellow Fever Research Institute.
- New York (United States of America) — Laboratories of the International Health Division, Rockefeller Foundation.
- Paris (France) — Pasteur Institute.
- Rio de Janeiro (Brazil) — Yellow Fever Research Institute.

(b) Laboratories approved for the Preparation of Yellow-fever Vaccine.

With regard to vaccines, the Committee recommended that those produced by the institutes already approved by UNRRA and listed below should continue to be so recognized ad interim under the same conditions, but that the measures already decided upon by the Interim Commission for a systematic international testing of yellow-fever vaccines should be put into force as soon as possible, so as to ensure maintenance of the activity.

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2 The amended text is reproduced as Appendix I.
of all vaccines in international use, to permit full approval to be granted to those institutes having at present only interim approval and to provide for other institutes being added to the list of approved vaccine-producing laboratories.

International Health Division of the Rockefeller Foundation.¹
National Institute of Health of the United States Public Health Service.¹
Pasteur Institute, Dakar.²
South-African Institute of Medical Research, Johannesburg.¹
Wellcome Research Institution, London.³
Yellow Fever Laboratory, Brazilian National Yellow Fever Service, Rio de Janeiro.⁵
Yellow Fever Laboratory, Colombian National Yellow Fever Service, Bogotá.⁶

(c) Development of Immunity after Inoculation against Yellow Fever.

In considering the period required for the development of immunity following prophylactic inoculations, the Committee noted that, while the International Sanitary Conventions regard ten days as sufficient for the development of effective immunity after yellow-fever inoculation, some countries base their quarantine requirements on a period of fifteen days. The Committee decided to request the Interim Commission to entrust the Yellow-fever Panel of the WHO with the task of making the studies necessary to determine objectively the time required for obtaining effective immunity.

(d) Inoculation of Infants against Yellow Fever.

On the evidence furnished by the experts of the WHO Yellow-fever Panel, the Committee agreed that infants and young children could be safely inoculated against yellow fever provided 17 D vaccine were used.

(e) Delimitation of Yellow-fever Endemic Areas.

After considerable discussion, the Committee decided to postpone any decision until the next session, and in the meantime asked the Secretariat to obtain further information.


(a) Deratization Exemption Certificates.

On the definition of "home ports", the Committee reaffirmed the decision taken by the Permanent Committee of the Office International d’Hygiène Publique at its April session 1932, which reads as follows:

"The term 'home port' should not be restricted to mean the 'port of registration of the ship' but should be applied equally to the port in which the ship is in fact at home—i.e., where its crew is paid off at the termination of the voyage (port terminus), where the necessary repairs are carried out, where its crew is usually enrolled prior to sailing—such port corresponding to the French meaning of 'port d’armement' (fitting port).

"Thus, a ship may not indefinitely have the same 'home port' (port d’attache), particularly if engaged on sea routes different from those on which it normally plies; it may claim the benefit of the extension provided for in Article 28 of the 1926 International Sanitary Convention, so as to be able to make the port which temporarily fulfils the conditions stated above."³

The Committee requested the Executive Secretary to bring this decision to the attention of any Government concerned.

(b) The Committee reaffirms the previous decisions of the Permanent Committee of the Office International d’Hygiène Publique in regard to the undesirability of issuing deratization exemption certificates to ships with loaded holds.

(c) The Committee noted the memorandum prepared by Dr. M. T. Morgan on estimating the rat population on ships.³


The Committee reviewed the terms of Article 49 of the 1926/1944 Conventions and unanimously agreed that, as an effective epidemiological service had now been established by the WHO, bills of health and consular visas should be abolished.

The Committee accordingly requested the Secretariat to bring this decision to the notice of Governments and do everything in its power to accelerate the abolition of these obsolete documents.


While the Committee felt that the issue of such a Directory was not pressing, it requested the Secretariat to prepare, when opportunity permitted, forms of questionnaires on sea- and air-ports for consideration by the Committee at a subsequent session.

11. Inoculation of Infants against Plague and Typhus.

The Committee felt that the value, for quarantine purposes, of inoculation against plague and typhus had not been established, and in any case could not advocate as a general measure such inoculation of infants under one year of age.

The Committee agreed that the Secretariat should in due course obtain the views of members of the expert panels on pestilential diseases about to be set up for the revision of existing International Sanitary Conventions.

12. "Polyglot Medical Questionnaire".

The Committee agreed that it could not recommend the establishment and use of a Polyglot (Multilingual) Medical Questionnaire for quarantine purposes.

¹ Fully approved.
² Approved, provided vaccine is administered by the scarification method of the Dakar Pasteur Institute.
³ Approved, for the time being, for quarantine purposes.
⁴ Translated from the Procès-verbaux de l’Office International d’Hygiène Publique, April-May 1932, page 123.
⁵ See Bulletin of the WHO, 1, pages 63-67.
13. Air Disinfection of Passenger Accommodation at International Airports.

The Committee felt that it was not in a position to recommend the installation of ultra-violet light or other methods of air sterilization for passenger accommodation at international airports. The Committee, however, emphasized the advantages of adequate ventilation and a high standard of environmental sanitation.

14. Other Items.

The Committee took note of a memorandum submitted by Dr. Hemmes on post-vaccinal encephalitis in the Netherlands \(^1\) and of a time schedule presented by Dr. Dujarric de la Rivière, of inoculations and vaccinations applicable when multiple immunization is required.\(^2\)

Appendix I.

EXTRACT FROM DOCUMENT WHO.IC/Q/I1, AS AMENDED BY THE EXPERT COMMITTEE ON QUARANTINE

INTERNATIONAL CERTIFICATE OF VACCINATION AGAINST SMALLPOX

I. I CERTIFY THAT (Age .. Sex .. ) whose signature appears below, has this day been vaccinated by me against smallpox. (Origin and if possible Batch No. of Vaccine ..)

   Signature of Vaccinator
   Official Stamp
   Official Position, if any
   Place .. Date ..

Signature of Person vaccinated
Home Address ..

IMPORTANT: A person vaccinated for the first time should be warned to report to a doctor between the 7th and 14th day, in order that the result may be inspected and recorded on certificate II. In the case of revaccination, an accurate assessment of the result is usually possible by inspection on the 3rd and again on the 6th or 7th day.

II. I CERTIFY THAT I inspected the above vaccination on date(s) .. and in my opinion the vaccination was [state whether (a) successful or (b) unsuccessful] ..

   Signature of Doctor
   Official Stamp
   Official Position, if any
   Place .. Date ..

Signature of Person vaccinated ..

NOTE: The term "successful vaccination" should be used only when vaccinial vesicles develop. In the case of unsuccessful vaccination, the operation must be repeated. If the result is then successful, certificates I and II should be issued. If the result is again unsuccessful, certificate III may be issued.

III. I CERTIFY THAT [date] .. I revaccinated .. (Age .. Sex .. ) whose signature appears below with .. vaccine (Origin and, if possible, Batch No. of Vaccine ..) believed to be potent, but vaccinial lesions did not result.

   Signature of Doctor
   Official Stamp
   Official Position, if any
   Place .. Date ..

Signature of Person vaccinated ..

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\(^1\) Document WHO.IC/Q/16, Add. 3, unpublished working document.
\(^2\) Document WHO.IC/Q/14, unpublished working document.
V. EXPERT SUB-COMMITTEE FOR THE REVISION OF THE PILGRIMAGE CLAUSES
OF THE INTERNATIONAL SANITARY CONVENTIONS

(a) REPORT ON THE FIRST SESSION

Held 16-26 April 1947, Alexandria, Egypt.

(presented to the Interim Commission at its fourth session).

The Expert Sub-Committee appointed to study the Revision of the Mecca Pilgrimage Clauses in the International Sanitary Conventions of 1926/38 met in Alexandria on 16 April 1947.

The following took part in the work of the Sub-Committee:

**Experts:**
- Dr. M. Gaud, Directeur de l’Office International d’Hygiène Publique, Paris, France;
- Dr. C. Mani, Deputy Director-General of Health Services, Government of India, New Delhi, India;
- Dr. M. T. Morgan, Medical Officer of Health, Port of London, United Kingdom;
- Professor J. J. Van Loghem, Professor of Hygiene, University of Amsterdam, Netherlands;
- Dr. Wasfy Omar, Director of the Pan Arab Regional Health Bureau, Alexandria, Egypt;
- Dr. Yehia Nasri, formerly Director-General of Health, Mecca, Saudi Arabia.

**Secretary:**
- Dr. G. Stuart
- M. G. de Brancion

On the proposal of Dr. Mani, seconded by Drs. Gaud and Yehia Naşı, Dr. M. T. Morgan was unanimously elected Chairman of the Sub-Committee. Dr. Gaud was nominated Rapporteur.

**Inter alia,** the Committee on Epidemiology and Quarantine had decided that the Expert Sub-Committee had the authority to call in advisers, who, however, would neither be members of the Sub-Committee nor have a right to vote.

The Sub-Committee therefore requested the aid of advisers whose qualifications and experience would, in the opinion of its Members, serve to elucidate certain special questions.

These advisers, unanimously appointed, were consequently individually invited by the Chairman to attend those meetings of the Sub-Committee in which their advice would prove of particular value.

The Sub-Committee met twice daily at Alexandria between 16 and 20 April. On 21 and 22 April, it examined the sanitary installations and equipment of the Port of Jeddah. Its journey to and from Jeddah was made by air. It resumed its deliberations at Alexandria on 23 April and continued its discussions until 26 April.

The Committee on Epidemiology and Quarantine of the Interim Commission, in its report dated 26 April 1947, had enjoined the Expert Sub-Committee to undertake a study of the following questions:

1. **Prophylactic Measures.**

"The need for taking, in respect of all pilgrims leaving their country of origin, adequate measures to ensure individual and collective protection in the country of origin, transit countries and countries of destination, against the introduction and dissemination of disease (inoculations and vaccinations), disinfection, disinsentization, biological examinations, etc.), and the need for official certification that such measures have been adequately carried out, both in the country of origin and in the country of destination."

The Sub-Committee, desirous of protecting pilgrims against the pestilential diseases mentioned in the International Sanitary Conventions, recognized the need for subjecting pilgrims, prior to their departure from their country of origin, to a number of prophylactic measures. In particular, it gave its attention to vaccinations, the bacteriological examination of stools, the duration of validity of immunization certificates; and arrived at the following conclusions:

**A. Vaccination.**

(a) **Smallpox.** — Every pilgrim should carry a valid certificate of vaccination against smallpox, the certificate to be in the form prescribed in the International Sanitary Conventions of 1944.

(b) **Cholera.** — Every pilgrim should carry a valid certificate of inoculation against cholera, the certificate to be in the form prescribed in the International Sanitary Conventions of 1944.

(c) **Yellow Fever.** — The Expert Sub-Committee recommended that, until further definite information is obtained from the Interim Commission’s Yellow-Fever Panel as to the biological conditions in the Hedjaz vis-à-vis the transmission of yellow fever, all pilgrims coming from zones recognized...
INTERNATIONALLY AS YELLOW-FEVER ZONES SHOULD BE INOCULATED AGAINST YELLOW FEVER PRIOR TO THEIR DEPARTURE FROM SUCH ZONES, WHETHER BY LAND, SEA OR AIR.

(d) Typhus Fever. — After discussion of every aspect of immunization against typhus fever by inoculation, the Sub-Committee came to the conclusion that such vaccination is more efficacious as a measure of individual, rather than of collective, protection. Furthermore, in view of the need for three inoculations and of the large quantities of vaccine that would be required if anti-typhus inoculation were to be made internationally compulsory, the alternative method of disinsection by the use of an adequate insecticide seemed preferable from every point of view. The Sub-Committee, therefore, recommended that disinsection should be obligatory for all pilgrims coming from an epidemic typhus area.

(e) Plague: The Sub-Committee was unanimously of the opinion that obligatory anti-plague vaccination was unnecessary.

B. Bacteriological Examination of Stools.

There has been no evidence of cholera in the Hedjaz for many years. Obligatory inoculation against cholera and a period of medical supervision both before departure and during the journey have been provided for in the present Convention. It seemed unnecessary, therefore, to add to these apparently sound measures a measure of doubtful value—i.e., the bacteriological examination of stools—until the findings could be more precisely evaluated.

Further, the mass bacteriological examination of the stools of all pilgrims at their place of departure necessitates a complicated organization, a number of highly trained personnel; and the results are not likely to be sufficiently decisive to permit of practical application in the short period of time available.

C. Methods of Vaccination and Duration of Validity of Immunization Certificates.

While the Expert Sub-Committee took the view that there were numerous points connected with immunization requiring further consideration and study—for instance, the method of vaccination against smallpox and the interpretation of the results and also the choice of antigen to produce optimum immunity in the case of cholera—these are matters which should be dealt with by appropriate technical committees of the Interim Commission—e.g., the Expert Committee on Biological Standardization.

Further study on the duration of validity of the certificates issued following immunization was also required, but the Sub-Committee did not feel called upon to express an opinion which might be prejudicial to the strict application of the present Convention. On the contrary, the Sub-Committee felt it important that the certificates issued to pilgrims should not differ in their validity from those laid down in the 1944 Conventions, and recommended that in the revised Pilgrimage Clauses the certificates referred to should take the same form as those in force for the time being for all classes of travellers.

D. Pilgrims' Sanitary Passport.

In accordance with the terms of Article 2 of the present draft Convention, pilgrims are required to be immunized, before departure, against smallpox and cholera and, in certain circumstances against yellow fever, and must carry with them valid certificates. These certificates must be of the internationally recognized form, in effect, the certificates annexed to the International Sanitary Conventions of 1944.

The Sub-Committee recommended that these certificates should be incorporated in the pilgrim's passport or, alternatively, should be printed and bound in the form of a booklet.

2. The Hedjaz and Transit Ports.

"To determine whether the sanitary installations and equipment of the Hedjaz and transit ports are capable of carrying out adequate measures and, if necessary, to make recommendations."

The Sub-Committee visited Jeddah on 21 and 22 April to inspect the sanitary services of the town and port and to examine the work undertaken in connexion with the provision of an adequate piped water-supply to the port. The findings of the Sub-Committee are recorded in Appendix 3. Dr. Yehia Nasri also submitted, in a Report—Appendix 4—an account of the organization and duties of the medical and quarantine services of the Kingdom of Saudi Arabia in general and of the port of Jeddah in particular.

The views of the Sub-Committee may be summarized as follows:

1. The Sub-Committee, having visited the port of Jeddah and observed the several activities of the Quarantine Service there, appreciated the efforts made to bring about improvements, but was of the opinion that the Service was not yet sufficiently equipped in personnel, in hospital and isolation accommodation and in sanitary facilities generally.

2. In the circumstances, the Sub-Committee was unable to regard the present services in the port of Jeddah as sufficient to warrant the cessation of activities at El Tor and Kamaran.

3. Even so, the Sub-Committee felt able to recommend that the terms of the Sanitary Conventions now in force should be modified, to the fullest extent possible, in order to relax the present burden of sanitary measures imposed on pilgrims, but without diminishing essential security.

4. The Sub-Committee did not consider that the draft which it now proposed should be regarded as final. As soon as a new quarantine service had been set up, the present measures proposed should be reviewed and the transfer to Jeddah of the

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2 Although this resolution had been unanimously adopted, Professor Van Loghem pointed out that, under special conditions, the examination of stools could be of value, and drew attention also to the importance of studying epidemic choleraiform enteritis (Appendix 1). Moreover, Dr. Wiafy Omar agreed with Professor Van Loghem's point of view (Appendix 2).
measures of control at present practised by the existing quarantine stations envisaged.

5. The Sub-Committee hoped that the Saudi Arabian Government would put plans of sanitary reorganization into operation as soon as possible and that, to hasten their development, it would take advantage of every technical assistance tending to that end.

3. Sanitary Authority.

"By what sanitary authority is the pilgrimage to be declared 'clean' or 'infected'?"

The International Sanitary Conventions dealing with the Pilgrimage—the Conventions of 1912 and those of 1926-1938—have never raised the question of the pilgrimage being "clean" or "infected", nor of the sanitary authority responsible for making such declaration. They have concerned themselves with the measures to be taken, on the return of pilgrims, in connexion with the presence in the Hedjaz or in the ports of embarkation, of plague or cholera.

On the other hand, in the section dealing with sanitary information concerning the pilgrimage, the 1926-1938 Convention provided that the Governments of Egypt and of Saudi Arabia, as well as of all other countries interested in the pilgrimage, should transmit to the Office International d'Hygiène Publique, Paris, all notifications and sanitary information coming to their knowledge during the pilgrimage season relative to the sanitary situation in the regions traversed by the pilgrimage.

It had not appeared opportune to the Sub-Committee to alter the existing Convention by introducing into the new text an official declaration on the state of the pilgrimage, whether "clean" or "infected". On the contrary, the Sub-Committee was of the opinion that, as all Governments concerned should be speedily and continuously informed of the epidemiological situation in the Hedjaz before, during and after the pilgrimage, it was desirable to make precise arrangements for the declaration and notification of Convention diseases occurring during those periods so as to enable the said Governments to take all necessary measures.

In the draft Convention, this sanitary information has been the subject of a special article—Article 58—in which the responsibilities of the Saudi Arabian Government in this respect have been defined.


"Proposals relating to the Red Sea Sanitary Stations referred to in the Conventions now in force."

Inquiries made at the time of its visit to Jeddah having demonstrated that the installations and sanitary equipment there did not allow of the application of adequate measures of control, the Sub-Committee unanimously decided that the sanitary stations on the Red Sea must continue to play the rôle assigned to them by the Convention now in force.

