LEAGUE OF NATIONS

CHRONICLE OF THE HEALTH ORGANISATION

Vol. I, No. 1 January 1st, 1939

I. BIOLOGICAL STANDARDISATION

Our therapeutic armoury comprises a whole series of remedies — sera, gland extracts, arsenobenzenes, vitamins, hormones — whose activity cannot be assessed except by comparison with that of a standard preparation in tests on animals. To express the results of such assays, a further idea has to be brought into play, that of " units of activity ". In the past, such a unit represented the dose which had to be administered to an animal to produce the effect taken as the criterion ; thus, there were rabbit units, mouse units, guinea-pig units and the like, in other words a multitude of biological units difficult to compare *inter se.* It has been the great achievement of the Permanent Commission on Biological Standardisation that it has brought order into this variety and has replaced the " biological units " by a unit corresponding to the activity exerted, on whatever experimental animal may be used, by a given weight of a single stable standard preparation.

Since 1921, this Commission has been devoting its energies to the establishment of standard preparations for international use and the definition of units of activity. If the system is to be kept abreast of advancing scientific knowledge, certain of these standards must obviously be reconsidered from time to time ; for instance, when a preparation containing impurities can be replaced by the active principle in the pure state, as has recently been the case for the standard of vitamin B_1 ; moreover, new standards are required for therapeutic agents which, like hormones, for example, are coming more and more into general use.

Annual subscription (post free) 5/– $1.25
Single number 6*d.* $0.15

The work which the Permanent Commission on Biological Standardisation has thus been conducting over a considerable period of time finds its fullest justification in the fact that thirty-nine countries have officially adopted the twenty-seven international standards which it has established, and that a number of these have made their use compulsory by embodying them in their pharmacopœæ.

The recent meeting of the serologist members of this Commission,[1] of which an account is given below, was called for three main purposes : to decide the adoption of standards for sera not yet included among the twelve already standardised, to provide for the replenishment of the stocks of certain standard preparations of which the demand had exceeded expectations, and to reconsider certain of the previously adopted standards whose use had raised new theoretical and practical problems.

The standard for *tetanus antitoxin*, which was adopted in 1928, is held, like all other international standard sera, by the State Serum Institute at Copenhagen, which acts as a central laboratory for the Health Organisation. Now, although the assays effected in relation to this standard were satisfactory for purposes of practical routine work, it was none the less true that the concordance of results was not as good as may be expected from a biological assay in spite of the many variable factors involved. In order to determine how far the factors likely to produce variations could be eliminated, the Commission drew up in 1934 an extensive research programme, the execution of which was entrusted to the laboratories of Buenos Aires,

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[1] The following were present :

Dr. Th. Madsen, Director of the State Serum Institute, Copenhagen *(Chairman)* ;

Dr. Percival Hartley, Director of the Department of Biological Standards, National Institute for Medical Research, Hampstead, London ;

Professor L. Hirszfeld, Director of the Department of Bacteriology and Experimental Medicine of the State Institute of Hygiene, Warsaw ;

Professor C. Ionesco-Mihaiesti, Director of the Sera and Vaccine Institute " Dr. I. Cantacuzino ", Bucharest ;

Professor Louis Martin, Director of the Pasteur Institute, Paris ;

Professor A. Sordelli, Director of the Bacteriological Institute of the National Department of Health, Buenos Aires.

Experts :

Dr. E. Grasset, the South African Institute for Medical Research, Johannesburg ;

Dr. Johs. Ipsen, the State Serum Institute, Copenhagen ;

Dr. F. Kauffmann, the State Serum Institute, Copenhagen ;

Professor E. Leclainche, Director of the Office international des Epizooties, Paris (attended the meeting on October 21st) ;

Dr. Margaret Llewellyn Smith, the National Institute for Medical Research, Hampstead, London ;

Professor M. Weinberg, Pasteur Institute, Paris ;

Mr. P. Bruce White, the National Institute for Medical Research, Hampstead, London.

Secretariat :

Dr. R. Gautier, Secretary to the Permanent Commission on Biological Standardisation.

Bucharest, Copenhagen, Hampstead and Washington. From the numerous assays performed under this scheme, it appears that the variations observed are not due to any lack of accuracy of the test itself, but to the circumstance that the toxins display qualitative differences. The toxin is thus the main factor, among the various influences likely to affect the precision of assay.