Nevertheless, the Sub-Committee was of the opinion that if no cholera, plague or yellow fever, or smallpox or typhus in epidemic form, had been notified in the Hedjaz during the pilgrimage period, pilgrim ships returning north would not be required to undergo at El Tor the measures at present prescribed. They would merely be visited at Suez, and, if any sanitary measures were considered necessary, the ships would proceed for such purpose to Moses Wells. Thereafter, if free from infection, they would be allowed to pass through the Suez Canal in quarantine, on condition that five days had elapsed since their leaving Jeddah.

A note prepared by Dr. Wasy Omar (Appendix 5) provides all information on the organization of the sanitary station at Moses Wells.

5. Measures for Land or Air Travel.

"Sanitary measures to be taken in regard to pilgrims travelling by land or air."

The Sub-Committee considered that the sanitary measures to be taken in regard to pilgrims travelling by land or air should form the subject of two new sections in the draft Convention. These are Sections II and III of the draft text prepared by the Sub-Committee.

In addition to the five points referred by the Epidemiology and Quarantine Committee for investigation by the Expert Sub-Committee, Dr. Wasy Omar requested that the note (Appendix 6) presented by Professor Khalil Bey should be discussed—a note proposing certain amendments to the Pilgrimage Clauses in the 1926-1938 Convention.

As to this request, the Sub-Committee, on the proposal of the Chairman, decided as follows:

(1) That the note of Professor Khalil Bey was not a personal note but one presented officially by the Egyptian Delegate, in the name of his Government, at the meeting of the Office International d'Hygiène Publique, held in April-May 1946;

(2) That this note, in addition to the technical measures it advocated, included certain proposals which seemed to be rather of a political character;

(3) That, in the circumstances, the Sub-Committee, composed as it was of technical experts, was only qualified to examine proposals of a technical nature. Such examination had been made during the discussions which had taken place on proposed amendments to the Conventions at present in force.

Moreover, the Sub-Committee, in agreement with Dr. Gaud's suggestion, was of the opinion that, as the note presented to the Office International d'Hygiène Publique by Dr. Khalil Bey in the name of his Government had been officially transmitted by the Office to all Governments, such Governments could take any stand they wished in respect of the questions raised.

The Committee on Epidemiology and Quarantine had recommended in its Report presented at the third session of the Interim Commission "that it should be left to the Expert Sub-Committee to suggest whether the revision should be an ad hoc agreement covering the pilgrimage or should eventually form part of the Sanitary Conventions."
This recommendation implied that the Sub-Committee had to propose a revised text of Part III of the 1926-1938 Convention, dealing with "Special Provisions regarding Pilgrimages".

However, as the 1926-1938 Convention at present in force did not modify the form of Part III of the 1912 Convention, which envisaged only transport by sea, it appeared necessary to the Sub-Committee to alter the summary of that part reserved for pilgrimages in such a way as to give a logical place to new prophylactic measures, on the one hand, and to provisions for transport by land and air, on the other.

Thereafter, the Sub-Committee examined article by article the Convention now in force, and deleted or modified such articles as did not appear to be adapted to modern conditions.

In so far as transport by sea is concerned, the Sub-Committee has refused to consider the transport of pilgrims by sailing ships because of the difficulty inherent in their medical surveillance—a difficulty amounting to practical impossibility; the Sub-Committee also has disallowed the cooking of food on board by the pilgrims themselves, by reason of the not inconsiderable risk of fire arising from such practice; the Sub-Committee has simplified and bettered the hygienic conditions of pilgrim-life on board ship.

In respect of Dr. Mani's proposal submitted to the Sub-Committee (Appendix 7) in regard to the usage and provision of bunks aboard pilgrim ships, the suggestion has been incorporated in the new text—viz., that each pilgrim should be furnished with a detachable, separate berth, preferably of metal construction. The berths could be arranged in two tiers, provided that the minimum unities of surface and of cubic space allowed to each pilgrim were observed.

Finally, having taken into account the new obligations imposed on pilgrims as regards immunizations and the security resulting therefrom, the Sub-Committee has reviewed, modified and consolidated the requisite sanitary measures to be taken for pilgrim ships in the sanitary stations of the Red Sea in respect both of outward- and homeward-bound pilgrims.

In the new text proposed, there have been added articles dealing with the compulsory immunization of pilgrims, prior to their departure from their country of origin, against smallpox, cholera and, in certain circumstances, against yellow fever, as well as special sections on the sanitary measures to be taken in connexion with transport by air and by land.

In regard to sanitary information, the Sub-Committee considered that the Saudi Arabian Government should be responsible for acquainting all interested Governments with the epidemiological state of the Hedjaz before, during and after the pilgrimage. The Sub-Committee has detailed the conditions under which such sanitary information has to be transmitted. The Saudi Arabian Government will receive, in this connexion, sanitary information and notifications furnished by the medical missions which accompany the pilgrims.

The Sub-Committee has expressed the desire that the heads of medical missions should be chosen by their Governments largely on account of their epidemiological knowledge and experience and that, in order to facilitate the carrying-out of their duties, such heads will, in so far as circumstances permit, be selected from Moslem doctors.

Thus has been prepared the draft which will be submitted to the Committee on Epidemiology and Quarantine to the Interim Commission. During its work, the Sub-Committee has been actuated by the desire to maintain logical order in its presentation of the measures prescribed, to lighten in every possible way the burden laid on pilgrims, without loss, however, of essential epidemiological security, to adapt the new legislation to meet the needs of modern transport, to bring into line the measures proposed with the development of national and international health organizations.

The Sub-Committee did not discuss the question of sanitary dues and sanctions, believing such to be beyond its technical competence.

Lastly, as to whether the revised text should be an ad hoc agreement covering the pilgrimage or should form part of existing or future Conventions, it has appeared to the Sub-Committee that the most advantageous course to follow would be to make the present text an Annex to these Conventions. Thus would be retained the largely international character of the agreement, as well as its connexion with a world sanitary code; at the same time, possibilities of further modifications arising out of later developments would be provided for.

Appendix 1.

REMARKS PRESENTED BY PROFESSOR J. J. VAN LOGHEM

1. Epidemic Choleriform Enteritis.

The question has been raised, in connexion with the pilgrimage, as to whether, in certain articles, mention should not be made of epidemic choleriform enteritis, caused by a non-cholera vibrio. This matter is worth consideration from two points of view:

(a) The El Tor vibrio, found many times since 1904 among pilgrims and once in the water of the Zam-Zam spring, is without pathogenicity; it was found in 1937 in Celebes, where it caused an epidemic of choleriform enteritis.

(b) The other point at issue concerns the diagnosis of vibrios.

Generally speaking, it is agreed that the word "cholera" indicates a pathological entity, a disease...
caused by the comma bacillus. This implies that choleraform enteritis caused by a vibrio which, according to bacteriologists, belongs to another species of vibrio is not, according to the Conventions, identical with cholera, even if it proves to be identical as a pathological and epidemiological entity. All bacteriologists, however, are not in agreement as regards the differentiation of vibrios agglutinable by cholera serum. This scientific incertitude presents a very real danger, because it tempts any Government not desirous of reporting first cases of cholera to shield itself behind bacteriological controversies.

From this angle, it would be desirable to reflect on the advisability of rejecting the sientiological conception of cholera and of applying the International Convention to all diseases which, caused by vibrios, prove pathologically and epidemiologically identical with "cholera asiatica".

2. Examination of Stools to determine the Presence of Cholera Vibrios and Other Pathogenic Bacteria of the Intestine.

Most members of our Sub-Committee are in agreement that the bacteriological examination of stools to determine the presence of the "vibrio comma" is not to be recommended. The Sub-Committee declared that "thanks to compulsory vaccination against cholera and the period of medical surveillance, no case of cholera has been found in the Hedjaz for many years. It would not seem necessary to add to these apparently adequate measures one of doubtful value viz., the bacteriological examination of stools."

For my part, I have tried to point out that it is not clear why the Hedjaz has been free from cholera for twenty-five years. Certainly, vaccination and medical observation are useful measures, but their value appears relative in the face of imperfect knowledge of the epidemiology of cholera.

From this point of view, it must be admitted that every measure which facilitates cholera research and detection should be included in the programme of the World Health Organization. It is evident that the basis of international measures against the infection by cholera of the Mecca pilgrimage does not lie in a quarantine system but in sanitary control in the countries of origin. The greater the number of preventive measures taken before departure, the fewer the risks of infection during the journey.

In this connexion will be needed sanitary or epidemiological services operating in the collecting centres for pilgrims and in the ports of embarkation. It goes without saying that these sanitary services should pay special attention to pilgrims coming from places where cases of cholera or choleraform enteritis have been notified.

I consider that the task of our Sub-Committee is not limited by the present terms of reference. It is also our duty to point out the measures leading to future improvements.

3. The Dangers of Quarantine Measures.

I propose to express in our resolutions the necessity for avoiding any quarantine measure not justified by considerations of hygiene or preventive medicine. Crowding not only facilitates the propagation of infectious diseases of a parasitic nature; it also favours the spread of communal infections, particularly by the accelerated circulation of commensal microbes, changing the quantitative equilibrium existing between them and their human host.

4. Personal and International Hygiene.

During the discussions of our Sub-Committee, we have sometimes touched on measures of personal rather than of international importance.

It is obvious that measures which increase the comfort of the pilgrim or protect him against risks on the journey do not belong to the international sphere.

Generally it must be recognized that the regulation and supervision of the conditions under which the journey is made form part of the duties of the respective Governments. For instance, there is no scientific basis for the calculation of the minimum of English square feet to be allocated to each pilgrim.

5. Anti-plague Vaccination.

The members of our Sub-Committee agree not to accept anti-plague vaccination as a compulsory measure. All the same, the danger of plague must not be forgotten. Pneumonic plague, following on bubonic plague, can become the source of an epidemic of primary pneumonic plague.

From this point of view, it may be stated that living anti-plague vaccine, studied and utilized by French and Dutch scientists, has not yet been given the attention it deserves.

Appendix 2.

NOTE PRESENTED BY DR. WASFY OMAR

Although having given his approval to the resolution unanimously adopted (see page 33), Dr. Wasfy Omar has expressed the wish that the following note concerning the question of bacteriological examination for cholera be added to the documentation:

"The question of bacteriological examination for cholera was deferred until the arrival of Professor J. J. Van Loghem, who is an accepted authority on cholera. He has given a favourable opinion as regards such an examination (Appendix 1), and I wish to associate myself with his declaration."

Appendix 3.

REPORT ON THE QUARANTINE STATION AT JEDDAH

The Quarantine Station comprises:

(1) An administrative and technical service, consisting of a Director and Assistant Director of Quarantine, together with a certain number of subordinate staff.

(2) Quarantine Offices, including a jetty for light craft, a large hall for the reception of pilgrims and one or two small rooms which are used for office administration, medical examinations, inoculations, etc. Pilgrims may not land other than at the above-
mentioned jetty, although it is doubtful whether this rule is strictly followed.

(3) Two quarantine islands situated respectively at approximately half-an-hour's and an hour's run from the jetty by motor-launch. It is understood that there is good deep-water anchorage close to these islands.

The Committee visited the more proximate island, on which the following facilities are provided:

(a) A landing-jetty for small craft;
(b) A disinfection and ablation block containing two steam disinfectors with a coal-fired boiler, not of modern design, which, it is understood, have not been used for some years.
(c) Four isolation blocks providing for approximately 300 persons. One of these blocks is intended for first-class passengers.
(d) Ancillary buildings, including medical officer's quarters, guardian's house, a kitchen and a shop.
(e) A water-supply, consisting of a condenser, with an output said to be 3 metric tons per diem.
(f) Latrine accommodation, which, save in the ablation chambers and the block for first-class passengers, consists only of wooden structures built out over the sea.

The buildings are all of sound construction and in a good state of repair.

With the exception of a few beds and mattresses, there was no evidence of any equipment, linen, crockery, medical stores, etc.

While this island station might possibly be useful in an emergency, it is not in any way suitable for routine use during the pilgrimage season, particularly on account of its distance from the port and an approach which must be difficult and even dangerous at times for the small craft usable for this type of jetty.

It was not possible to visit the second island, which, it is understood, could provide accommodation in at present uncompleted buildings for approximately 1,000 persons.

Hospital accommodation in Jeddah. There is a 54-bedded hospital in the town, which, although appa-renently of solid construction, is not modern in design and gives the impression of being very inadequately equipped.

This hospital forms no part of the port's quarantine service but caters solely for the local sick.

Water-supply. The present water-supply is of two kinds:

(a) from a number of brackish wells; and
(b) from a condensing plant (this water, being very costly, cannot be used by the poorer inhabitants).

A piped water-supply from springs situated 62 kilometres away from the town is in course of construction and is expected to be completed before the next pilgrimage.

Drainage. There is no drainage or sewerage system.

Accommodation for pilgrims. A certain number of houses in the town are registered for the accommodation of a specified number of pilgrims per house. The Sub-Committee did not visit any of these houses.

Recommendations.

(1) The Quarantine Service requires reorganization throughout.
(2) A new Quarantine Station, with isolation accommodation and ancillary services adequate to meet the needs of the pilgrimage, should be constructed.
(3) Meanwhile, the equipment and facilities on the quarantine islands should be brought up to date and kept in running order.
(4) While the piped water-supply should enable a material improvement in the general situation, it is recommended that a drainage and sewerage scheme should be immediately drawn up and carried out as soon as possible, in order to take full advantage of the water-supply.

It will be appreciated that the port of Jeddah is only one link in the chain of defence against epidemic disease; the measures of control in the interior, the frontier quarantine posts and the provision of adequate isolation arrangements all form part of a comprehensive and efficient plan of defence organization.

A note prepared by the Chief Quarantine Officer on the functioning of his service is annexed (see Appendix 4).

Appendix 4.

NOTE PRESENTED BY DR. YEHIA NASRI ON THE SANITARY MEASURES TAKEN ON THE ARRIVAL OF PILGRIMS AT JEDDAH PORT

1. On the arrival of the ship at Jeddah, and before allowing any contact with the shore, the Quarantine Officer boards the ship and meets the captain and the ship's doctor or doctors.

He examines the bills of health issued by the port of origin and particularly that issued by Kamaran Quarantine Station (when the ship comes from the south, after having called at Kamaran Station).

The captain fills in and signs the sanitary questionnaire submitted to him by the Quarantine Officer, which includes questions as to the sanitary state of the ship from the date of its departure from the port of origin to the time of its arrival at Jeddah, the number of pilgrims carried by the ship, the ports of call during the voyage, the sanitary state of these ports, and whether pilgrims were embarked or disembarked there.

The Quarantine Officer also examines all other documents which might interest the quarantine authorities, such as the fumigation certificate or the certificate of exemption from fumigation, the certificate relating to the number of pilgrims transported, their names, the names and functions of the members of the crew, the certificates of inoculation which the pilgrims and members of the crew were subjected to before embarkation. In addition to this, the ship's surgeon is given three certificates to be filled in and signed: the first dealing with the sanitary state of the ship during the voyage and the inoculations made before embarkation; the second concerning the state of the sick during the voyage, with their names, the nature of the disease, and all other useful information, (the sick are transported to Jeddah Hospital if they are in a condition requiring such a measure); the
third concerning cases of deaths which have occurred during the voyage, mentioning the names of the deceased, etc.

The Quarantine Officer then inspects the ship to ascertain the sanitary state of the pilgrims and crew, paying special attention to the drinking-water and the food of the pilgrims, the sanitary accommodation provided, so as to ensure sanitary well-being, such as hospital accommodation, isolation quarters, whether the pharmacy is provided with all the necessary requirements, the baths, showers, and latrines, the means of ventilation. The Quarantine Officer also ascertains that the ship is not carrying pilgrims in excess of the number allowed by the certificate of measurement, as well as the state of the rescue equipment (lifeboats, rafts, lifebelts) imposed by the International Sanitary Convention of 1926 for pilgrim ships. After ascertaining that the ship is free from any suspicion from the sanitary point of view, the Quarantine Officer will authorize the disembarkation of the pilgrims on the special jetty through which all pilgrims must pass with a view to undergoing a medical inspection and—as an additional precaution—a check of the inoculation certificates they carry. Free pratique is then granted to the ship.

2. It is a matter of great importance to us that pilgrims should be subjected—in their country of departure—to compulsory inoculation against small-pox, cholera and the other diseases against which inoculation is required under the terms of the International Sanitary Convention. Further, passengers or pilgrims from an area infected with an epidemic disease, such as yellow fever, cholera or typhus, are not allowed to disembark unless they have been previously inoculated against the disease prevailing in their country and a sufficient period has elapsed since that inoculation. Otherwise they will be liable to isolation, with all measures that this isolation involves, such as inoculation, disinsection, disinfection, etc., etc.

3. If the existence of positive or suspected epidemic disease is verified among the passengers or members of the crew, they will be isolated in the special quarantine islands, in accordance with the provisions of the International Sanitary Convention, and subject to all the measures required by their sanitary state. Any communication between the ship and the inhabitants of the town will be forbidden, except for the seamen of Jeddah harbour and the "muzaweriyas", whose duties require such a contact. The latter will be isolated with the passengers for a period varying between five and six days. The ship will leave with an unclean bill of health, after inoculation of the members of the crew and transit passengers and a general disinfection of the vessel.

4. Pilgrims are at present landed in motor-launches or sailing-boats and directed to the special premises erected on the quay.

Departure of Pilgrims from Jeddah.

5. After completion of the pilgrimage, the pilgrims proceed to Jeddah for their embarkation. If the pilgrimage has been declared " clean " by a decision of the public health organization, they are allowed to leave without restriction. On their embarkation, they undergo an individual inspection, with the object of ascertaining their general state of health and freedom from disease. The ship receives the usual bill of health.

If, on the contrary, the clean state of the pilgrimage is not established, the pilgrims are not allowed to leave unless they have been detained for the period of incubation and subjected to inoculation, disinfection, etc., as provided for in the International Sanitary Convention. After completion of their quarantine period and if they are in a good state of health and free from diseases, they are allowed to proceed home.