This raises a question of principle, namely : can the factor of variation inherent in the toxin be eliminated by recourse to a test toxin which would be distributed at the same time as the standard serum ? If this were so, the Commission would be called upon to select a toxin and to have it prepared in sufficiently large quantities to enable the official institutes and factories to use it for the test of their tetanus antitoxin production.

But this is not all. On the evidence of the assays conducted at various levels — that is to say, in which different doses of toxin have been taken as indicators of neutralisation by serum — it may be asked how far the antitoxin unitage which is given on tetanus antitoxin ampoules really indicates the prophylactic or therapeutic activity which the serum is capable of exerting. This is a theoretical question of outstanding importance, but one, however, which is not of practical moment, since the sera supplied at the present time are made up of mixtures in which the qualities peculiar to the various antitoxins — their " avidity " in particular — offset each other. In both these matters, the Commission held that further research was necessary ; this will be undertaken on the lines of a pre-arranged plan in the Institutes of Buenos Aires, Copenhagen and Hampstead.

The use of the international standard for *gas gangrene (perfringens)* antitoxin led to similar conclusions. It seems probable that, if the requisite precision of assay is to be attained, use will have to be made not only of the standard antitoxin, but also of a standardised test toxin. The Commission accordingly requested the Copenhagen Institute to prepare a suitable toxin for use in the comparative tests that are to be undertaken.

The standardisation of the *anti-snake-venom sera* is still in its initial phase, the Commission having decided, for the moment, to limit consideration to the venoms of the European vipers. Even within these limits, however, the problem is complex, for the venoms of the eighteen European species are all different ; some are fairly closely related to each other in antigenic structure, whilst others display quite specific antigenic properties and are hence not neutralisable by sera against the venom of another species. In these circumstances, the problem was to endow the sera with the requisite polyvalence and consequently to

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choose the venoms to be used as antigens in their production. The research carried out at the Copenhagen and Zagreb Institutes showed that the venoms to be selected were those of the asp, which is found in the south of France and the north of Italy, and of *V. ammodytes*, which occurs in the Balkans.

It was also demonstrated that individual specimens of the same species did not produce identical venoms, and that even samples of venom taken from the same snake at different times were not always alike. In these circumstances, it will be necessary to adopt a standardised test venom, since in no other way can assays be made comparable *inter se*.

Two international standards of *anti-pneumococcus* serum — namely, those corresponding to types I and II — were adopted in 1934. Since then, the serum therapy of pneumonia has made great strides ; thirty-two types of pneumococcus have been identified and this has made it possible to provide for the swift determination of the type of causative agent concerned and for treatment by means of the homologous serum with the striking clinical results which are now common knowledge. The question arose, therefore, whether standards should be established for other types, especially those most frequently encountered. Since this question is, at present, at a stage in which fresh developments are constantly taking place, the Commission took the view that no further *anti-pneumococcus serum standards* need be set up for the time being.

The study of *anti-anthrax serum* standardisation has been further prosecuted by the Bucharest and Szeged Institutes. Research has been specially directed to the elucidation of the part played in the immunisation process by the capsular antigen of the anthrax bacillus. This research is, however, still in its initial phase ; it will be continued on more extensive co-operative lines, the Paris Pasteur Institute and the Buenos Aires Bacteriological Institute having promised their support.

So far as *tuberculin* is concerned, the Commission thought it essential to establish side by side with the standard for Koch's old tuberculin set up in 1931, a subsidiary standard consisting of purified tuberculin produced in a synthetic medium and corresponding to the preparation known in the United States as " purified protein derivative " (P.P.D.). The advantages of this type of tuberculin are obvious ; it gives solutions which remain stable for nearly a month, it is sufficiently active to be used in diagnostic tests on cattle, and yields about the same percentages of positive reactions with a two-injection Mantoux test as the old tuberculin on the three-injection. The preparation of this new standard has been entrusted to the Copenhagen Institute.

NOTE CONCERNING THE "CHRONICLE OF THE HEALTH ORGANISATION"

The work of the Health Organisation forms the subject of a number of publications which are quite distinct in purpose and character. These publications may be classified as follows :

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The Weekly Epidemiological Record,[1] which contains mostly information on pestilential diseases, transmitted and published with the utmost speed in order to enable quarantine measures to be taken in good time in seaports and on land frontiers ;

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The Annual Epidemiological Report[3] reproduces these same particulars duly *supplemented and corrected* ; it also provides tabulated data on the different causes of sickness in the various countries.

In the East, the Singapore Bureau publishes a *Weekly Epidemiological Fasciculus* confirming and supplementing the information broadcast.

(*b*) The *Bulletin of the Health Organisation*,[4] which contains the various technical reports prepared for the Health Organisation by its Commissions or individual experts.

(*c*) The reports which the Health Committee submits for approval to the Council of the League of Nations on the activities of the Health Organisation, and the account of its work in the course of the year which it presents to the annual Assembly of the General Advisory Health Council.

(*d*) The Annual Report on the Work of the League of Nations, which is laid before the Assembly at its September session (documents A.6 and A.6 (*a*)).

(*e*) The various *communiqués*, articles and pamphlets issued by the Information Section of the Secretariat of the League of Nations with a view to keeping the public and the Press informed of the work of the League.

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price of single number 6*d*. $0.15

[2] Issued at the end of each month : subscription rate . . . 5/– $1.25
price of single number 6*d*. $0.15

[3] Published at the end of the year : average price 5/– $1.25

[4] Six issues per annum : subscription rate. 15/– $3.75
price of single number 2/6 $0.65

These publications can be obtained by application to the PUBLICATIONS SERVICE OF THE LEAGUE OF NATIONS, GENEVA, or its agents.

P. T. O.

These various publications still left a gap unfilled. There was need for a periodical publication which would keep members of the Health Organisation's Commissions, its various collaborators, doctors, scientists, public health specialists, health departments, scientific institutes and medical reviews and publications informed of the essential day-to-day activities of the Organisation. After a trial which proved conclusive, the Health Committee decided to create the publication which is appearing to-day. This "CHRONICLE OF THE HEALTH ORGANISATION" will be designed both to give an account of the work in progress and to provide information matter in as succinct a form as possible. It cannot, needless to say, take the place of the *Bulletin of the Health Organisation*, which will continue to publish the technical findings of the various bodies and workers acting for the Health Organisation. It will appear twice a month, and those who may wish to reproduce or publish extracts, more especially in the medical Press, are at full liberty to do so.

Apart from this, the Health Section of the Secretariat of the League of Nations is ready to supply any documentary material or supplementary information on application.

The Commission decided to replace the international *staphylococcus antitoxin* standard, the stock of which was nearing exhaustion, by a new preparation, and to label this " international staphylococcus α antitoxin standard ". It has recently been shown that the staphylococcus produces various kinds of toxin (α, β, γ) and that there are corresponding antitoxins endowed with distinct properties. Now the international standard antitoxin was obtained with a type–α toxin. The Copenhagen Institute has, however, been requested to prepare an antitoxin of type β, in order to provide for the contingency of its being used in the treatment of staphylococcus infections.

The Commission had before it a proposal for the establishment of a *Sordelli antitoxin*. The question of the Sordelli bacillus is one which is primarily of interest to the American continent, where cases of infection by this organism have been reported much more frequently than in Europe. In these circumstances, the antitoxin chosen as the international standard was that of the Washington Institute, the unit of activity to be defined only when a series of comparative assays have been carried out.

The Commission also considered the possibilities of standardising *anti-typhoid serum* and the *agglutination* tests, especially that of Widal.

Finally, it took note of the report presented to it by the Copenhagen Institute on the periodical testing of the various national *diphtheria antitoxin* standards in relation to the international standard. These tests showed a highly satisfactory degree of concordance.

* * *

From what has been said, it will be seen that the work of biological standardisation is progressing and expanding : it is of some interest to observe that the research it has entailed has raised afresh problems of outstanding theoretical importance that had been exercising the minds of many serologists. At the same time, the essential objective to be aimed at remains a practical one and may be briefly stated as follows : to make the results of the prophylactic and therapeutic use of biological agents comparable from country to country ; to place in the hands of the physician a reliable weapon with a known range of action ; to provide public health authorities with clear evidence for the rejection of any preparations which are below the requisite standard and, finally, to simplify the work of the producers, who, henceforth, need only assay their export products in terms of international units.

II. CURRENT ACTIVITY OF THE HEALTH ORGANISATION (Fourth quarter of 1938)

1. The *Health Committee* held its twenty-ninth session from October 12th to 15th, 1938. Its report, which will be examined by the Council at its meeting from January 16th to 21st next, will be dealt with in a future *Chronicle.*

The next session of the Health Committee has been fixed for May 4th, 1939. The Bureau of the Committee, however, will meet on January 20th, to take requisite decisions connected with the execution of the programme of work.