All these measures—and any other complementary measures—are applied to all persons, whether arriving by air or by land, according to the circumstances of each case, and in accordance with the clauses of the International Sanitary Convention of 1926 modified by the International Sanitary Conference of 28 October 1938.

[Seal of the Saudi Arabian Quarantine Administration.]

MEDICAL AND HEALTH SERVICES IN SAUDI ARABIA

General Directorate:

1 Director-General of Public Health
1 Assistant Director
1 Inspector-General
1 Chief Pharmacist
7 Regional Directors.

Regional Services:

A. At Mecca.

Specialists:
1 gynaecologist
1 oculist
1 surgeon
1 dermatologist
1 radiologist
4 internists
1 bacteriological chemist
1 paediatric
1 ear, nose and throat specialist
2 travelling doctors
2 dentists
2 dispenser
2 assistant dispensers

Dispensaries in the Mecca Region:

I. Taif: Hospital
2 doctors
1 pharmacist
1 assistant pharmacist
1 dentist

II. Zafar: 1 doctor

Medical Centres:

I. Bahra
II. Wadi Fatma
III. Wadi Mohreme
IV. Zema
V. Ceil

B. At Riyadh.

Royal Palace: 4 doctors
1 dentist
1 dispenser

Hospital: 1 surgeon
1 oculist
1 radiologist
1 paediatric
2 physicians
2 travelling doctors
1 dentist
Appendix 5.

ORGANIZATION OF THE SANITARY STATION AT MOSES WELLS
by Dr. Wasfy OMAR

The Egyptian Quarantine Administration maintains two lazarets at Suez: one at El Shat (not used since the construction of the Moses Wells lazaret) and the other at Moses Wells, situated on the Asiatic coast of the Gulf of Suez, about 5 kilometres south of Suez.

Moses Wells lazaret is designed for the reception of passengers arriving on an infected vessel. It can accommodate 25 first- and second-class passengers and 500 third-class.

The lazaret is composed of buildings for the accommodation of passengers, buildings for the nursing staff, one ordinary hospital block, one isolation block, kitchens, baths with hot and cold showers, and a disinfecting station including steam stoves.

It is provided with a jetty which vessels can approach in ordinary weather; there are a separate sewage-disposal system and an electric light plant.

The station has been used for the isolation of pilgrims arriving after the closure of El Tor camp and for that of cases of infectious diseases landed from vessels.
I should like first of all to thank warmly the Sub-Committee for having appointed me as adviser on the pilgrimage question.

My opinion is that a general review of the pilgrimage situation will greatly facilitate future discussions.

You have been nominated because the countries to which you belong are those most interested in the Moslem Pilgrimage, but the country most interested is, without doubt, Saudi Arabia, for the pilgrimage is a very important matter for Saudi Arabia, more important, perhaps, than mines or oil.

The opinion of the Saudi Arabian Government is that the measures concerning the pilgrimage figuring in the Convention, such as quarantine at El Tor, etc., deter people from proceeding on the pilgrimage. It complains also of measures which discriminate between Moslems and non-Moslems. As an example is quoted the case of a British Moslem returning from the Hedjaz accompanied by his Christian wife on the same ship. The husband was detained in quarantine, whereas his wife was authorized to proceed on her voyage. Naturally, this discrimination cannot be justified on any scientific basis. These measures were adopted because Mecca was, as it still is, inaccessible to persons other than Moslems, because no reliable sanitary information was received from Mecca or the inland districts of the Hedjaz, only the ports having foreign consuls, and because there were no organized medical staffs or sanitary services in the country.

But conditions have now changed, and it has been finally admitted that the Hedjaz is not a source of cholera or of plague. If cases of these diseases were formerly observed there, it was because the disease had been brought into the country from outside. It is therefore necessary to take measures in the countries of origin to protect pilgrims, and also the Hedjaz, from cholera, plague and yellow fever. These measures are dictated by humanitarian motives.

It has to be considered whether the whole question of measures concerning the pilgrimage should not be reviewed in the light of scientific progress and of the equality of race and religion.

The Conventions at present in force were aimed only at protecting Europe against these diseases, without any consideration for the pilgrims themselves; it is necessary to consider them now, and the protection of the pilgrimage countries. Moreover, sanitary organization has been considerably developed in the Hedjaz, where the methods of protection against pestilential diseases are now well known.

It must be added that yellow fever, which in the past was present in regions situated at more than six days' journey from the Hedjaz, has crept considerably nearer the frontier of that country. A few years ago, the countries on the west coast of the Red Sea were included in the endemic yellow-fever zone (Eritrea, British, French and Italian Somalilands, Ethiopia, Sudan). For this reason, when revising the convention, measures to protect pilgrims from that disease must not be neglected.

For the last twenty-two years, there has been no epidemic of plague or cholera among the pilgrims. Thus the measures taken at El Tor have been unnecessary. When the pilgrims return to Jeddah, it is possible to determine the presence or absence of cases of cholera, plague or yellow fever; and if the pilgrimage is declared "clean", why continue to take at El Tor measures which are only necessary if the pilgrimage has been declared "suspect" or "unclean"?

The measures of surveillance to be applied to pilgrims on their arrival in the Hedjaz are a matter for the Saudi Arabian Government; it has the right to decide on the conditions to be fulfilled by the pilgrims in order to enter Arabia.

Finally, on account of the facility afforded by the Convention of concluding agreements between neighbouring countries, incredible results have sometimes ensued.

The Saudi Arabian Government made an agreement with Palestine whereby pilgrims travelling by air can travel directly from Jeddah to Lydda (Palestine) without touching El Tor. Thus a pilgrim can reach his country of destination in three hours without passing through the quarantine station, whereas, if he travels by sea, he must spend three days in quarantine at the El Tor lazaret. The case has even occurred of a pilgrim being able to return to Egypt without passing through El Tor, because he flew from Jeddah to Lydda, whence he continued his return journey by air. Similar agreements have been signed with India, South Africa, Syria and the Lebanon.

When the pilgrimage question was submitted to the Hygiene Committee of the Pan Arab League, the latter was of the opinion that a complete review of the pilgrimage clause of the 1926 Convention should be undertaken immediately.

It is necessary, therefore, to examine scientific and practical conditions to enable the control of pilgrims on the return journey to be made at Jeddah and to ensure that cases of pestilential diseases arriving there may not escape notice. As regards the arrival of pilgrims in the Hedjaz, it is for the Government of that country to decide the measures it desires to apply to them before permitting them to enter its territory.1

In the original report, Appendix 6 was completed by an "Explanatory Note on the Proposed Amendments to the Sanitary Convention of 1938 in so far as the Pilgrimage is Concerned", by Dr. Khalil Bey, and the text of the proposed amendments. The note and amendments have already been published in Off. Rec. WHO, No. 4, pages 162-163, with the exception of the following paragraphs, which were added to the amendments:

1. The above measures will not come into force until all the premises and equipment have been installed and placed in working order and all technical measures decided upon, in conformity with regulations to be approved by the experts of the Pan Arab Regional Sanitary Bureau of Alexandria.

2. If at any time these measures prove insufficient, the El Tor lazaret will again be utilized.

3. It will be the duty of every Government to take the additional measures it considers necessary in regard to its own nationals.

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3. It will be the duty of every Government to take the additional measures it considers necessary in regard to its own nationals."
1. The following extracts from an inquiry carried out in 1940 by the Government of India are placed before the Sub-Committee with a view to recommending the provision of berthed accommodation in pilgrim ships. It is my considered opinion that unberthed accommodation is not only anti-hygienic but completely out-of-date and that all accommodation for pilgrims should, in future, be of the berthed type.

2. Unberthed passenger traffic is peculiar to India and some of the countries of the East, while Western countries do not permit it. Its main advantage lies in low costs and consequently low fares.

3. Many of the suggestions for improving the lot of the deck pilgrim involve capital outlay, increased cost, and lower income for the steamer company, but there is another aspect of the problem which must not be disregarded. Unberthed accommodation has defects which are inherent in its nature; improvements, therefore, have a natural limit beyond which they cannot be carried out without creating inconveniences. Increased space-allowance, separate marking of blocks, and similar measures intended to give pilgrims comfort to the degree generally desired must, if progressively enforced, lead to a point when it would be more practicable to do away with unberthed accommodation altogether.

4. It should be clear from what has been said in the foregoing that overcrowding can be prevented only by increasing the space-allowance to an extent that would entail a very considerable curtailment of the capacity of the between-deck compartments.

5. Berthed accommodation, if introduced for the lowest class of passengers on pilgrim ships, would possess the following advantages, disregarding the question of cost, over the system in force at present:

(a) In the first place, berths add directly to physical comfort, as sleeping in a berth is more comfortable than sleeping on the floor, and berths can also be used for sitting.

(b) The space in area which can be utilized by the passenger is virtually increased by almost the surface area of the berths, a small allowance being covered by bedding, mats, carpets, etc., and by passengers lying about.

(c) The arrangement of berths by itself introduces order in the distribution of passengers and obviates the annoyance of some appropriating more of the deck than is their due.

(d) Reservation of accommodation becomes possible.

(e) When berths are arranged in two tiers, a considerable amount of space becomes free, in which passengers can move about unobstructed.

(f) It should be easier to keep the quarters clean in berthed accommodation than when the deck is covered by bedding, mats, carpets, etc., and by passengers lying about.

The usual size of a small bunk is about 6 feet by 2 feet. This area of 12 square feet accrues to the advantage of every passenger and represents so much extra horizontal surface that can be used by him. Normally, berths are installed in two tiers, an arrangement that is adopted in emigrant ships of the United Kingdom.

6. It appears that the berths are often fitted up temporarily in the between-decks. It is, in fact, not necessary to have permanent fixtures which would prevent the present pilgrim ships from carrying cargo in the between-decks during the off-season. I have seen on a ship that was preparing to convey Indian seamen wooden bunks being fitted for the occasion, but this arrangement was crude and would not be generally satisfactory. Steel tubular construction would answer the requirements best of all, as such take-down berths could be used for many seasons without replacement, being very durable and, from the point of view of hygiene, the most suitable.

Technically, therefore, it is practicable to use steel take-down berths on pilgrim ships. To the objection that permanent attachments on the steel decks into which the supports have to be fitted would damage cargo, it may be said that it is quite feasible to design sockets that would be either countersunk or have bevelled tops to avoid interference with cargo. Technical difficulties are seldom insuperable.

7. The 16 square feet allowance as in force today would be sufficient for berthed accommodation.

8. A large class of people who cannot afford to travel in cabins are deterred by what they hear of the unpleasant features of deck passage from venturing out on pilgrimages altogether. Those who go in the deck class at present are mostly those who would go in any case, whatever the hardships and discomforts.

9. Pilgrim steamers of some foreign countries with berthed accommodation for the lowest class have for several years regularly called at Jeddah. Unberthed steamers do not hold the field entirely in this traffic, which caters mainly for Asiatics and Africans. Many persons and associations who feel that deck passage has outlived its day have urged the introduction of berthed accommodation for the lowest class in all pilgrim ships, and it appears that the question is likely to attract increasing attention in future. The matter is of such fundamental importance that I consider it desirable that the possibility of providing pilgrims travelling in the lowest class with berthed accommodation should be investigated as early as possible.
REVISION OF THE PILGRIMAGE CLAUSES OF

[WHO. IC/84]
30 June 1947

(b) DRAFT REGULATIONS FOR THE CONTROL OF THE PILGRIMAGE

(presented to the Interim Commission at its fourth session).¹

Outline.

Chapter I. General Provisions.

Chapter II. Special Provisions.

Section I — Transport by sea.

(i) Pilgrim ships — general provisions.
(ii) Conditions applying to pilgrim ships.
(iii) Measures to be taken before departure for the Hedjaz.
(iv) Measures to be taken during the voyage.
(v) Measures to be taken in the Red Sea.

A. Measures to be taken on the outward voyage:
   (a) Ships going to the Hedjaz from the south;
   (b) Ships going to the Hedjaz from the north.

B. Measures to be taken on the return of pilgrims:
   (a) Ships proceeding north;
   (b) Ships proceeding south.

Section II. — Transport by air.

Section III. — Transport by land.

(i) Pilgrims travelling by caravan or individually.
(ii) Pilgrims travelling by automobile.
(iii) Pilgrims travelling by rail.

Chapter III. Sanitary Information.

Chapter IV. Sanctions (not examined).

Chapter One. GENERAL PROVISIONS

Article 1.

The general provisions and all sanitary measures laid down in the International Sanitary Conventions in force are applicable de plano to the transport of pilgrims, whether the transport be by sea, air or land.

Article 2.

The following special measures of sanitary protection will apply to pilgrims prior to their departure from their country of origin:

(1) All pilgrims shall be immunized, before their departure, against smallpox and cholera, whatever their region of origin and the sanitary condition of the region.

(2) Pilgrims coming from regions where yellow fever exists or from zones classified as endemic by international decision shall be in possession of a valid internationally recognized yellow-fever certificate of immunization.

(3) If cases of plague, smallpox, typhus or any other widely diffused communicable disease exist in the area of origin or departure of the pilgrims, such pilgrims may not leave, whatever the means of transport, until they have undergone the necessary observation, with a view to ensuring that none of them is suffering from these diseases. The local sanitary authorities will carry out all measures of disinfection and disinsectization they consider necessary.

(4) Pilgrims coming from localities where cases of cholera have been observed during the six months preceding the date of departure may not, in principle, be authorized to proceed to the Holy Places. They may be permitted to leave after a period of five days' observation.

Article 3.

Certificates of immunization will conform with the international standards in force.

Article 4.
Provisions brought by pilgrims may be destroyed if the sanitary authority considers it necessary.

Article 5.
Pilgrims shall, whatever the method of transport may be, be in possession of a return ticket or shall have deposited a sum sufficient to pay the return journey, and, if circumstances permit, they shall be required to show that they possess the means necessary for the accomplishment of the pilgrimage.

Chapter Two. SPECIAL PROVISIONS

SECTION I — TRANSPORT BY SEA

(i) Pilgrim Ships — general provisions.

Article 6.
Only mechanically propelled ships shall be permitted to carry pilgrims.

Article 7.
Pilgrim ships used for short sea transport known as coasting voyages shall conform with special regulations made by agreement among the countries concerned. These regulations will be based on a model drawn up by the World Health Organization.

Article 8.
A ship, which, in addition to ordinary passengers, embarks pilgrims in less proportion than one pilgrim per 100 tons gross shall not be considered a pilgrim ship.

This exemption applies only to the ship. The pilgrims carried therein, irrespective of class, shall remain subject to all the measures relating to them set out in this Convention.

Article 9.
The captain or the agent of the shipping company shall, at the discretion of the sanitary authority, pay the total of the sanitary charges due in respect of each pilgrim. Such charges shall be included in the price of the ticket.

(ii) Conditions applying to pilgrim ships.

Article 10.
The ship shall be capable of accommodating the pilgrims in the between-decks. Over and above the space reserved for the crew, the ship shall provide for each pilgrim, irrespective of age, an area of 1.5 square metres, equivalent to 16 English square feet, and a cubic capacity of at least 3 cubic metres, equivalent to 96 cubic feet.

Each pilgrim should be provided with a separate, detachable berth preferably of metal construction. These berths may be in two tiers, provided that the above-mentioned unities of surface and of cubic space allowed to each pilgrim are used for calculation of total space provided in any compartment reserved for pilgrims.

Pilgrims shall not be lodged on any deck lower than the first between-deck below the water-line.

Satisfactory ventilation, augmented by mechanical means in the case of decks below the first of the between-decks, shall be provided.

In addition to the space reserved for pilgrims, there shall be on the upper deck a free area of not less than 0.56 square metre, equivalent to about 6 English square feet, for each person, irrespective of age, over and above the area upon that deck which may be reserved for temporary hospitals, the crew, douches and latrines and for the working of the ship.

Article 11.
Places screened from view, including a sufficient number for the exclusive use of women, shall be provided on deck.

These places shall be provided with water under pressure in pipes fitted with taps or douches, so as to furnish sea water supply for the use of the pilgrims at all times even if the ship is lying at anchor. Taps or douches shall be in proportion to 1 per 100 pilgrims or fraction of 100.

Article 12.
The ship shall be provided, in addition to closets for the crew, with latrines fitted with a flushing apparatus or with a water tap.

Some of these latrines shall be reserved exclusively for women.

Latrines shall normally be in the proportion of 3 per 100 or fraction of 100 pilgrims, but in the case of existing ships where adaptation will not permit of 3 per cent., a minimum of 2 per 100 may be admitted by the competent authority.

There shall be no latrines in the hold.

Article 13.
Pilgrims are forbidden to cook food on board.

Article 14.
Hospital quarters, satisfactory from the point of view of safety and health, shall be reserved for the accommodation of the sick. They shall be situated on the upper deck, unless, in the opinion of the sanitary authority, an equally healthy situation can be provided in another place.

They shall be constructed so as to allow persons suffering from infectious diseases, and persons who have been in close contact with them, to be isolated according to the nature of their illness.

The hospitals, including temporary hospitals, shall be capable of accommodating not less than 4 per 100 or fraction of 100 of the pilgrims taken on board, allowing 3 square metres, equivalent to approximately 32 English square feet, per person.

The hospitals shall be provided with special latrines.

Article 15.
Every ship shall carry medicaments, disinfectants and articles necessary for the treatment of the sick. The regulations framed for this class of ship by each Government shall specify the nature and the quantity of these medicaments. Each ship shall be provided, in addition, with the necessary immunizing agents, especially anti-cholera and anti-smallpox vaccines, which shall be stored under suitable conditions. Medicine and attendance shall be provided for the pilgrims free of charge.
Article 16.
Every ship taking pilgrims shall carry a duly qualified medical officer, who shall be recognized by the Government of the country of the first port at which the pilgrims are embarked upon their outward journey. A second medical officer fulfilling the same conditions shall be carried when the number of pilgrims on board exceeds 1,000.