2. *The Fifth International Conference for the Revision of the Nomenclatures of Causes of Death* met in Paris from October 3rd to 7th. The preparation of this Conference was entrusted to a Joint Committee composed of representatives of the International Institute of Statistics and of the Health Organisation. The resolutions of the Conference and the nomenclatures adopted will be published at the beginning of 1939 in the *Revue* of the Institute and in the *Bulletin of the Health Organisation* (while the full report will be published by the French Government).

3. A consultation on *medico-social policy* was held from October 10th to 14th. It was attended by the Directors of the health services (or their representatives) of the following countries: Belgium, United Kingdom, Hungary, Latvia, Netherlands, Poland, Roumania, Switzerland. Its drafting committee[1] drew up a " General Outline of Medico-social Policy in Rural Districts of Europe ". This important document is for the guidance of the delegates to the European Conference on Rural Life (July 1939) and will leave the press at the end of January. It will be dealt with in a future number of this *Chronicle.*

4. The *Commission on Health Indices*[2] met on October 10th and 11th. As a result of its work, a certain number of indices characteristic of geographical, economic, social and public health factors which influence the state of health of a given group of the population were chosen. The report will be published in the *Bulletin of the Health Organisation* early in 1939.

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[1] Composed of Dr. René SAND *(Chairman)*, Secretary-General of the Belgian Ministry of the Interior and Public Health (Brussels); Dr. B. BORČIĆ, Director of the Institute and School of Hygiene (Zagreb); Dr. N. M. GOODMAN, Medical Officer, Ministry of Health (London); Dr. Béla JOHAN, Secretary of State at the Royal Hungarian Ministry of the Interior (Budapest); and Dr. M. KACPRZAK, Chief of Service at the Ministry of Social Welfare (Warsaw).

[2] Composed of Dr. J. PARISOT *(Chairman)*, Professor of Hygiene at the University of Nancy; Dr. R. M. ATWATER, Executive Secretary of the American Public Health Association; Dr. M. KACPRZAK, Chief of Service at the Ministry of Social Welfare (Warsaw); Dr. J. PATERSON, Medical Officer of Health (England); and Dr. J. TOMCSIK, Director of the State Institute of Hygiene (Budapest).

5. The serologists members of the *Permanent Commission on Biological Standardisation* met from October 19th to 21st. An outline of their deliberations is given above.

6. The representatives of *National Nutrition Committees*[1] met in Geneva from October 24th to 31st. The object of this meeting was to promote the requisite liaison between these National Committees.

They examined a handbook prepared by Professor Bigwood (Brussels), which was submitted by the Technical Commission on Nutrition. This handbook contains guiding lines for conducting surveys on the actual food consumption of selected population groups, combined with somatometric examinations and physiological tests on their state of nutrition. The final edition of this handbook will appear towards the end of January 1939.

At the same time, the possibility was considered of organising combined surveys to be co-ordinated by the Technical Commission, the results of which might be made available to the Conference on Rural Life.

7. The Advisory Committee of the *Eastern Bureau of the Health Organisation* met at Hanoi (Indochina) during the last days of November, on the occasion of the Congress of the Far-Eastern Association of Tropical Medicine. This meeting will be dealt with in a future number.

8. As a result of a proposal put forward by Dr. Hilmy Bey, Under-Secretary of State for Public Health, Egypt, the Health Committee called together a number of experts[2] on December 1st and 2nd to discuss to what extent the Health Organisation could assist administrations

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[1] The following is a list of the representatives :

Canada: Dr. R. E. Wodehouse *(Chairman)*, Vice-Minister of Pensions and Health of Canada ;
Australia: Dr. Frank McCallum, of the Department of Health of Australia ;
Egypt: Dr. Ali Hassan, Professor of Biological Chemistry, Cairo ;
Finland: M. Artturi J. Virtanen, Director of the Institute of Biological Chemistry ;
Belgium: Dr. E. J. Bigwood, Professor at the Free University of Brussels ;
United Kingdom: Dr. H. E. Magee, D.Sc., M.B., of the Ministry of Health, London ;
France: Dr. André Mayer, Professor at the Collège de France, Paris ;
Hungary: Dr. Aladar Beznak, Professor at the University of Budapest ;
Iraq: Mr. Walter P. Kennedy, Professor at the Royal College of Medicine, Baghdad ;
Latvia: M. Alfred Ceichners, member of the National Nutrition Committee, Ministry for Foreign Affairs, Riga ;
Netherlands: Dr. R. N. M. Eykel, Chief Inspector of Public Health, The Hague ;
Norway: M. Karl Evang, Principal Director of the Civil Medical Service of Norway ;
Poland: M. Stephan Mandecki, Councillor at the Ministry of Agriculture, Warsaw ;
Sweden: Professor E. Abramson, of the Karolinska Institute, Stockholm ;
U.S.A.: Miss Sybil Smith, of the Department of Agriculture, Washington ;
Yugoslavia: M. Z. Dragutinovič (Observer).

[2] The following is a list of the experts :

Dr. O. F. H. Atkey, Late Director of the Sudan Medical Service ;
Dr. E. Burnet, Director of the Pasteur Institute, Tunis ;
Professor R. T. Leiper, London School of Hygiene and Tropical Medicine ;
Professor Edm. Sergent, Director of the Pasteur Institute, Algiers.

concerned with *bilharziasis* control. The experts drew up a plan of work, the details of which will be given when the Health Committee has taken note of their report.

9. It will be known that an *Epidemic Commission*, provided with necessary staff and equipment, was sent to China at the end of 1937 to assist the health authorities in their campaign against the spread of epidemics.[1]

Dr. H. Mooser, Professor of Hygiene and Bacteriology at the University of Zurich, who was the Head of the Mobile Unit which operated in North-Western China, has just returned to Europe with two members of his Unit, Dr. H. Winzeler, Assistant at the Clinic of the Faculty of Medicine, Zurich, and M. E. Etter, Sanitary Engineer.

Dr. Lasnet, former Inspector-General of the French Colonial Health Service, who led the Mobile Unit situated in the South-West of China, is due at Marseilles in the middle of January.

10. A consultation of experts on *rural planning* was held under the auspices of the Housing Commission from December 6th to 9th. While this subject appeared on the programme of work of the Housing Commission, it was also the task of this meeting to prepare the discussions of the European Conference on Rural Life in this field. The report, which is to be drafted by M. M. Vignerot, Chief Engineer of the Rural Engineering Service of the Ministry of Agriculture of France, will form part of the technical documentary material of the Conference. It will be dealt with in this *Chronicle* after its publication in February next.

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[1] See, in this connection, the Note published in the *Weekly Epidemiological Record*, No. 12, May 1938, page 229.

LEAGUE OF NATIONS

CHRONICLE OF THE HEALTH ORGANISATION

Vol. I, No. 2 January 15th, 1939

I. CURRENT ACTIVITY OF THE HEALTH ORGANISATION

1. The New Zealand Government has just announced its intention of making a contribution of £250, in 1939, to the Eastern Bureau of the Health Organisation at Singapore. The League of Nations contributes about 60% of the expenses of this Bureau, the balance being met by means of grants-in-aid from the health administrations in the Far East. New Zealand was one of the countries which contributed in 1938.

2. Countries concerned in anti-malaria control were requested in 1938 to give their views regarding the desirability of convening an intergovernmental conference to consider the various problems connected with the production, distribution and use of anti-malarial drugs. So far the following countries have replied in favour of the suggestion : Union of South Africa, Australia, Belgium, United Kingdom, Egypt, France, Greece, Hungary, India, Iraq, Mexico, Peru, Poland, Roumania, Turkey United States of America and Yugoslavia.

3. Dr. M. Tsurumi (Japan) has just resigned his appointment as an associate member of the Health Committee. The President conveyed to him his regret that Dr. Tsurumi's collaboration, which dates from 1923, when the first Health Committee was appointed, should now have come to an end.

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II. PUBLICATIONS

1. *No. 4 of the* Bulletin of the Health Organisation *has just appeared.*

It contains the following reports and monographs :

(*a*) Report of the Commission on *Physical Education* on the meeting held in July 1938.[1]

This Commission, whose terms of reference are to define the scientific bases of rational physical education adapted to different ages, made a preliminary examination of the following questions :

> Results of research work so far carried out in relation to the physiological effects of physical exercise, and conclusions to be drawn from these results ;
>
> Programme of studies to supplement the results of research work so far carried out ;
>
> List of somatometric measurements and functional tests which should be recommended as descriptive of physical fitness and form.

The Commission noted that the scientific evidence available so far is meagre, and submitted a *programme of laboratory research* into the physiological effects of physical exercise, the relation between somatometric measurements and physical fitness and the relation between intellectual and physical development. It also recommended that information should be collected on the principles and methods of physical education in various countries according to sex and age.