Article 17.
The captain shall cause notices, printed in the principal languages of the countries to which the pilgrims to be embarked belong, to be posted up on the ship in a conspicuous place accessible to all concerned, showing:

(I) The destination of the ship;
(2) The price of tickets;
(3) The daily ration of food and water allowed to each pilgrim in accordance with the regulations of the country of origin;
(4) The price of foodstuffs not included in the daily ration, which may be procured on extra payment.

Article 18.
The heavy baggage of pilgrims shall be registered and numbered. Pilgrims may keep with them only such articles as are absolutely necessary. The nature, amount and dimensions of these articles shall be set out in regulations framed by each Government for its own ships.

Article 19.
Extracts from the provisions of Section (i) of this Chapter shall be posted up, in the form of regulations, in the language of the country to which the ship belongs, and also in the languages chiefly spoken in the countries inhabited by the pilgrims to be embarked, in a conspicuous and accessible place on each deck and between-deck of every ship carrying pilgrims.

(iii) Measures to be taken before departure for the Hadjaz.

Article 20.
The captain, or, failing the captain, the owner or agent, of every pilgrim ship shall, not less than three days before departure, declare to the competent authority of the port of departure his intention to embark pilgrims. At ports of call, the captain, or, failing the captain, the owner or agent, of every pilgrim ship shall make the same declaration twelve hours before the departure of the ship. This declaration shall indicate the proposed date of departure and the destination of the ship.

Article 21.
On receipt of the declaration prescribed in the preceding article, the competent authority shall proceed at the expense of the captain to inspect and measure the ship.

Inspection alone shall take place if the captain already has a certificate of measurement furnished by the competent authority of his country, unless it be suspected that the certificate no longer represents the actual condition of the ship.

Article 22.
The competent authority shall not permit the departure of a pilgrim ship until satisfied:

(a) That the ship has been thoroughly cleaned and, if necessary, disinfected.

(b) That the ship is in a condition to undertake the voyage without obvious danger; that it is provided with the necessary gear and apparatus for use in case of shipwreck, accident or fire, particularly a wireless apparatus for sending and receiving messages, capable of being worked independently of the ship's engine, and that it carries a sufficient number of boats and life-saving apparatus; that it is properly manned, equipped and ventilated, and provided with awnings of sufficient size and thickness to shelter that part of the decks reserved for pilgrims and that there is nothing on board that may be or may become injurious to the health or safety of the passengers.

(c) That there is on board, properly stowed away, over and above the provision made for the ship and crew, sufficient fuel and food of good quality for all the pilgrims during the duration of the voyage.

(d) That the drinking-water on board is of good quality; that it is in sufficient quantity to ensure that not less than 5 litres shall be put each day at the disposal of every pilgrim, irrespective of age, free of charge; that the tanks for drinking-water are safe from all contamination and so closed that the water can be supplied only by means of taps or pumps; fittings for sucking water shall be absolutely prohibited.

(e) That the ship carries a condenser capable of distilling a minimum quantity of 5 litres of water per diem for every person on board, including the crew.

(f) That the ship possesses a disinfecting chamber, ascertained by the sanitary authority of the port where the pilgrims embarked to be safe and efficacious.

(g) That the ship carries a duly qualified medical officer, if possible with up-to-date knowledge of maritime health conditions and of the pathology of tropical diseases, recognized by the Government of the country of the first port at which the pilgrims are embarked upon their outward journey, and that it carries medical stores as required by Article 15.

(h) That the deck is free from merchandise and all encumbrances;

(i) That the arrangements on board are such as to allow of the measures prescribed in Chapter II, Section I (iv) being carried out.

Article 23.
The captain may not start without having in his possession:

(I) A list countersigned by the competent authority showing the names and sex of the pilgrims who have embarked, and the total number of pilgrims he is authorized to carry.
(2) A document giving the name, nationality and tonnage of the ship, the names of the captain and of the doctor, the exact number of persons embarked (crew, pilgrims and other passengers), the nature of the cargo, and the place of departure.

The competent authority shall note on this document whether the number of pilgrims permissible under the regulations has been embarked or not, and, in the latter case, the additional number of passengers the ship is authorized to embark at subsequent ports of call.

(iv) Measures to be taken during the voyage.

Article 24.

During the voyage, the deck allotted to pilgrims shall be kept free from encumbrances; it shall be reserved night and day for the passengers and placed at their disposal without charge.

Article 25.

The between-decks shall be carefully cleansed and rubbed with sand every day when the pilgrims are on deck.

Article 26.

The latrines allotted to the passengers, as well as those of the crew, shall be kept clean, in good working order; and they shall be cleansed and disinfected at least three times daily, and more frequently if necessary.

Article 27.

In the case of infectious or other communicable disease, the ship's medical officer will be responsible for all necessary measures of disinfection, which shall be carried out under his supervision.

Article 28.

If there be any doubt as to the quality of the drinking-water or any reason to suspect that it may possibly have become contaminated, either at its source or during the voyage, it shall be boiled or sterilized, and the captain shall cause it to be emptied overboard at the first port of call at which he can procure a purer supply. The tanks shall be disinfected before taking on a fresh supply.

Article 29.

The medical officer shall visit the pilgrims, tend the sick and see that the rules relating to health are observed on board. He shall, in particular:

(1) Satisfy himself that the rations issued to the pilgrims are of good quality, that their quantity is in accordance with contract and that they are properly prepared;

(2) Satisfy himself that the provisions of Article 22 (d), regarding the distribution of water, are observed;

(3) If there be any doubt as to the quality of the drinking-water, call the attention of the captain, in writing, to the provisions of Article 28;

(4) Satisfy himself that the ship is always kept clean, and particularly that the latrines are cleansed in accordance with the provisions of Article 26;

(5) Satisfy himself that the pilgrims' quarters are kept wholesome, and, in case of the occurrence of infectious disease, that the necessary disinfection is carried out;

(6) Keep a diary of all occurrences relating to health during the voyage, and submit this diary, on request, to the competent authority of the ports of call or the port of final destination.

Article 30.

Only the persons charged with the care of patients suffering from plague or cholera or other infectious diseases shall have access to them, and these persons shall not come in contact with the other persons that have been embarked.

Article 31.

In the event of a death occurring during the voyage, the captain shall enter the fact opposite the name of the deceased on the list countersigned by the authority of the port of departure, and shall also enter in the log the name of the deceased, his age, the place from which he came, the supposed cause of death, according to the medical certificate, and the date of death.

In the event of a death from infectious disease, the corpse, wrapped in a shroud impregnated with a disinfecting solution, shall be committed to the deep.

Article 32.

The captain shall see that all measures taken against the spread of communicable disease during the voyage are entered in the log. The log shall be submitted by him, on request, to the competent authority of the ports of call or the port of final destination.

At each port of call, the captain shall cause the list drawn up in accordance with Article 23 to be countersigned by the competent authority.

In the event of a pilgrim disembarking during the voyage, the captain shall note the fact on the list opposite the pilgrim's name.

In the event of persons embarking, their names shall be entered on the list in accordance with the provisions of Article 23. This shall be done before the list is countersigned by the competent authority.

Article 33.

Any sanitary document given at the port of departure shall not be modified during the voyage. In case of failure to observe this regulation, the ship may be treated as infected.

It shall be countersigned at each port of call by the sanitary authority, who shall enter:

(1) The number of passengers disembarked or embarked at the port;

(2) Anything that has happened at sea affecting the life or health of the persons embarked;

(3) The health conditions of the port of call.

(v) Measures to be taken in the Red Sea.

A. Measures to be taken on the outward voyage.

(a) Ships going to the Hedjaz from the south.

Article 34.

Pilgrim ships from the south, bound for the Hedjaz, shall, in the first instance, put in at the Kamaran Sanitary Station, and shall be subjected to the procedure set out in the following article.
Article 35.

The pilgrims shall be medically examined. Any pilgrim not in possession of a valid certificate of immunization against cholera and smallpox and, if the terms of Chapter I, Article 2, apply, yellow fever, shall forthwith be immunized and issued with a certificate of immunization.

If there has been no case of Convention disease on board during the voyage, the ship shall be permitted to proceed forthwith to Jeddah.

If there has been a case of plague, cholera or yellow fever on board, the ship shall also be landed and isolated. The pilgrims shall also be landed and a daily medical inspection carried out. The pilgrims will be re-embarked, and the ship will be allowed to proceed to Jeddah in the case of cholera, five days after the occurrence of the last case, and six days after the last case of plague or yellow fever.

If there has been a case of Convention disease other than plague, cholera or yellow fever, the case shall be landed and isolated and the ship allowed to continue the voyage after the necessary measures of immunization or disinsectization have been completed.

Article 36.

Ships to which Article 35 applies shall be subject to medical inspection on board on arrival at Jeddah. If the result is favourable, the ship shall receive free pratique.

If, on the other hand, the occurrence of definite cases of Convention disease on board during the voyage, or at the time of arrival at Jeddah, is established, the sanitary authority of the Hedjaz may take all necessary measures subject to the provisions of Article 54 of the International Sanitary Convention of 1926.

Article 37.

Every sanitary station intended for the reception of pilgrims shall be provided with a skilled and experienced staff, in sufficient number, together with all the structures and plant necessary for ensuring the complete application of the measures to which pilgrims are liable.

(b) Ships going to the Hedjaz from the north.

Article 38.

All ships carrying pilgrims and passing through the Suez Canal will pass through in quarantine.

Article 39.

If, on medical inspection of the pilgrims at Port Said, no case of Convention disease has been observed, and if the pilgrims are in possession of valid immunization certificates, the ship shall proceed forthwith to Jeddah without call at any intermediate port. Pilgrims not in possession of valid certificates shall be immunized.

If medical inspection of the pilgrims at Port Said reveals a case of plague, cholera or yellow fever on board, the ship shall proceed direct to El Tor to undergo the measures prescribed in Article 35. Cases of other Convention diseases shall be disembarked and isolated at Port Said or at Suez and the ship allowed to proceed to Jeddah after the necessary measures of immunization or disinsectization have been completed.

B. Measures to be taken on the return of pilgrims.

(a) Ships proceeding north.

Article 40.

If plague, cholera or yellow fever, or if smallpox or typhus in epidemic form has not been observed in the Hedjaz during the pilgrimage period, ships will proceed direct to Suez, where the pilgrims will undergo medical inspection.

If a case of plague, cholera or yellow fever is found on board, ships will be sent back to El Tor.

If a case of smallpox or typhus is found on board, it will be disembarked, the ship put in quarantine, and the necessary measures of re-vaccination, or disinfection and of disinsectization will be taken before the ship is authorized to continue its voyage.

If there is no pilgrim found to be suffering from one of the Convention diseases, the ship will be authorized to enter the Suez Canal, even at night, provided five full days have elapsed since leaving Jeddah.

Nevertheless, if the first three ships returning pilgrims via El Tor are found to be healthy, the Suez sanitary authority may permit the passage of the Canal by healthy ships, without requiring the lapse of five days since leaving Jeddah.

Article 41.

Pilgrims wishing to disembark at a port on Egyptian territory may not travel in ships referred to in the preceding Article 40.

Ships carrying pilgrims wishing to disembark at an Egyptian port shall proceed to El Tor or to any other station prescribed by the Egyptian Sanitary Authority, there to undergo the sanitary measures prescribed in the Egyptian Quarantine Regulations.

Article 42.

If plague, cholera or yellow fever, or if smallpox or typhus in epidemic form has been observed in the Hedjaz during the pilgrimage period, the Saudi Arabian Government will immediately notify all the diplomatic missions in its territory.

The diplomatic authorities of the countries to which the pilgrims are going will instruct the captains of the ships to proceed to El Tor, there to undergo the measures prescribed in Article 43.

Article 43.

Ships arriving at El Tor in the circumstances prescribed in Article 42 and carrying pilgrims not wishing to land on Egyptian territory will undergo the following measures:

(2) Medical examination under conditions to be determined by the local sanitary authority.

(2) Disembarkation and isolation of cases of Convention diseases.
(3) In the case of plague, cholera and yellow fever, contacts shall be disembarked and submitted to the sanitary measures considered necessary by the sanitary authorities. They shall be isolated for a period not exceeding five days in the case of cholera, and six days in the case of plague and yellow fever. In the case of plague, the procedure laid down in Article 25 of the International Sanitary Convention of 1926 concerning rats shall be applied in so far as possible.

(4) Contacts with cases of Convention diseases other than plague, cholera and yellow fever will undergo the disinfection or disinfestation considered necessary by the sanitary authority, after which they will return to the ship.

On completion of the sanitary measures referred to in this Article, the ship, having re-embarked its pilgrims, shall proceed without delay to Suez.

Article 44.

Ships from the Hedjaz carrying pilgrims bound for the African coast of the Red Sea shall proceed direct to the Quarantine Station appointed by the Government concerned, for the purpose of undergoing any sanitary measures considered necessary by the local sanitary authority.

Article 45.

Passengers from the Hedjaz, whoever they are, who have accompanied the pilgrimage, shall be subject to the same measures as pilgrims. All passengers travelling on ships carrying pilgrims will be submitted to the same sanitary measures as those applied to pilgrims.

(b) Ships proceeding south.

Article 46.

If plague, cholera, yellow fever, or smallpox or typhus in epidemic form have been observed during the pilgrimage, the diplomatic authorities of the countries to which the pilgrims are proceeding, notified by the Saudi Arabian Government, will instruct the captains of ships to call at Kamaran, notified by the Saudi Arabian Government, will require the local sanitary authority to disembark and disinfect the pilgrims who have accompanied the pilgrimage, and place them in a sanitary station to be especially designated for this purpose, where they will undergo the disinfection or disinfestation necessary to prevent their transmission on entry into the countries to which they are proceeding. If these sanitary measures have been complied with, the pilgrims, who will receive the same sanitary protection as if they had been disembarked, will be permitted to leave the ship.

SECTION II — TRANSPORT BY AIR

Article 47.

Aircraft transporting pilgrims and pilgrims transported by air shall be subject to the general requirements of international air navigation and to the provisions of the International Sanitary Convention for Aerial Navigation, 1933, modified in 1944. They will, in addition, conform to the conditions laid down in Articles 1 and 2 of this Convention and in the following articles.

(a) Conditions applying to aircraft. — Aircraft engaged in the transport of pilgrims shall fulfill all the health and security requirements laid down by the international regulations governing the transport of passengers by air. No departure from such regulations in the way of additional passengers or cargo shall be permitted.

(b) Measures to be taken before departure. — The commander of an aircraft carrying pilgrims, or, in default, the agent of the aircraft company at the aerodrome of departure, shall declare to the competent authority of the aerodrome of departure, at least twenty-four hours before leaving, his intention to embark pilgrims. The said authority shall immediately warn the competent sanitary authority, who shall be responsible for carrying out the measures provided in Chapter I, Articles 2 and 3, of the present Convention.

The competent authority of the aerodrome shall not permit an aircraft carrying pilgrims to leave without being satisfied that the aircraft is in a fit state to undertake the voyage without obvious danger, that it is suitably equipped to carry pilgrims and that all safety requirements are fulfilled.

The commander of the aircraft may not take off until in possession of a list, signed by the competent authority, containing the names of the pilgrims who have been embarked, as well as the total number of the pilgrims he is authorized to take on board.

(c) Aircraft carrying pilgrims may only land on designated sanitary aerodromes.

Article 49.

Measures as regards pilgrims to be taken on arrival in or on departure from the Hedjaz.

(a) Immediately the aircraft lands in the Hedjaz, the local sanitary authority will ascertain if the pilgrims fulfill the conditions required to satisfy the sanitary measures provided in Chapter I, Articles 2 and 3.

If these sanitary measures have been complied with, the pilgrims will not be subjected to any further sanitary measure.

If the pilgrims have not complied with the prescribed conditions, they shall undergo the necessary immunizations.

If a pilgrim refuses to undergo these sanitary requirements, he shall immediately be sent back.

(b) On return from the Hedjaz, pilgrims not showing any evidence of Convention disease shall not, during the voyage, undergo any sanitary measures other than those prescribed in Article 52 of the International Sanitary Convention for Aerial Navigation, 1933, modified in 1944.

On arrival, each country of origin will determine the sanitary measures to take as regards its own nationals.

Article 50.

The crew of aircraft carrying pilgrims and all passengers, whether they be pilgrims or not, shall undergo the same sanitary requirements as those for pilgrims.

SECTION III — TRANSPORT BY LAND

(b) Pilgrims travelling by caravan or individually.

Article 51.

Pilgrims entering the Hedjaz by caravan shall pass through the frontier sanitary stations specially designated for this purpose, where they will
be examined by the sanitary authorities of Saudi Arabia. The measures laid down in Article 62 of the International Sanitary Convention of 1926 will apply.

Article 52.

If pilgrims have complied with the immunization requirements laid down in Articles 2 and 3 of this Convention, they may continue their voyage. If not, they shall be immunized. If pilgrims in caravans refuse to submit to immunization or to such measure of disinfection and disinsectization considered necessary by the local sanitary authority, they will be immediately sent back.

Article 53.

On leaving the Hedjaz, pilgrims are required to conform with the regulations of the sanitary authorities of the neighbouring countries in accordance with the terms of Article 62 of the International Sanitary Convention of 1926.

Article 54.

Pilgrims making the voyage individually are subject to the same regulations as pilgrims travelling in caravan. After medical examination at the frontier sanitary posts, they will, as far as possible, be grouped together for the continuation of their voyage.

(ii) Pilgrims travelling by automobile.

Article 55.

Pilgrims arriving in the Hedjaz by automobile are required to pass through frontier sanitary posts specially designated for the purpose by the Saudi Arabian Sanitary Authorities, where they will be visited. The measures laid down in Article 62 of the International Sanitary Convention of 1926 will be applied.

Article 56.