The Commission then laid down certain general principles for those who engage in physical exercise and suggested a form for the medical examination to which all persons taking part in physical education should be subjected.

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[1] The following attended the meeting :
Chairman :
Dr. H. Laugier, Professor of Physiology at the Sorbonne, Paris.
Members :
Colonel A. Bauer, President of the Swiss National Association for Physical Education, Berne ;
Dr. J. Dill, Professor of Industrial Physiology, Fatigue Laboratory, Harvard University, Boston ;
Professor E. Hansen, Director of the Institute for the Theoretical Study of Gymnastics, Copenhagen ;
Dr. B. A. McSwiney, Professor of Physiology, Sherrington School of Physiology, St. Thomas's Hospital, London ;
Dr. C. Wroczynski, School Medical Inspector at the Ministry of Education, Warsaw.

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Apart from this, the Health Section of the Secretariat of the League of Nations is ready to supply any documentary material or supplementary information on application.

(*b*) Report of a Sub-Committee of the Technical Commission on *Nutrition* (August 1938).[1]

The Sub-Committee first dealt with the guiding principles for the study of the diets and nutrition of populations. Its work in this field resulted in the preparation of a handbook for use in surveys, which was mentioned in the previous issue of the *Chronicle*.

The Sub-Committee also noted the special considerations which arise in connection with nutrition in the Far East, tropical countries and colonial territories. It referred in particular to the necessity of making a closer study of the nutritive value of local foodstuffs and the incidence of diseases directly or indirectly due to dietary deficiencies.

In this connection, the Sub-Committee submitted a programme of studies which it is hoped will be organised in 1939 with the assistance of the Nutrition Research Laboratories established at Coonoor (India) by the India Research Fund.

Lastly, the Sub-Committee's attention had been drawn to the fact that critical situations exist, even in Europe, where emergency measures are urgently required for famine relief. Its report contains simple and very inexpensive diets sufficient to maintain life and to prevent serious malnutrition. These diets include cereals, milk (whole milk or skim-milk), yeast, cod-liver oil and various salts, so as to provide the necessary vitamins and inorganic elements.

(*c*) The Health Organisation's Statute provides for an Annual Assembly, consisting of Government representatives, organised by the Office international d'Hygiène publique. At this Annual Assembly, the Health Committee presents an account of the work carried out during the past year and a statement on its programme for the following year.

The *Bulletin* under review contains the *annual report* submitted to this body in May 1938, including a detailed account

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[1] The following attended the meeting :

Chairman :

Sir Edward Mellanby, Secretary-General of the Medical Research Council, London ;

Members :

Dr. W. R. Aykroyd, Director of the Nutrition Research Laboratories, Coonoor, India ;

Dr. Ed. J. Bigwood, Professor of Physiology at the University of Brussels ;

Dr. Lela E. Booher, Chief of the Foods and Nutrition Division, Bureau of Home Economics, U.S. Department of Agriculture, Washington ;

Dr. H. Chick, Head of the Division of Nutrition, Lister Institute, London ;

Dr. L. S. Fridericia, Professor of Hygiene at the University of Copenhagen ;

Dr. A. Mayer, Professor at the Collège de France, Paris ;

Sir John Boyd Orr, F.R.S., Director of the Rowett Institute of Animal Nutrition, Aberdeen ;

Observer :

Dr. W. Ph. Kennedy, Professor of Physiology, Royal College of Medicine, Bagdad.

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of the work done in the field of rural hygiene, biological standardisation, malaria, nutrition and housing. One chapter deals with anti-epidemic action in China.

(*d*) The last article is by Dr. J. ØRSKOV, of the Copenhagen State Serum Institute, on the *standardisation of smallpox vaccine*, a question recently brought before the Health Committee. In Dr. Ørskov's opinion, while it is no doubt possible to produce a relatively constant standard vaccine, its use and utility will be fairly limited. Actually, only vaccines with very nearly the same previous history will be comparable, and even then such a comparison will not be in the nature of a real assay, since its practical value will in most cases be limited to determining whether a vaccine is too weak for practical use.

2. *The Epidemiological Intelligence Service has just published its* Annual Epidemiological Report (E.I.21).

This volume, the fifteenth of the series, relates to the year 1936.

Whereas the weekly and monthly *Epidemiological Reports* publish as rapidly as possible provisional figures for infectious diseases, the *Annual Epidemiological Report* publishes only complete series of revised figures once they have been checked by the health and statistical services of the various countries.