On their return, if cases of plague, cholera, yellow fever, or smallpox or typhus in epidemic form have been observed in the Hedjaz during the pilgrimage, the pilgrims shall report to the first sanitary post of the neighbouring country, to undergo observation or surveillance, which the Sanitary Authorities may apply according to the terms of Articles 61, 62 and 65 of the International Sanitary Convention of 1926.

(iii) Pilgrims travelling by rail.

Article 57.

In the case of pilgrims travelling towards the Hedjaz by rail, the sanitary authorities of the countries traversed will ensure that the measures laid down in Chapter I, Articles 2 and 3, are complied with.

Special measures in conformity with Articles 62, 63 and 65 of the International Sanitary Convention of 1926 may be taken in the case of pilgrims travelling to and from the Hedjaz by rail.

Chapter Three. SANITARY INFORMATION

Article 58.

(a) The Saudi Arabian Government will keep the Governments concerned with the pilgrimage regularly informed of the epidemiological conditions in the Hedjaz during the pilgrimage and for a period of two months preceding and following the pilgrimage.

This information, sent weekly by cable to the World Health Organization, will be transmitted by the latter to the various Governments concerned. In addition, the diplomatic missions in the Hedjaz will be immediately informed of these communications by the Saudi Arabian Government.

To this end, the Saudi Arabian Government will take into account the information supplied and the notification made to it by medical missions accompanying the pilgrims.

It rests with each Government, in the light of this information, to decide on the measures to take on the arrival of pilgrims in their territory.

(b) The Saudi Arabian Government, and those of all other countries concerned in the pilgrimage, will send an annual report on the pilgrimage to the World Health Organization.

The World Health Organization will, as soon as possible, transmit these reports to Governments concerned, in the form of a collective document.

Chapter Four. SANCTIONS

Not examined.
VI. EXPERT COMMITTEE ON TUBERCULOSIS

REPORT ON THE FIRST SESSION

Held 30 July-2 August 1947, Office International d'Hygiène Publique, Paris

(presented to the Interim Commission at its fourth session).

Outline.

1. Introduction.
2. Fields of Activity.
3. Techniques for Control.
5. Tuberculosis Secretariat and Finance.
6. Dissemination of Information.
7. Composition and Functions of the Expert Committee on Tuberculosis.
8. Summary.

At the third session of the Interim Commission of the World Health Organization, held in Geneva in April 1947, it was resolved to set up an Expert Committee on Tuberculosis. The Chairman of the Interim Commission and the Executive Secretary agreed to appoint the following members of this Committee, after approaching their respective Governments:

Dr. P. M. d'Arcy Hart, Farm Laboratories, National Institute for Medical Research, Medical Research Council, London, United Kingdom;

Dr. Herman E. Hilleboe, Commissioner of Health, New York State Department of Health, Albany, New York, United States of America;

Dr. Johannes Holm, Chief, Tuberculosis Division, State Serum Institute, Copenhagen, Denmark.

An invitation to the Government of the Union of Soviet Socialist Republics to suggest the name of a Russian member for the Committee was sent. The attendance of an expert was arranged, but his sudden illness prevented his coming to Paris.

The Expert Committee on Tuberculosis appointed by the Interim Commission met in Paris from 30 July to 2 August 1947. Dr. Holm was elected Chairman. The Secretary to the Expert Committee, Dr. J. B. McDougall, and Dr. W. Gellner (Interim Commission Field Services) were in attendance.

The Committee unanimously agreed to forward the following statements and recommendations to the Interim Commission, with a view to their submission to the World Health Assembly:

1. Introduction.

It is recognized that tuberculosis is a world problem of great magnitude. The Committee is fully in accord with the decision of the Interim Commission that tuberculosis, malaria and venereal diseases are infectious diseases deserving the highest priorities for its activities.

There can be no isolationism in the field of health. The fight against infectious disease is not a national or a racial problem; it is a task for the whole of humanity. No nation is safe if another nation is vanquished by disease. The fortunate and relatively healthy nations, inspired by intelligent self-interest and humane considerations, will necessarily have to come to the aid of stricken nations and, through money, professional personnel and equipment, distribute existing resources to the needy and suffering areas of the world.

Tuberculosis-control work of an international scope must go forward if present suffering and disability are to be alleviated and future generations protected. The all-inclusive objective of any sound tuberculosis programme is the prevention and eventual eradication of tuberculosis from the peoples of the world. Poverty, shortages of food and housing and the lack of opportunity for gainful occupation complicate the task enormously and make it necessary for us to share and distribute our resources where they will do the most good in the shortest possible time.

2. Fields of Activity.

There are five well-defined fields of activity in which we must work and direct our efforts on a planned basis, if tuberculosis is to be systematically eliminated: (1) prevention, (2) case-finding, (3) isolation and medical care, (4) rehabilitation and after-care, (5) social and economic protection of afflicted families.

No one of these activities can be effective alone. They all must operate together and in proper sequence.

3. Techniques for Control.

It is not enough merely to recognize and describe the objectives of a tuberculosis-control programme. It is also necessary to have clearly defined and firmly established techniques for the achievement of those objectives. The following recommendations include eleven principle techniques for tuberculosis control, which may be used singly, in groups, and, finally, all together, if the WHO programme is to be comprehensive and wholly effective:

1. The first technique is the determination of the extent of the problem of tuberculosis in each country, the present means and facilities at its disposal, the manner in which these facilities are being used to tackle the problem, and the additional facilities required. Countries with little information available should be encouraged to record at least simple basic data. It is recommended that schedules (now being prepared by the Expert Committee) be filled in by the experts of the Secretariat who actually go into the countries at their request; these schedules should be kept up-to-date at regular intervals.

2. One of the most important techniques that work toward the realization of the objectives of tuberculosis control is the recruitment and training of professional personnel. In most countries, there is at present an insufficient number of well-trained workers in this field. It is recommended that travelling fellowships be awarded to countries most in need, principally to train medical officers. There are four special fields in which trained medical officers are essential for every country: administration, epidemiology, laboratory work and clinical work. It is estimated that one thousand such fellowships could be granted by the WHO with good effect within the next few years. It would appear wise to recommend that only fifty of these be provided in the first year, in order to get the programme under way. To operate the scheme, the Secretariat should survey the teaching facilities throughout the world and designate acceptable teaching centres. At the same time, the Secretariat should ascertain the needs of countries for trained personnel, so that, in consultation with them, promising medical officers, especially those who show potentialities of leadership, can be selected for fellowships. Countries where the needs are greatest should be chosen first.

It is also recommended that fifteen visiting lectureships of short duration be provided to countries, especially those with teaching centres, in order to make available the latest knowledge and viewpoints of outstanding specialists.

3. The provision of physical facilities, supplies and equipment for all phases of prevention, diagnosis and treatment is second in importance only to the provision for personnel. It is recommended that the WHO should be prepared to give expert advice to the various countries requesting such information, on the number, type and location of facilities needed and on the best means of financing the construction and maintenance of these facilities, drawing on the successful experience of other countries. Recommendations should be given only if they are to form a part of a long-range, comprehensive plan for the nation and its administrative subdivisions.

4. Health education is recognized as an essential tool in tuberculosis control. The general public must know the seriousness of the disease and its cost in human misery and money before it will accept its responsibility to support the work financially. It is recommended that the WHO should encourage national and international voluntary organizations to take the major responsibilities for informing the public and gaining their support.

To keep the medical profession informed on advances in tuberculosis, it is recommended that the WHO prepare from time to time material on recent developments of special importance, and that it provide for the circulation of specialist literature. The WHO should encourage national and international professional organizations to develop the distribution of tuberculosis literature.

5. The best way to get a new programme started or to improve a poor one in any country is by means of field services for the purpose of demonstrating practical activities in one or more of the special fields of administration, epidemiology, laboratory work and clinical work. Well-trained teams, even with limited supplies and equipment, can demonstrate what should be done to control tuberculosis and how to do it. It is recommended that the WHO provide demonstration teams. The size of the team and the length of its stay would vary with needs, but in any event should be kept to a minimum. Certain supplies and equipment will be necessary for these teams. An essential condition for the demonstration will be that the country agree beforehand to take over the project as soon as sufficient of its personnel has been trained to do so. When taken over, these field demonstrations should become national training-centres, and in some cases should be designated also for international use of travelling Fellows. For example, an international training-centre might be established in India for training workers from various parts of Asia, where the problems to be solved are similar in nature. Areas where it is proposed to set up international training-centres should have first call on demonstrations, if such are necessary.

The persons charged with these demonstrations could be either regular staff members of the WHO or professional personnel with temporary appointments. The person to take charge of the work when it is taken over by the local group could well be one of the persons who had received a travelling fellowship from the WHO.

6. While it is recognized that present budgetary limitations do not permit grants of money for tuberculosis control to nations at this time, it is recommended that in future such grants should be made, in order to help nations unable to help themselves. Such grants should be made, however, only if great need is demonstrated, and if a complete plan is submitted to show the joint use of national funds and those from the WHO and to show that the funds are used solely for tuberculosis
control and that the WHO's contributions are not used to replace local funds.

7. The best contribution that can be made by the WHO in tuberculosis research would appear to be in developing and recommending uniform procedures. Special problems would require from time to time the services of small sub-committees of experts in highly specialized fields; where possible, members of other expert committees of the WHO should be used for this purpose. Whenever a problem comes up for the Expert Committee on Tuberculosis which involves the responsibility shared by another expert committee, one of the members of the second committee should be asked to take part in the deliberations. For example, when the Expert Committee on Tuberculosis considers the problem of tuberculin and tuberculin-testing, a member of the Expert Committee on Biological Standardization should be asked to participate, and vice versa. It is recommended that the Expert Committee for the Preparation of the Sixth Decennial Revision of the International Lists of Diseases and Causes of Death consult with the Expert Committee on Tuberculosis before final action is taken on classification of tuberculosis. There are several suggestions which the Committee wishes to make on the first draft prepared by the former Committee.

The principle problems which need action to establish uniform procedures are as follows:

1. Tuberculin and tuberculin-testing;
2. Preparation and clinical use of BCG;
3. Classification of tuberculosis;
4. X-ray interpretation and mass radiography;
5. Laboratory diagnosis of tubercle bacilli;
6. Evaluation of new chemotherapeutic agents such as streptomycin.

Even during the period of the Interim Commission, it is recommended that action be taken on (1), (2) and (6). Thus, it is urged that sub-committees be appointed on tuberculin and tuberculin-testing, and on BCG, and that a conference be called early in 1948 on the use and value of streptomycin. This conference should bring together those who have been actively engaged in research on this drug.

8. It is recognized that several other international organizations have been carrying on activities and have contributed in many ways to tuberculosis control. It is recommended that the WHO should take full advantage of these services and should establish working relationships with all groups genuinely interested in tuberculosis control. Such co-operative effort would help to avoid duplication and would produce harmonious agreement in this collective enterprise. The Committee has been informed that the International Union against Tuberculosis is about to establish a branch office in Geneva. It is urged that liaison be established at once between the WHO and the Union in order that their several activities go forward in unison. Co-operation with all private and official agencies, even those only partially engaged in tuberculosis-control activities, should be extended at every opportunity. Furthermore, this Committee would welcome the opportunity to be consulted by other committees of the WHO and of the United Nations whenever questions and problems involving tuberculosis arise.

9. Tuberculous cattle still form an important source of tuberculosis among human beings throughout the world. Infected milk is not the only source of spread, for it has recently been demonstrated that farm-workers may contract bovine tuberculosis through direct contact with diseased cattle. It is recommended that the WHO should use its influence to encourage nations whose herds have high infection rates to take active steps to eradicate tuberculosis among cattle as quickly as possible.

10. It is recommended that the WHO should be prepared to give expert advice to national Governments and health departments on sound laws and regulations pertaining to human and bovine tuberculosis. This Committee proposes to study both the legal and epidemiological aspects of the problem of tuberculosis among migrants. This would form the basis of recommendations designed to prevent the spread of this disease from one country to another.

11. Modern public-health practice demands that public-health programmes have review and evaluation at regular intervals, in order that any ineffective techniques be discarded and that more modern ones be added as new knowledge is gained. This is particularly true of a new programme. Accordingly, it is recommended that the WHO make preparation for review and evaluation of its programme at yearly intervals, with the advice and counsel of the Expert Committee.


Because of the epidemic proportions of tuberculosis in many countries, certain emergency measures which require relatively small expenditure should be applied at once. It is recommended that small demonstration teams be sent into such countries, even for short periods, for two principle purposes:

1. To carry on intensive programmes of BCG vaccination similar to those at present in operation under the Danish Red Cross in several European countries which have appealed for aid.

2. To develop a system of collecting and examining sputum for tubercle bacilli of all persons who are coughing and expectorating. Private doctors, dispensaries and hospitals in such areas should be encouraged to assist in the demonstrations. In this way, the most infectious cases can at least be identified.

The Committee wishes to emphasize that these two measures are clearly of an emergency nature. It is hoped that their initiation and successful operation will encourage the local groups to develop and carry on a more comprehensive programme.
5. Tuberculosis Secretariat and Finance.

In order to accomplish the above proposals, it is recommended that a permanent Tuberculosis Control Office be established within the WHO. This office must be adequately staffed by highly qualified professional and other personnel, and provided with sufficient funds to develop the programme for the international control of tuberculosis. In addition to this central office, certain other items requiring substantial sums of money have been included in the above proposals.

Under Section 3 (2), funds will be needed for fifty fellowships averaging six months each, and for fifteen visiting lectureships averaging one month each. Under Section 3 (4), funds will be needed to publish special reports and to purchase publications for distribution to various countries. Under Section 3 (5), funds will probably be required for twenty demonstration teams, comprising in all approximately fifty to sixty professional personnel, and for their necessary travel expenses, subsistence, supplies and equipment.

Even though no funds are available yet for all these proposals, which the Committee hopes the WHO will in due course accept, it is recommended that some funds be provided immediately by the Interim Commission for the emergency measures under Section 4 of this report — namely, to start in certain countries, as soon as possible, programmes under Section 4 of this report — namely, to start in certain countries, as soon as possible, programmes for BCG vaccination and for identifying infectious cases.

It is further recommended that the Interim Commission provide immediately funds for the expenses of the sub-committee meetings (on tuberculin and tuberculin-testing, and on BCG) and for the conference on streptomycin referred to in Section 3 (7).

6. Dissemination of Information.

If the Interim Commission approves of the proposals of this Committee, it is recommended that there should be wide dissemination of information concerning the services which the WHO can provide.

7. Composition and Functions of Committee on Tuberculosis.

It is recommended that:

(1) The terms of reference of the Committee should be to act as the advisory experts to the WHO in the field of tuberculosis.

(2) The Committee should consist of from nine to twelve experts, appointed for terms of three years and eligible for reappointment. Consideration should be given to appropriate geographical representation.

(3) The Committee should be empowered to appoint its own Chairman, adopt its own rules of procedure and call in other experts for temporary service on special problems when necessary.

(4) There should be at least two meetings per year, each lasting approximately five days. Special meetings and conferences, other than the regular meetings, may be requested when special needs arise.

(5) The Chairman of the Executive Board, in agreement with the Director-General, should appoint the first nine to twelve members from a list submitted by the Expert Committee on Tuberculosis of the Interim Commission. As new appointments need to be made, additional lists will be prepared by the Committee.

(6) The time of the next session of the Committee should be determined by the Committee at the closing meeting of each session. The Expert Committee on Tuberculosis would like to have its next session not later later than January 1948.

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These proposals are respectfully submitted to the members of the Interim Commission of the WHO for their acceptance and approval. The Expert Committee strongly feels that with the leadership and support of the WHO, it will be possible to bring tuberculosis under international control within a reasonable period of time.

8. Summary.

The recommendations incorporated in this report are summarized herewith:

(1) The extent of the problem of tuberculosis in each country should be determined.

(2) There should be recruitment and training of professional personnel, with provisions for fellowships and lectureships.

(3) Expert advice should be given to requesting countries on the physical facilities for all phases of prevention, diagnosis and treatment.

(4) Specialist literature on tuberculosis should be provided by the WHO.

(5) Field services should be provided for the purpose of demonstrating practical activities.

(6) Grants should be made in the future to help nations unable to help themselves.

(7) Uniform procedures should be established in tuberculin and tuberculin-testing; the preparation and clinical use of BCG; the classification of tuberculosis; X-ray interpretation and mass radiography; laboratory diagnosis of tubercle bacilli; and in the evaluation of new therapeutic agents such as streptomycin.

(8) Special sub-committees should be set up at once on tuberculin and tuberculin-testing and on BCG, and a special conference be called early in 1948 to discuss the use and value of streptomycin.

(9) Working relationships should be established with all groups genuinely interested in tuberculosis control.
(10) Nations should be encouraged to take steps to eradicate tuberculosis among cattle.

(11) The legal and epidemiological aspects of the problem of tuberculosis among migrants will be studied by the Expert Committee.

(12) The tuberculosis programme shall be reviewed and evaluated at regular intervals.

(13) Demonstration teams should be made available at the earliest moment to deal with emergency problems by BCG vaccination and the identifying of infectious cases.

(14) A Tuberculosis Control Office should be established within the World Health Organization.

(15) The Committee on Tuberculosis should consist of from nine to twelve members and should act as the advisory experts to the WHO, and there should be at least two regular sessions of this Committee each year.

(16) The time of the next session of the Expert Committee should be not later than January 1948.
VII. EXPERT COMMITTEE ON THE UNIFICATION OF PHARMACOPOEIAS

REPORT ON THE FIRST SESSION

Held 13-17 October 1947, Palais des Nations, Geneva

(presented to the Interim Commission at its fourth session). 1

Outline.

1. Introduction.
3. Preparatory work for the International Pharmacopoeia undertaken during the session.
4. Programme of future work.
5. Recommendations.
6. Appendices.