These data refer principally to the incidence of pestilential and other infectious diseases, first, in the ports in telegraphic liaison with the Singapore Bureau, and then in different countries throughout the world.

Other tables show the population in the various countries and territories and give comparative vital statistics extending over a period of fifteen years.

For thirty-five countries whose statistics are particularly reliable, the death-rates have been given under each of the forty-three heads of the Abridged International Nomenclature of Causes of Death ; and for thirty-one countries mortality by age and sex.

Lastly, upwards of thirty pages are devoted to the vital statistics of the main cities in the world, including deaths caused by the principal infectious diseases.

In general, the report contains epidemiological data for all countries and territories possessing an adequate medical or statistical organisation. These countries include 1,961 million inhabitants, which represent close upon 93% of the world population.

Mortality data in towns cover a total of 397 large towns with a population of upwards of 155 million inhabitants.

LEAGUE OF NATIONS

CHRONICLE OF THE HEALTH ORGANISATION

Vol. I, No. 3 February 1s , 1939

CURRENT ACTIVITY OF THE HEALTH ORGANISATION

The Far-Eastern Bureau of the Health Organisation.

The main function of the Bureau which the Health Committee set up in Singapore in 1925 is to keep permanently in touch with port health authorities in Eastern and Far-Eastern countries, and give immediate warning, by the swiftest available means, of all epidemic outbreaks involving a risk of contamination for the outside world. Every week, the Bureau's epidemiological *communiqué* is issued and broadcast by nine wireless stations ; each of these messages, until superseded by the next, is repeated daily by the powerful station at Malabar (Java). It can be picked up at any point in the Indian Ocean and the Western Pacific, in the Mediterranean basin, and as far as the Atlantic coast. The information broadcast is constantly brought up to date.

A difficulty arose at the end of 1937, when the Bandoeng, Saigon and Antananarivo stations gave up long-wave transmission. As a result of this, some health authorities in the Near East, on the East-African coast and in Australia were unable to pick up the message.

To meet this difficulty, the Radio-Nations station at Geneva will broadcast once a week. It will be transmitting every Friday, beginning on February 10th, at 8.40 a.m. G.M.T., on wavelengths of 16, 23 and 20.64 metres. This arrangement has been made in consultation with the ports concerned, but is merely tentative and subject to modification if circumstances require.

2. There is another aspect to the work of the Singapore Bureau, considered as part of the machinery of the Health Organisation : this consists in promoting practical co-operation between public health services in the East, and between institutes engaged in research.

Thus, it devolves upon the Bureau to help forward and co-ordinate the action taken upon the recommendations of the 1937 Conference of Far-Eastern Countries on Rural Hygiene held in 1937.[1]

Information supplied to the Advisory Council of the Singapore Bureau in November 1938, shows that the Netherlands Indies, French Indo-China, Malaya, the Philippines and Siam are now undertaking in a number of typical districts the surveys recommended by the Bandoeng Conference, enquiring into the actual state of the public health, the factors affecting it, the health equipment and the working of the various health agencies. The Singapore Bureau will keep in touch with those countries, supply them with information, and endeavour to secure as much uniformity as possible in the presentation of the findings.

3. The Philippine authorities have recently set up a Nutrition Institute which is to concentrate on experimental research. India possesses a similar institution : the Nutrition Research Laboratory at Coonoor. Australia, French Indo-China, the Fiji Islands, New Zealand and Siam have also started research institutions dealing exclusively with problems of nutrition. In this way, effect is being given to a further recommendation of the 1937 Conference, which after emphasising the importance of nutrition as a health problem in Eastern countries stressed the need for dietary surveys undertaken in collaboration with the Technical Commission of the Health Organisation. Since 1938, two new members representing technical institutions in Far-Eastern countries have been added to this body, which will have to co-ordinate an extensive programme of work in that part of the world.

Supply of Cholera Vaccines to China.

At the last session of the Council of the League, the representative of New Zealand, speaking as Rapporteur on health questions, drew attention to one particular aspect of the help which the League had given to China in its efforts to control epidemics : in 1938, the Chinese health authorities, faced with the threat of a cholera epidemic, asked the League to supply them with six million doses of vaccines. With the generous support of thirteen countries,[2] the Health Organisation succeeded, in less than four weeks, in procuring eight million doses, free of charge.