1. Introduction.

At the third session of the Interim Commission of the World Health Organization held in Geneva in April 1947, it was decided to set up an Expert Committee on the Unification of Pharmacopoeias to continue the work of the Technical Commission of Pharmacopoeial Experts of the Health Organization of the League of Nations. The Chairman and Executive Secretary of the Interim Commission, with the approval of the health authorities of the Governments concerned, appointed the following five members:

Professor H. Baggesgaard-Rasmussen, Chairman, Chemical Division of the Danish Pharmacopoeia Commission, Copenhagen, Denmark;
Professor E. Fullerton Cook, Chairman, Committee of Revision of the United States Pharmacopoeia, Philadelphia, Pennsylvania, United States of America;
I. R. Fahmy, Ph. D., Professor of Pharmacognosy, Fouad I University, Cairo, Egypt;
Dr. C. H. Hampshire, Secretary of the British Pharmacopoeia Commission, General Medical Council Office, London, United Kingdom;
Dr. R. Hazard, Professeur de Pharmacologie et de Matière médicale à la Faculté de Médecine de l'Université de Paris, France.

The Expert Committee held its first session in Geneva from 13 to 17 October 1947, at which all the members were present with the exception of Professor Hazard, who was unfortunately prevented by illness from attending. At the opening meeting, a draft agenda was adopted with modifications, and Dr. C. H. Hampshire was elected Chairman.

Dr. R. Gautier and Dr. W. M. Bonne represented the Secretariat.

The report which follows, prepared by the Chairman at the request of the Committee, represents the views and decisions unanimously reached by the Committee.


The Committee reviewed in detail the work of its predecessor, the Technical Commission of Pharmacopoeial Experts set up by the Health Organization of the League of Nations, as outlined in the Minutes of its second meeting 2 and in its Interim Report 3.

The Committee agreed that the object of its work should be the same as that of the previous Commission namely, to produce a draft International Agreement for the Unification of Pharmacopoeias, modifying and extending the existing Agreement for the Unification of the Formule of Potent Drugs, and to present the draft Agreement as an International Pharmacopoeia, similar in form to the present-day national pharmacopoeias. It was understood that such an International Pharmacopoeia could have no authority in any country until it had been adopted officially by that country.

The Technical Commission last met in May 1939, and its report was examined in the light of changed conditions and in view of the modern developments in medical and pharmaceutical knowledge and practice.

It was decided to continue the main part of the work, the preparation of draft monographs, along the lines adopted by the previous Commission. Each member of the Committee agreed to prepare monographs upon specified drugs, and Professor Baggesgaard-Rasmussen agreed to supply comparative information on the treatment in the different national pharmacopoeias.

(a) General Rules.

The Chairman agreed to prepare a revised draft extending and completing the General Rules as set out in the Interim Report. The rules of the national pharmacopoeias would be taken into consideration, and those which had already been published in the Interim Report would be considered for incorporation in the new draft.

(b) Approximate Estimate of Spoonfuls.

After discussion, the Committee decided not to include any statement defining standard spoonfuls.

(c) Chemical Nomenclature and Formulae.

The Committee decided to include wherever appropriate systematic chemical names in the monographs, and to follow any international rules that might be available for chemical formulae. The final decision as to the style of graphic formulæ should be taken later with the help of expert chemists.

(d) Botanical Nomenclature.

The Committee decided to describe vegetable substances by their scientific Latin names, following the International Rules of Botanical Nomenclature prepared by the International Botanical Congress. In case of difficulty, it was agreed that the Chairman should consult with the Director of the Royal Botanical Gardens, Kew.

(e) Style and Arrangement.

The Committee approved in general, but subject to minor modifications, the style and presentation of the monographs which had been drawn up and adopted by the previous Commission. Professor Cook undertook to send copies of the stylebook compiled for the use of the United States Pharmacopœia Commission, to the members of the Committee.

On the question of the arrangement of the sections in the monographs, the Committee decided that it would be preferable for the present to adopt the arrangements approved by the Technical Commission, and to make at a later stage any rearrangements that might be required.

(f) Synonyms.

The Committee discussed the use of synonyms and the extent to which they should be included in the monographs. It was decided to defer decision for the present, pending consideration of a report on this subject which Professor Cook agreed to prepare.

(g) Freezing, Melting and Boiling Points.

The Committee was of the opinion that a report on the methods used for the determination of freezing, melting and boiling points should be prepared. Professor Baggesgaard-Rasmussen stated that one of his assistants had been engaged on this problem, and the Committee accepted his offer to supply members with a copy of this report. It was also decided to adopt the term "range" in all suitable cases in place of "point".

(h) Measurement of Colour and Clarity.

After a discussion on the measurement of colour and clarity, especially in regard to the use of coloured glasses and the colour-matching fluids of the United States Pharmacopœia, Professor Baggesgaard-Rasmussen reported that Dr. F. Reimers, of the Laboratory of the Danish Pharmacopœia Commission, had done valuable work on this subject, and had found that the colour-matching fluids of the United States Pharmacopœia with certain modifications gave reliable results. The Committee decided to accept the report of Dr. Reimers on this subject.

(i) Incompatibilities.

After a discussion as to whether the international pharmacopœia should include information on incompatibilities, the Committee decided that, while this information was included in certain national pharmacopoeias, in accordance with national practices and to comply with national legislation, it was not necessary in an international pharmacopœia.

(j) Doses.

Professor Cook questioned the inclusion in the monographs of maximal doses, which are not stated in the United States Pharmacopœia. After discussion, the Committee agreed, in view of the legal position in France and some other countries, that maximal doses should be included, in order to indicate the quantities which must not be exceeded in dispensing, without express instructions from the prescribing physician. It was decided not to include the dosage in each monograph, but to provide the information in tabular form. Such a table of doses should include mode of administration, usual doses, and maximal doses both single and daily.

(k) Monographs.

The Committee decided that each member should examine the monographs printed in the Interim Report, and should send any criticism and revision to the Secretariat.

3. Preparatory Work for the International Pharmacopœia.

(a) Scope of the International Pharmacopœia.

The Committee discussed the scope and content of an international pharmacopœia. Professor Cook wished it to be extended so as to present to medical men a comprehensive list of the drugs considered to have outstanding value in medical practice. Such a list might be divided into two sections, a primary list of the essential drugs, and a secondary list of less important but useful drugs. It was decided that, for the present, monographs should be prepared only of the essential drugs.

The inclusion of other material, such as surgical suture, dressings, was also discussed. The Committee was of the opinion that international standards and specifications for such material should be established, and thought that, as soon as an

1 See Bull. Hlth. Organ., 1945-46, 12, 119.
international pharmacopoeia proper had been prepared, the terms of reference of the Expert Committee should be extended so as to include consideration of the establishment of international standards for such materials.

(b) Arrangement of the International Pharmacopoeia.

A general discussion took place on the question as to whether preparations of drugs, such as tinctures, etc., should be grouped together, as is the practice of some national pharmacopoeias, or whether the American practice of placing them under the name of the drug itself should be adopted.

The Committee felt that, as the international pharmacopoeia was intended primarily for the use of national pharmacopoeias, and only secondarily for the use of the medical profession, it would be better to group the preparations together. It was decided, however, that any final decision should be deferred until the Committee should have been enlarged.

(c) Biological Standardisation.

After discussion, it was decided to include in the international pharmacopoeia the preparations standardized by the Expert Committee on Biological Standardization.

(d) Patented Drugs and Trade-marks.

The Committee discussed the inclusion of patented drugs and the use of trade-mark names in an international pharmacopoeia in view of possible legal complications. It was realized that extensive enquiries would be necessary in order to ascertain the world position regarding patent rights in the manufacture of drugs, and trade-mark rights in names proposed for international use. The Committee decided to request the Secretariat to obtain legal advice on the position which might be created by the inclusion, in an international pharmacopoeia, of a drug the sole method of manufacture of which was patented, or by the use of a name which was the subject of a trade-mark. It was suggested that the trade-mark position might be met by the inclusion of the following paragraph in the introduction to the pharmacopoeia: "In parts of the world in which any of the names used is a trade-mark, this name should be applied only to the product of the particular firm owning the trade-mark".

(e) Medical Advisory Committee.

The Committee considered the possibility of establishing a medical advisory committee to assist the work of the Expert Committee. After discussion, it was felt that the formal establishment of such a committee was unnecessary, and it was agreed that the Secretariat should be asked to provide any necessary medical comment on as wide an international basis as possible.

(f) Reference Sub-Committee on Galenical Pharmacy.

In view of the fact that galenical preparations are now of less importance in medicine and pharmacy than formerly, their place being taken by the new synthetics, alkaloidal principles and injectable materials, the Committee decided not to re-establish, at the present stage of the work, the Reference Sub-Committee on Galenical Pharmacy appointed by the previous Commission.

(g) Provisional International Secretariat of Pharmacopoeias at Brussels.

The Committee discussed the relationship of the Expert Committee with the provisional International Secretariat established at Brussels under the International Agreement of 1925. It was pointed out in discussion that the Belgian Pharmacopoeia Commission was entrusted with the work on a purely provisional basis, and that the preparation of an international pharmacopoeia would be greatly facilitated by the existence of a single unified Secretariat. The Committee recommended to the Interim Commission that the Executive Secretary be empowered to enter into negotiations with the Belgian Government for the establishment of a single international secretariat under the aegis of the World Health Organization. (See Section 5, Recommendation II.)

(b) Draft Monographs.

Thirty draft monographs were before the Committee, and during the course of the session all were discussed and accepted, with amendments where necessary. The list was as follows:

- Acidum Hydrochloricum
- Acidum Hydrochloricum Dilutum
- Adrenalinum
- Æther Anestheticus
- Arseni Trioxideum
- Asphærum Filix Mas
- Belladonnae Folium
- Belladonnae Folium Pulveratum Standardisatum
- Belladonnae Radix
- Cascara Sagrada
- Chloroformum Anestheticum
- Coffeïnum cum Natrii Benzoate
- Coffeïnum cum Natrii Salicylate
- Colchici Semen
- Digitalis Folium
- Digitalis Folium Pulveratum Standardisatum
- Ergota (except the Assay)
- Ergota Pulverata
- Ergotamini Tartras
- Hyoscyami Folium
- Iodum
- Ipecacuanha
- Ipecacuanhae Pulverata Standardisata
- Quinini Sulfas
- Scilla
- Stramonium
- Strychnos Nux Vomica Pulverata Standardisata
- Strychni Nux Vomicae Semen
- Theophyllinum
- Theophyllinum et Natrii Acetas.

4. Programme of Future Work.

(a) List of Drugs.

The Committee compiled a new and comprehensive list of drugs which should be considered for inclusion in an international pharmacopoeia.
It was agreed to divide the drugs into three categories, category A being assigned to those drugs deemed of primary importance for immediate attention and inclusion, category B to drugs which, though valuable, were not considered of sufficient importance to justify immediate attention, and category C to drugs which were discussed but not thought worthy of further attention. 543 drugs were considered, 248 of which were deemed of primary importance for immediate attention and inclusion, 73 monographs had now been approved by the Committee.

(b) Preparation of Monographs.

The Committee decided to allocate the preparation of the necessary monographs for the drugs in category A among the members present. It was agreed that, as Professor Hazard had unfortunately been unable to attend and participate in the discussions, he should be invited to act in the capacity assigned to him.

The drafting of the monographs was then allocated among the members, and the lists of the work undertaken form Appendix 3 of this Report.

(c) Preparation of Reports.

The Committee discussed the list of special reports to be prepared, both those which remained from the work of the Technical Commission and those the need for which had been shown in the course of the Committee's deliberations. The preparation of such reports was allocated among the members present (see Section 6, Appendix 1).

(d) Experimental Investigations.

The Committee considered the draft list of experimental investigations, which it revised in the course of discussion (see Section 6, Appendix 2). It was decided that each member should be responsible for any experimental investigations required during the drafting of the monographs assigned to him.

(e) International Nomenclature.

The Committee discussed the possibility of introducing international nomenclature for new drugs so as to avoid the present multiplicity of names for the same drug. While the Committee was fully agreed as to the desirability of and the necessity for the adoption of an international nomenclature for new drugs, it felt that this question should be reconsidered in the light of the legal advice to be provided by the Secretariat on the question of patented drugs and trade-marks.

(f) Membership of the Committee.

In view of the great amount of work required in the preparation of draft monographs and reports and of the desirability of providing as wide an international basis as possible, the Committee recommended that its membership should be increased by at least three members (see Section 5, Recommendation 1a).

(g) Relations with the Secretariat.

The Committee considered that its work would be greatly facilitated by the presence of specialized staff familiar with the work of pharmacopoeial revision on the Secretariat, and therefore recommended the appointment of such staff (see Section 5, Recommendation Ib).

(h) Date of Next Session.

The Committee recommended that its next session should be held during the latter part of May 1948.

The Committee wished to record its thanks to the Secretariat and the members of the Committee for their assistance during the session.

Professor Cook expressed the thanks of the Committee to the Chairman for his unfailing guidance during the deliberations of the Committee.

5. Recommendations.

The Expert Committee for the Unification of Pharmacopoeias submits the following recommendations for the consideration of the Interim Commission:

Whereas the preparation of draft monographs entails much detailed work on the part of the individual members of the Committee,

Whereas the additional list of drugs under study for inclusion in the International Pharmacopoeia is so comprehensive that it would be impossible for the present members to finish the task within a reasonable time,

Whereas it is essential for the International Pharmacopoeia to be completed as expeditiously as possible,

Whereas it is felt that a more representative opinion is essential for the establishment of the International Pharmacopoeia on a truly international basis,

And whereas the work would be greatly facilitated by the presence of suitably specialized staff on the Secretariat capable of undertaking preparatory and editorial work,

The Committee recommends:

I. (a) that the Committee be increased by at least three members,

(b) that a suitably qualified specialist be added to the staff of the Secretariat.

Whereas Article 35 of the Final Protocol of the Second International Conference for the Unification of the Formulæ of Potent Drugs, Brussels, 1925, reads as follows:

"The Organizing Committee shall urge the Belgian Government to enter into negotiations with the League of Nations with a view to the definite Constitution of the Permanent Secretariat, and of the other Committees which the Conference has in principle decided to set up."

"Meanwhile, the Belgian Pharmacopoeia Commission will, purely provisionally, be entrusted with the work of the projected Organization so as to lose no time and to enable the Secretariat to continue its work as soon as it has been finally set up"
Whereas the functions of the League of Nations Health Organization have been transferred to the World Health Organization or to its Interim Commission (by the International Acts signed at New York on 22 July 1946),

Whereas it was clearly indicated in Article 35 quoted above that the Secretariat to be set up at Brussels was to be purely provisional,

Whereas the Expert Committee for the Unification of Pharmacopoeias established by the Interim Commission has been entrusted with the preparation of an International Pharmacopeia,

Whereas such a task would be greatly facilitated by the existence of a single unified Secretariat, THE COMMITTEE RECOMMENDS:

II. that the Executive Secretary of the Interim Commission be empowered to enter into negotiations with the Belgian Government for the establishment of a single International Secretariat for Pharmacopoeias under the aegis of the World Health Organization or of its Interim Commission.

6. Appendices.

1. Preparation of Reports.

Professor Baggesgaard-Rasmussen agreed to report on:
   - The methods of determining boiling, freezing and melting points (with the assistance of Professor Fahmy).

Professor Cook agreed to report on:
   - The use and inclusion of synonyms,
   - The solubility of Theophyllinum et Natrii Acetas.

Professor Fahmy agreed to report on:
   - The general principles of alkaloidal assays,
   - Standards for the fineness of powders;
   - And to assist Professor Baggesgaard-Rasmussen in:
     - The methods of determining boiling, freezing and melting points.

Dr. Hampshire agreed to prepare:
   - A revised draft of the General Rules,
   - A list of reagents,
   - A list of qualitative and limit tests; and to report on:
     - The standardization of ergot,
     - The methods of preparing sterile solutions.

The Secretariat agreed to report on:
   - The legal position on the inclusion of patented drugs and trade-mark names,
   - The standards for fineness of powders defined by the Commission Internationale de Standardisation.

2. Experimental Investigations.

Professor Baggesgaard-Rasmussen agreed to investigate:
   - The chemical standardization of Thyroideum,
   - The limits of ash, acid-insoluble ash and sulphated ash,
   - The applications of chromatographic methods to pharmacopoeial work,
   - The pH of available supplies of Barbitalantrium.

Professor Cook agreed to investigate:
   - The applications of spectrophotometric methods to pharmacopoeial work.

Professor Fahmy agreed to investigate:
   - The methods of sampling of vegetable and animal drugs,
   - The chemical standardization of alkaloidal crude drugs.

Dr. Hampshire agreed to investigate:
   - The chemical standardization of alkaloidal salts.

3. Preparation of Draft Monographs (Category A).

Professor Baggesgaard-Rasmussen agreed to prepare draft monographs on:
   - Acriflavina
   - Amphetamina
   - Amphetamine Sulphas
   - Amyleni Hydras
   - Argenti Nitras
   - Argentum Proteinicum Forte
   - Benzylys Benzoas
   - Calcii Gluconas
   - Calcii Lactas
   - Carbacholum
   - Chinofonum
   - Chloraminum T
   - Cresol
   - Formaldehydum
   - Glycerylis Trinitras
   - Injectio Mersalyli et Theophyllini
   - Mersalyhum
   - Neostigmine Bromidum
   - Neostigmine Methylsalphas
   - Pentazol
   - Pethidine Hydrochloridum
   - Phenytoinum Sodium
   - Potassii Bromidum
   - Potassii Iodidum
   - Profavaines Hemisulphas
   - Sodii Bromidum
   - Sodii Citras
   - Sodii Iodidum
   - Sodii Salcylas
   - Suraminum Sodium
   - Tetrachloroethylenum
   - Thyroideum
   - Tribromoethanolis
   - Unguementum Hydrargyri

Professor Cook agreed to prepare draft monographs on:
   - Acidum Nicotinicum
   - Äether Vinylicus
   - Äthisteronum
   - Äthylis Aminobenzoas
   - Amino Acid Preparations
   - Aneurine Hydrochloridum
   - Butacain Sulphas
   - Butylis Aminobenzoas
   - Calciferol
   - Carbonei Dioxidum
Desoxycorticosteroni Acetas
Diethylstibboestrol
Digitoxinum
Digoxinum
Gonadotrophinum Chorionicum
Histamine Phosphas Acidus
Injectio Epinephrine (Adrenaline)
Injectio Hepatis
Injectio Insulini
Injectio Insulini Protaminaticum Zinco
Injectio Oxytocini
Injectio Vasoressinii
Lanatosidum C
Liquor Epinephrina Hydrochloridi
Liquor Hepatis Purificatus
Menadionum (Menophthonum)
Mepacrine Hydrochloridum
Methyltestosteronum
Nitrogenii Monoxidum
Oestradiol
Oestradiolis Monobenzoas
Oestronum
Oleum Hippoglossi
Oleum Morrhue
Oxygeuniun
Filocarpine Hydrochloridum
Pituitarium Posterus
Progressorum
Riboflavina
Streptomyccin
Testosteroni Propionas
Tetracainum Hydrochloridum
Theophyllina cum Ethylenediamina
Totaquina
Tuberculini Derivatum Proteinicum Purificatum
Tuberculinum Pristinum

Professor Fahmy agreed to prepare draft monographs on:

\( \ddot{A} \)thylis Chloridum
Aloe
Aloium
Amylis Nitris
Apomorphine Hydrochloridum
Aspidii Oleoresina
Barii Sulphas
Bismuthi Carbonas
Bismuthi Salicylas
Carbonii Tetrachloridum
Codeinae Phosphas
Codeinae Sulphas
Colchicina
Ephedrina
Extractum Belladonne Siccum
Extractum Cascara Sagradae
Extractum Nucis Vomicae
Ferri Sulphas
Ferri Sulphas Exsiccatus
Ferrum Citricum Ammoniatum
Hyoscyamus Muticus
Liquor Arsenicis
Liquor Potassii Arsenitis
Morphiini Hydrochloridum
Morphiini Sulfas
Oleum Chenopodii
Oleum Ricini
Opium
Opium Pulveratum Standardisatum

Oxymel Scilla
Phenol Liquifactive
PicROTOXINUM
Strophanthin K
Theobromina et Sodii Acetas
Theobromina et Sodii Salicylas
Tinctura Aconiti
Tinctura Belladonnae
Tinctura Colchici
Tinctura Digitalis
Tinctura Hyoscyami Mutici
Tinctura Hyoscyami Nigri
Tinctura Ipecacuanhæ
Tinctura Nucis Vomicae
Tinctura Opii
Tinctura Opii Benzoica
Tinctura Scillae
Tinctura Stramonii

Dr. Hampshire agreed to prepare draft monographs on:

Acetarsol
Acidum Benzoicum
Antimoni et Sodii Tartras
Antimoni et Sodii Thioglycollas
Antitoxinum Diphtericum
Antitoxinum Gas-Gangrenosum
Antitoxinum Scarletinum
Antitoxinum Tetricum
Carbasonum
Chloroformum
Dichlorophenarsine Hydrochloridum
Emetine Hydrochloridum
Ergometrinae Maleas
Ergotamine Tartras
Heparinum
Neoarsphenamina
Oxophenarsine Hydrochloridum
Penicillium
Solutiones Iodi
Succinyl sulphathiazolum
Sulphadiazina
Sulphadiazina Sodium
Sulphaguanidina
Sulphamerazina
Sulphamerazina Sodium
Sulphanilamidum
Sulpharsphenamina
Sulphathiazolum
Sulphathiazolum Sodium
Thiopentonum Sodium
Toxinum Diphtericum Diagnosticum
Toxoida Diphterica Alumen-Practicata
Toxoida Diphterica et Tetrica
Toxoidum Diphtericum
Toxinum Scarlattinum
Toxinum Tetanicum Detoxicatum
Tryparsamidum
Vaccinum Cholericum
Vaccinum Febris Flavæ
Vaccinum Pestis
Vaccinum Typhi Exanthematici
Vaccinum Typho-Paratyphosum
Vaccinum Typhosum
Vaccinum Vaccina

Finally, Professor Hazard was asked to prepare a draft monograph on:

Vaccinum Rabies.
VIII. EXPERT COMMITTEE ON VENEREAL DISEASES

REPORT ON THE FIRST SESSION

Held 12-16 January 1948, Palais des Nations, Geneva

(presented to the Interim Commission at its fifth session). 1

Outline.

1. Introduction.
2. Delineation of the Problem.
3. Fields of Activity:
   (a) Training facilities, fellowships, lectureships;
   (b) Serological standardization and laboratory aspects;
   (c) Availability of drugs;
   (d) Evaluation of treatment;
   (e) Health education;
   (f) Research;
   (g) Venereal-disease information;
   (h) Prophylaxis;
   (i) Unification of nomenclature for causes of morbidity and deaths;
   (j) Relations with other international organizations;
   (k) Assistance to Governments.
4. International Health Regulations for Venereal Diseases.
5. Presentation of the Polish Anti-syphilis Plan.
6. WHO Committee on Venereal Infections, a Section in the WHO Secretariat on Venereal Diseases, and Finance.

At the second session of the Interim Commission, a joint resolution by Brazil, France and Norway requested that venereal diseases be entered on the agenda of the Interim Commission. At its third session, the Interim Commission decided to carry out a preliminary survey on the nature and the extent of the problem. At its fourth session, the establishment of an Expert Committee on Venereal Diseases was decided, the terms of reference being:

"that a survey with regard to scientific, practical, and other aspects of the problem be pursued, with a view to developing practical plans for international combating of venereal diseases", and "to prepare a report for consideration by the Interim Commission at its fifth session for eventual recommendation to the first World Health Assembly".

With the approval of the Chairman of the Interim Commission, the Executive Secretary appointed, with the consent of the respective Governments, the following members to the Committee:

1. Professor Waldemar E. Coutts, Chief, Department of Social Hygiene, Public Health Administration, Santiago, Chile;

2. Professor Marian Grzybowski, Chief, Clinic of Dermato-Syphilology, University of Warsaw, Poland;
3. Dr. John F. Mahoney, Medical Director, Venereal Disease Research Laboratory, United States Public Health Service, Staten Island, New York, United States of America;

The participation of a Soviet Union specialist was invited, but no candidate was suggested to the Interim Commission Secretariat. The Expert Committee on Venereal Diseases met in Geneva 12-16 January 1948. All members were present. Dr. J. F. Mahoney was elected Chairman. Dr. G. L. M. McElligott took the Chair during the discussion on the Brussels Agreement. Dr. T. Guthe was Secretary to the Committee. Also present were Drs. J. Suchanek and D. Borenstein, of the Venereal Disease Division of the Polish Ministry of Health, Dr. Hantchef of the League of Red Cross Societies, and Dr. Bor6i6, liaison officer, UNICEF. Dr. W. Burckhardt, liaison officer for the International Union against the Venereal Diseases, attended the last meeting.

The following report, unanimously adopted by the Committee, is submitted to the Interim Commission of the World Health Organization for its action and consideration. It was agreed to submit recommendations included in this report for consideration of the Interim Commission with a view to their submission to the World Health Assembly.

1. Introduction.

It is recognized that venereal diseases represent a world health problem of great magnitude, and that the Committee is fully in accord with the views of the Interim Commission that malaria, tuberculosis and venereal diseases deserve the highest priorities among the important activities of the WHO, and that in several respects the venereal-disease problem has a distinct international character, brought out particularly during and after the recent war.

The relative importance of many aspects of venereal-disease control has undergone major changes in the last few years. In the therapy of syphilis, penicillin has removed most of the dangers and many of the drawbacks formerly associated with arsenic, heavy metal and other therapy, and has introduced a hopeful outlook for prevention of congenital syphilis in the newborn by treatment of pregnant syphilitic mothers. Gonorrhoea has lost much of its capacity to injure the human being, and the minor venereal diseases have shown a satisfactory response to chemotherapy. In the field of diagnosis, better culture techniques have added to the recognition of the gonococcus. The development of cardiolipin lecithin antigens holds promise of removing some of the uncertainties in serum diagnoses of syphilis.

In planning for future international activities in the field of venereal diseases it would appear desirable to attempt an early evaluation of the impact which will be exerted on the general situation by these advances. These have probably not been operative for a sufficiently long period of time or over a wide enough geographic area to exert a demonstrable influence on the world-wide venereal-disease picture. National and international venereal-disease control activities recommended at the present may become obsolete or may require realignment within the next few years, when a more precise appraisal of the influence likely to arise becomes possible.

While a hopeful vista is apparent today, there is not any assurance that the favourable situation will persist. As long as the therapeutic agents upon which reliance is now being placed continue to be effective, satisfactory progress in control of the communicable stages of the venereal diseases may be anticipated. It is not beyond the range of possibility, however, that the present antibiotics may encounter a progressively increasing resistance on the part of the causative organisms of gonorrhoea and syphilis. In that event, the control forces would be in a discouraging position, unless and until a replacement for the present agents would be developed. Although no evidence of resistance has been observed up to the present, it would appear provident to press national and international control programmes as vigorously as possible while entirely adequate implements for the managements of the diseases are available.

Action now through public health, scientific, and other measures, in each country and internationally, would gain such advantage which would contribute most fully to shrink the reservoirs of venereal infections.

The Committee recognizes that in all countries venereal diseases represent a health problem with vast social implications. In view of the terms of reference of the Committee—to propose plans for international combating of venereal infections—the Committee takes notice that many of the social aspects of the problem are at present under consideration by the United Nations and other international organizations. Until such definite programmes have been outlined, the WHO may find it advisable to concentrate on the public health and medical aspects of the problem as the essential basis for international combating of these infections.

Realizing the responsibility placed on the Committee by the Interim Commission under its terms of reference, and considering the statutory obligations of the WHO under its Constitution, as well as the views of Governments obtained through the preparatory work of the Interim Commission Secretariat, the Committee is of the opinion that the activities outlined in the report are essential for the programme of the WHO in international combating of venereal diseases. These activities will require a permanent Committee on Venereal Infections, to advise the WHO, and a section on venereal diseases as part of the administrative framework of the Secretariat.

2. Delineation of the Problem.

An accurate determination of the magnitude of the problem through the conduct of serological surveys and through the medium of other devices for collecting information on incidence would constitute the desirable approach to the formulation of national and international programmes for the combating of venereal infections. Countries should be encouraged to record at least basic data. It should be one of the activities of the WHO Secretariat to collect data in an effort to map systematically the nature and extent of the global problem of venereal diseases. In view of the protracted delay entailed by this approach, however, and the weight of the opinion that a basic structure should now be designed, capable of functioning under any particular set of circumstances, it is considered justified to proceed with the organization of international activities in the field of venereal diseases.

The major emphasis of the venereal-disease problem should be placed on the control of syphilis with gonorrhoea, chancroid, lymphogranuloma venereum and granuloma inguinale, considered in that order of relative importance. In view of reports from many countries on the increasing importance of genito-infections of unclassified or ill-defined origin, the possibility of new entities of venereal infections being recognized in the future should be stressed. Collection of data on these conditions is desirable.

Although the late manifestations of syphilis are important from the standpoint of medical care and should be considered in any extensive inter-
national venereal-disease programme, the early infection is the stage of the disease which primarily warrants public-health attention. This statement risks being invalidated by the production of evidence indicating an active rôle of the late or latent infections in the transmission of the disease.

In support of the allocation of priorities, the Committee desires to record the following:

1. Antibiotic therapy appears to have transformed gonorrhea from a disease of great chronicity with frequent recurrences, with great tendency to troublesome complications and protracted disability, to an infection readily amenable to treatment and with almost complete freedom from complications or tendency to relapse.

2. Chancroid responds promptly to sulphonamide therapy in the majority of instances without extensive tissue damage and prolonged disability. Its principal importance apparently lies in the frequency with which chancroidal lesions may harbour evidence of a concomitantly acquired syphilis.

3. Lymphogranuloma venereum in the acute phase yields readily to sulphonamide therapy. The incidence of the disease is not great except in certain geographic areas and certain social strata. The degree of disability usually encountered is not great except in chronic stages, as represented by a rectal stricture esthiomene and elephantiasis penis et scrota.

4. Granuloma inguinale is a disease of minor prevalence, except in certain geographic areas and certain races. Satisfactory response is reported to streptomycin therapy.

In view of the above, it is recommended that international venereal-disease activities should place major emphasis upon the detection and treatment of early syphilis, with a proviso that special consideration be given to the remaining members of the venereal group of diseases where special geographical or racial considerations pertain, and in the spread of venereal diseases from country to country.

3. Fields of Activity.

(a) Training facilities, fellowships, lectureships.

The Committee takes notice of the statutory obligations of the WHO to promote improved standards of teaching and training in the health, medical and related professions.

In many countries today, there is an inadequate number of trained personnel available in the venereal-disease field. The diagnosis, prevention, treatment and control of these infections have undergone major changes in the past decade. It appears timely to consider the venereal diseases, including their laboratory aspects, as a separate entity within the fields of medicine and of public health. An appreciation of the changes in the venereal-disease field in the last decade is essential for the development of effective venereal-disease control programmes. To this end, it appears of primary importance to establish training facilities in the several departments of control work at the earliest possible moment.

The fields in which medical officers are needed and which would be important nationally and internationally are: administration and epidemiology, and clinical and laboratory aspects.

The selection of physicians, nurses and laboratory workers for training should be done with the object of making available personnel capable of subsequently conducting demonstrations and/or establishing training facilities in countries or in geographic areas where the need for intensive activity is pressing.

In this connexion it is desired to express the willingness of the United States Public Health Service, in order to start this programme, to make the training facilities of the United States Marine Hospital and the Venereal Disease Research Laboratory, Staten Island, New York, available for such key medical personnel as may be required to launch programmes to be subsequently outlined.

It is recommended that twelve venereal-disease fellowships be provided in the first year and that training facilities in various countries be studied and designated by the WHO with a view to expanding this part of the training programme.

It is further recommended that six lectureships be provided for outstanding specialists in the venereal diseases, to visit countries at their request.

(b) Serological Standardization and Laboratory Aspects.

An effective control programme is dependent, to a major degree, upon the efficient conduct of serological tests for syphilis. At the present time, a wide variety of distinctive methods, employing as an indicator either the complement fixation or the precipitation phenomenon, is in use in different parts of the world. All of these methods have limitations. No single test or combination of tests completely covers the field of clinical syphilis. All are capable of being influenced by reacting substances produced by infections and disease conditions other than syphilis. A close scrutiny of the entire situation will be required if sound information is to be the basis for international activities in the field of serology.

There is a great lack of uniformity in procedure and technique, which has, in the past, had the effect of producing confusion and of rendering valueless many studies of the serology of syphilis. It may cause an individual to be considered as having syphilis in one country and as being free of suspicion in another; as being syphilitic on one day and normal on the next.

Quantitative determinations of the reacting substance are essential to the most advantageous use of penicillin in the treatment of syphilis, especially in early infections. The serology curve as portrayed by successive quantitative determinations conveys to the clinician the degree of satisfactory progress, the presence of serologic relapse or of serologic failure in the individual patient. The pattern is also helpful in differentiating relapse and reinfection. The quantitative procedures throw an additional burden of technical work upon the serology laboratory and introduce even greater opportunities for discrepant and inconsistent findings.
Very recently, the advantages of the more stable and more uniform mixtures of cardiolipin and lecithin replacing the lipoidal antigens which have been employed in the tests for syphilis are becoming apparent. This circumstance may prove to be of great value to serology in syphilis, as it offers an opportunity of eliminating some of the variable factors encountered in the older type of antigens. Several years of additional experience, however, will be needed before the real value of this advance can be estimated.

If the maximum of usefulness is to be obtained from serology in syphilis, the following technical aspects will require detailed consideration:

(1) The selection and adoption of one technical method to be employed in the laboratory of the official health organization of the countries participating in the WHO programme. This selection would not militate against the conduct of any other test or tests but would stipulate that this procedure be employed in the exchange of information between nations.

(2) A concerted effort to bring the test methods employed in various parts of the world into a reasonable degree of uniformity as to the level of sensitivity.

(3) The selection of a uniform method for the reporting of the results of quantitative determinations.

(4) The standardization of technical methods as far as is possible.

The Committee recognizes the international importance of the efforts of the Health Organization of the League of Nations in the field of serological standardization. This work should again go forward.

The Committee takes notice of the statutory obligations of the WHO to standardize diagnostic procedures where necessary and to call such technical and other special international conferences which are within its competence. As a means of initiating steps to bring the laboratory phases abreast of clinical work in syphilis, it is recommended that an international conference of key serologists from representative areas be convened, on the model of the Technical Laboratory Conferences of the League of Nations and the Sero- logical Standardization Conferences of the United States Public Health Service.

For the conduct of preliminary studies, and for guidance on the preparation of the technical work essential to such an international gathering, the United States Public Health Service has expressed its willingness to make available the facilities of its Venereal Disease Research Laboratory, New York. To undertake other necessary preparatory work in this highly specialized field, it is further recommended that a sub-committee on serology to the suggested Committee on Venereal Infections be established. This sub-committee should commence to function before the end of 1948, and the International Serological Conference itself be called not earlier than 1950.

In an international effort towards uniformity of serological tests for syphilis, the WHO must have at its disposal at least one first-class reference laboratory, competent to guide international serological work and to teach and keep abreast of new developments. As a temporary measure, it is recommended that the potential services of existing laboratories should be explored in this respect.

Laboratory preparations of other venereal diseases—gonorrhoea, chancreoid, lymphogranuloma venerum and granuloma inguinale—as well as genito-infections of ill-defined and unclassified origin, may from time to time require consideration from the point of view of establishing internationally uniform procedures.

(c) Availability of Drugs.

Many countries have been lacking anti-venereal drugs since the war. Sulphonamides are the most widely available, but a shortage of arsenicals and bismuth is marked in several areas. Production of penicillin is limited to a few countries, and requirements for treatment of venereal and other diseases cannot be met in many countries owing to limited production and other technical reasons. Whilst penicillin preparations in the past have been issued in the amorphous form, demands for purified crystalline preparations are steadily increasing. While it is desirable that crystalline penicillin should be used for reasons of accurate dosage, tolerance, etc., the purification process results in as much as 30-50% decrease in the actual yield during manufacture. Crystalline penicillin should therefore be restricted to syphilis, and the amorphous form to gonorrhoea. It is considered that penicillin is often being wastefully used and that the medical profession should be warned that cumulative undue expenditure of the drug would further endanger its availability. All possible measures should be taken by the World Health Organization to encourage production and to ensure an equitable distribution of the antibiotic to all countries, particularly those where it is not now available. It is recommended that, as a basis for further development of this problem, the World Health Organization or its Interim Commission should study current production capacities, as well as penicillin requirements in the various countries.

(d) Evaluation of Treatment.

The advent of new anti-syphilitic drugs and methods of treatment during the last few years has introduced conditions essentially different from those prevailing at the time of the standardization work in the field of antisyphilitic therapy by the Health Organization of the League of Nations.

Developments in recent years have shown that, regardless of penicillin-arsenic-bismuth being used alone or in any combination, emphasis is put on the epidemiological aspect by the use of short-term treatment methods to break the chain of infection as quickly as possible. A precise optimal form of treatment cannot, however, be laid down, since these methods have not been applied long enough to permit a final evaluation of the results.

It is assumed that, on the basis of available data, it may be stated, however, that a minimum treatment schedule for early syphilis with penicillin should consist of not less than 4,000,000 units, given over a period of eight days, at the
rate of 60,000 units every two hours, for a total
of 90 injections, or 24-hourly injections of 500,000
units of penicillin in oil beeswax (POB). In gonorrhea, the therapy with penicillin should not be
changed because of the danger of aborting or
masking an early syphilis in the advent of the two
diseases being contracted simultaneously; serological
follow-up for six months after penicillin treatment
of gonorrhea would, however, seem advisable.

It is recommended that one of the tasks of the
proposed WHO Committee on Venereal Infections
should be, through suitable procedures, to make
available future evaluations of treatment methods
and to induce nations to adopt a reasonably accurate form of therapy. Evaluation of treatment
schedules might be facilitated by the calling of an
international meeting of experts on venereal
diseases when sufficient time has elapsed to permit
such evaluation.

(c) Health Education.

The Committee observes that the statutory
obligations of the WHO provide for assistance in
developing an informed public opinion among
all peoples in matters of health.

Opinions on the type of health education important
to venereal-disease control programmes appear to vary widely from country to country. If the WHO should establish a section on health
education, venereal diseases should be included,
to encourage national and international voluntary
organizations to assume responsibility for informing
the public and gaining its support. If such a section were established, the Committee would be in
favour of considering the recommendation at a
later date of a sub-committee to the suggested
WHO Committee on Venereal Infections. This
sub-committee should be composed of trained men,
skilled in the art of public enlightenment, to
study the questions involved and evaluate measures
and procedures currently used in various countries.

(f) Research.

The Committee observes that it is within the
province of the WHO to promote and conduct research in the field of health.

There are a number of important investigative
problems in the venereal-disease field, the solution
of which would be beneficial to national and
international control work. Special problems might
require studies by experts in highly specialized
fields, and financial support of such research by the
WHO would appear desirable.

It is recommended that the activities of the WHO
in regard to research in the venereal diseases be
confined to financial support to organizations,
institutions or individuals who are considered
competent to carry to a definite conclusion the
study of significant problems bearing upon any of
the venereal infections.

It is recommended that the proposed WHO Committee on Biological Standardization.

(g) Venereal-Disease Information.

Most existing periodicals in the venereal diseases
are of national character, and there is need for a
critical international abstract periodical which
would provide information to health administra-
tions, public health officers and the medical
profession, and would contribute to liberalize
international interchange of medical and public
health information.

It is recommended that the possibility of es-
ablishing a specialized abstract periodical under the
egis of the WHO and other international organizations or of co-ordinating existing activities
in the field be explored by the Secretariat and
further considered by the proposed WHO Com-
mittee on Venereal Infections when it meets.

In many countries, particularly those ravaged
by war, great need exists for venereal-disease
information in general, particularly with regard to
recent developments in the field of epidemiology
and therapy. Assistance by the WHO in providing
venereal-disease textbooks, monographs, medical
periodicals, etc., would expedite venereal-disease
control programmes in such countries.

(h) Prophylaxis.

It is the opinion of the Committee that present
available personal and per-oral prophylactic methods
are not suitable for general use in civilian
populations. There is no reliable evidence that
per-oral prophylaxis based on penicillin is success-
ful. Should future developments in this field prove
of definite value in the control of venereal diseases,
the Committee would favour indicating a prophyl-
lactic procedure.

(i) Unification of Nomenclature for Causes of
Morbidity and Deaths.

The Committee takes notice of the statutory
obligations of the WHO to establish and revise
necessary international nomenclatures of diseases.
In considering the proposed unification list of
causes of morbidity and deaths, the Committee
approves the approach embodied in the unification
principle. In regard to the proposed groupings for
venereal diseases, it is recommended that liaison
be maintained between the proposed Committee
on Venereal Infections and the Committee on the
International Statistical Classification of Diseases,
Injuries and Causes of Death, for reciprocal
consultations whenever action on revision is taken.
Suggestions will be passed by the Expert Committee
to the Classification Committee.

(j) Relations with other International Organizations
in the Venereal-Disease Field.

It is recognized that several other international
organizations are carrying out activities contrib-
uting to venereal-disease control. The United
Nations and several other international organiza-
tions are considering programmes relating to the
social hygiene, educational and other aspect of the
problem. Full advantage should be taken of the
services of these organizations, and relations should
be established to co-ordinate future over-all planning
and action. Elsewhere in this report specific
reference has been made concerning mutual
problems appearing to require reciprocal consultations and action by such other international organizations.

Relations should also be maintained with non-governmental international organizations. The social implications of venereal diseases represent a field where these organizations can contribute to control programmes.

The Committee observes that the Interim Commission at its fourth session requested that the reports of the International Union against Venereal Diseases be included as part of the Committee's reference material. In considering these reports, the Committee approves the purposes and activities of this organization and the proposed establishment by the Union of a liaison committee with the WHO, as set forth in the resolutions passed at the first post-war assembly of the Union.

It is recommended that liaison be maintained by the WHO with other international governmental and non-governmental organizations carrying out activities contributing to venereal-disease control, in order that future over-all planning and action be co-ordinated.

(k) Assistance to Governments.

The Committee takes notice that, under the WHO Constitution, assistance may be extended to Governments upon request.

The Committee is of the opinion that, in venereal diseases, the WHO should be prepared to give expert advice to countries requesting information on the aspects of prevention, diagnosis, treatment and control, drawing on the experience of other countries.

It should also be prepared to inform Governments and health departments on legal aspects of venereal-disease control and to review periodically recent developments in this field. The Committee takes notice that the International Union against the Venereal Diseases is presently undertaking a systematic compilation of current venereal-disease laws and regulations in all countries and areas of the world. It would appear desirable that this project be supported by the WHO.

The WHO should be prepared to meet requests of Governments to send expert teams, with a view to demonstrating practical activities in one or more of the special fields of clinical, laboratory or administrative phases of control work. Such consultation and demonstration units should be made available, particularly to areas where knowledge of modern public health methods is limited.

The educational value of these teams would be considerable, and such equipment should be provided as would permit the authorities of the country itself, or organizations designated by them, to carry on the work after an initial demonstration period. Such teams should preferably be composed of personnel trained under the fellowship programme. The suggested units should not be put into the field until teams are available capable of carrying out an impeccable job.

Details of the composition of the teams and the minimum equipment required in such field consultation and demonstration units should be further discussed at the next meeting of the experts.

It is recommended that the WHO should be prepared to give advice to Governments on various aspects of venereal-disease control and should outline plans for field consultation and demonstration units, composed of qualified teams, which, at the request of Governments, could demonstrate practical venereal-disease control activities, these activities to be taken over by the countries themselves after an initial demonstration period.

4. International Health Regulations for Venereal Diseases, and the Brussels Agreement.

The Committee is in agreement with the principle expressed by the Economic and Social Council of the United Nations, June 1946, on the advantages of replacing diplomatic conventions in technical fields by international regulations, and takes notice of the Constitution of the WHO, authorizing the World Health Assembly to adopt such regulations in health matters. The Committee is further in accord with the views of several Governments that the Agreement respecting facilities to be accorded to merchant seamen for the treatment of venereal diseases (Brussels, 7 December 1924) be revised and expanded. In the opinion of the Committee, such revision and expansion should take place in the form of international health regulations for venereal diseases, and the Agreement should remain valid until the actual entry-into-force of the new regulations.

The Committee agrees with the views of several Governments that the expansion of the Brussels Agreement should include migratory groups other than seafarers (such as displaced persons, foreign workers, emigrants, etc.). It is, however, recognized that seafarers are particularly exposed to risks of venereal infections, and it is desirable that the principles of the Brussels Agreement be preserved in any new health regulations for venereal diseases. Further, due to their international epidemiological importance, seafarers should receive particular attention as regards the question of sick-pay (to those who might be deterred from undergoing anti-syphilitic treatment for fear of losing their ship).

The Committee takes notice that the United Nations, the ILO, and other international organizations are at present considering the problems pertaining to migratory groups, including seafarers, owing to the particular characteristics of this group.

Revision and expansion of the Brussels Agreement into international health regulations for venereal diseases should therefore be made by co-ordinating the activities of the organizations concerned.

In such international health regulations, the following basic principles should be embodied:

(1) Medical examination, treatment and drugs, and hospitalization where necessary, should be provided, all free.

(2) The services provided should be of the highest professional quality, and treatment applied, where ever possible, following optimal treatment schedules as might be recommended from time to time by the WHO Committee on Venereal Infections.

(3) An individual treatment book should be provided free of charge to the patient, where pertinent data regarding results of examinations, laboratory procedures, treatment, etc., should be entered.
(4) It would be advantageous to have an international list of treatment centres, including facilities available in inland towns as well as ports. This list should be revised at least every third year.

(5) The epidemiological necessity for treatment of infectious stages of venereal diseases is in the interests of the community concerned. A system of international contact tracing should therefore be established in such a way that each country agrees to communicate confidentially, under the professional seal of secrecy, directly to the public health authorities of other countries, the names and addresses of persons indicated as being a source of infection, so that the public health authorities of these countries will be able to take measures permitted under their legislations. To facilitate rapid epidemiological investigations, such communications should be sent by airmail.

(6) In every large port, it is desirable that a social welfare worker be available, the qualifications for whom should include some knowledge of venereal-disease treatment and its implications.

It is recommended that the Brussels Agreement be abrogated and replaced by a wider instrument in the form of international regulations for venereal diseases. This instrument should cover various categories of migratory groups, including sea-farers, and be based on the principles outlined.

The Expert Committee would be prepared to make a preliminary draft of such regulations in consultation with the Committee entrusted with the revision of sanitary conventions (Committee on International Epidemiological Control) for the consideration of the WHO and Governments.

5. Presentation of the Polish Anti-syphilis Plan.

The Committee takes notice of the anti-syphilis plan of the Polish Ministry of Health, as presented both by the representatives of the Ministry and in the documents made available to the Committee. After considering its technical and other aspects, the Committee wishes to express its approval of the plan as follows:

A mass attack on syphilis on a nation-wide scale with penicillin has, to the knowledge of the Committee, so far not been attempted anywhere in the world.

It is the opinion of the Committee that the plan, as presented by the Polish Ministry of Health, appears to be a well-rounded and well-planned method for the control of syphilis in that country. The principles which are embodied in the plan should serve as an effective means of combating a similar situation in other countries.

6. WHO Committee on Venereal Infections, a Section in the WHO Secretariat on Venereal Diseases, and Finance.

(a) Committee on Venereal Infections and Sub-Committee on Serology.

The international activities outlined, in the opinion of the Committee, can only be accomplished by the establishment of an advisory body of experts to the WHO, composed of ten to twelve specialists in public health, clinical venereology, and other aspects, with power to create special sub-committees. A Sub-Committee on Serology and Laboratory Aspects, composed of five members, should be appointed as soon as possible.

Meetings will be required as programmes and activities develop. The time and place of meetings should be tentatively set at the end of each session.

In view of the proposed activities in the field of serological standardization and the time necessary to prepare for the proposed international meeting of serologists, the Expert Committee is of the opinion that a meeting of the Sub-Committee on Serology should be held in September 1948 in New York and that the WHO Committee on Venereal Infections should also meet at that time.

(b) A Section in the WHO Secretariat on Venereal Diseases, and Finance.

The proposed Section in the WHO Secretariat on venereal diseases should be adequately staffed by highly qualified personnel. The structure of the section should be flexible in such a way as to permit of a rapid development of the international public health and medical activities in the field of venereology and to meet particular problems arising from new advances.

Adequate funds for the proposed WHO committees and the activities of the Secretariat should be provided, including funds for the particular proposals outlined. A translation of these activities into budgetary terms will be made at a later date.


(1) Introduction.

Considering the international character of the venereal-disease problem, the increased prevalence of venereal infections after the Second World War, the high degree of effectiveness displayed by new antibiotics in the management of these infections and the present favourable absence of resistance on the part of the causative organisms of syphilis and gonorrhoea, organizational programmes in international combating of venereal diseases should go forward as soon as possible under the aegis of the WHO and its Interim Commission.

Until definite plans on many of the social aspects of the venereal-disease problem now under consideration by the United Nations and other international organizations become available, the WHO may find it advisable to concentrate on the public health and medical aspects in international venereal-disease activities.

(2) Delimitation of the Problem.

In international combating of venereal diseases, major emphasis should be placed on detection and treatment of early syphilis, special considerations being given to the remaining members of the venereal group of diseases: gonorrhoea, chancroid, lymphogranuloma venereum and granuloma inguinale, in that order of relative importance, where
special geographical or racial considerations pertain and in the spread of venereal diseases from one country to another.

The nature and extent of the problem of venereal infections should be determined, as far as possible, in each country, and countries should be encouraged to record at least basic data.

(3) Fields of Activity.

(a) The Expert Committee recommends that:
- recruitment and training of professional personnel in the various departments of venereal-disease control work under a fellowship and lectureship programme;
- research in the venereal-disease field, financially supported by WHO, be confined to organizations, institutions or individuals capable of carrying to a definite conclusion the study of significant problems;
- information on venereal diseases be sponsored and provided to health administrations, public health officers, specialists and the medical profession in general;
- consideration be given at a later date to the requirements regarding health education and venereal-disease information for the public;
- the WHO be prepared to give expert advice on various phases of venereal-disease control work; and
- plans for field units, consisting of teams to demonstrate practical venereal-disease control activities be further studied.

(b) The Expert Committee further recommends that:
- uniform serological procedures in syphilis be sought and that an international conference on serological standardization and laboratory aspects be called under theegis of the WHO, not earlier than 1950;
- a special sub-committee on serology and laboratory aspects be established in 1948 under the proposed WHO Committee on Venereal Infections, to prepare for such a conference of key serologists;
- at least one first-class serological reference laboratory be at the disposal of the WHO; and
- the potential services of existing laboratories be explored.

(c) It is also recommended that:
- measures should be taken by the WHO to encourage production of penicillin and to ensure an equitable distribution to all countries;
- the WHO or the Interim Commission study current production and requirements of penicillin;
- the medical profession in each country be warned that cumulative undue expenditure would endanger the availability of penicillin.

(d) It is recommended that:
- evaluation of modern treatment methods be made available through appropriate procedures proposed by the WHO Committee on Venereal Infections when sufficient time has elapsed to permit such evaluation.

(e) It is finally recommended that:
- working relationships be established and maintained with other international governmental and non-governmental organizations contributing to venereal-disease control;
- close liaison be established between Expert Committees of the WHO where mutual problems are concerned.

(4) International Health Regulations for Venereal Diseases.

Considering the principle expressed by the Economic and Social Council of the United Nations on advantages of replacing diplomatic conventions in technical fields by international regulations, the authority of the World Health Assembly to adopt such regulations in health matters and the views of Governments on the desirability of revising and expanding the Brussels Agreement, it is recommended that:
- the Brussels Agreement be replaced by international health regulations for venereal diseases;
- such international health regulations include migratory groups other than seafarers;
- these regulations be based on the principles outlined in the report of the Expert Committee.

(5) Presentation of the Polish Anti-syphilis Plan.

The Expert Committee expresses its approval of the plan as presented by the Polish Ministry of Health, observing that the principles embodied might be of interest to other countries.

(6) Committee on Venereal Infections, a Section in the WHO Secretariat on Venereal Diseases, and Finance.

In order to carry out the programme in international combating of venereal diseases outlined, the Committee recommends that:
- an advisory body be established on venereal infections, with powers to create special sub-committees;
- a Sub-Committee on Serology and Laboratory Aspects be appointed as soon as possible;
- the proposed Committee and Sub-Committee meet in September 1948, in New York.

It is further recommended that:
- an adequately staffed section on venereal diseases be part of the administrative framework in the Secretariat of the WHO, to carry out essential activities, and that adequate funds be made available for the requirements of the proposed Committee, Sub-Committee, the Section in the Secretariat on Venereal Diseases and the specific proposals outlined.