The Council thanked the countries concerned and drew special attention to this striking example of the part which the League of Nations can play in the field of international humanitarian assistance.

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[1] See the Report of the Conference, document A.19,1938.

[2] Argentina, Australia, Burma, Ceylon, Denmark, Egypt, French Indo-China, Malay States, Netherlands, Roumania, Turkey, United States of America and Yugoslavia.

Unification of Pharmacopœiæ.

The potential value of the creation of a limited international pharmacopœiæ has long been realised by medical men and is frequently brought home to the individual patient by the difficulty he experiences in getting his prescriptions made up when abroad. The same problem exists with regard to the treatment of ships' crews calling at different ports and the replenishment of ships' medical chests.

From the academic point of view, the existing variations in the strengths and composition of medicinal preparations in different national pharmacopœiæ add an unnecessary complication to the investigation of the comparative results in drug therapy of the same disease in different countries, and further tend to prevent the adoption of new methods of treatment by a country, even where these have proved valuable elsewhere.

Apart from the view of the practitioner, consideration must also be given to the manufacturer who, from one country, is supplying large quantities of drugs to the international market. The varying standards as to strength and particularly as to purity at present existing make it essential for a producer, either to limit his sales to his own country, or to manufacture a special preparation of the same drug for each country to which he is exporting.

The field of possible unification of pharmacopœiæ had already been explored by an International Conference, meeting at Brussels in 1925, the outcome being a Convention creating an International Secretariat, under the Belgian Government. In addition, the International Pharmaceutical Federation had worked along similar lines. A further step forward was taken in 1937, when, after agreement with the Belgian Government and in liaison with the International Pharmaceutical Federation, the Health Organisation set up a Technical Commission of Pharmacopœial Experts.[1] This Commission met in Geneva

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[1] This Commission has the following composition : Dr. C. H. Hampshire, Secretary, British Pharmacopœia Commission (*Chairman*) ; Professor H. Bagges-gaard-Rasmussen, of the Pharmaceutiske Laereanstalt, Copenhagen ; Dr. E. Fullerton-Cook, Chairman of the Committee of Revision of the Pharmacopœia of the United States of America, Philadelphia ; Professor E. Eder, Professor at the Pharmaceutical Institute of the Polytechnicum, Zurich ; Professor L. van Itallie Director of the Institute of Pharmacology, Leyden ; Professor M. Tiffeneau, Dean, Faculty of Medicine, Paris ; and Professor Edgar Zunz, Laboratory of Pharmacodynamics and Therapeutics, University of Brussels.

It includes a *Reference Sub-Committee on Galenical Pharmacy* : Dr. C. H. Hampshire, Secretary, British Pharmacopœia Commission (*Chairman*) ; Mr. H. Berry, Dean of the College of the Pharmaceutical Society, University of London ; Professor J. Buchi, Institute of Pharmacy, Polytechnicum, Zurich ; Professor A. Goris, Director of the Central Pharmacy of Hospitals and Civil Asylums, Paris ; Dr. J. A. C. van Pinxteren, Hillegersberg, Netherlands ; Dr. S. A. Schou, Pharmaceutiske Laereanstalt, Copenhagen ; Professor N. Wattiez, School of Pharmacy, University of Brussels.

during 1938 and prepared a programme of studies, including the selection of suitable drugs for examination.

The Commission further considered and adopted standard forms of monograph for use in preparing the drafts, and decided to prepare general descriptions of reagents and analytical procedures, and statements of other general principles for the unification of monographs. The preparation of a report on maximum doses and on the possibility of defining average doses was entrusted to two members of the Commission.

Finally, the members agreed to prepare a number of draft monographs on various drugs, sixty of which have already been received. The monographs will be subsequently considered at a meeting of the Commission in May 1939, when the final form will be discussed and approved, and will then be forwarded to the Permanent Secretariat in Brussels for circulation amongst the signatory countries of the Agreement, with a view to their ultimate adoption and final incorporation into a limited international pharmacopœia.

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LEAGUE OF NATIONS

CHRONICLE
OF THE
HEALTH ORGANISATION

Vol. I, No. 4 March 1st, 1939

I. CURRENT ACTIVITIES OF THE HEALTH ORGANISATION

(1) *Departure of Dr. Rajchman.*

At its meeting on January 20th-21st last, the Bureau of the Health Committee was informed of the imminent departure of Dr. L. W. RAJCHMAN, who had been Director of the Health Section since its inception in 1921.

The President of the Bureau paid a tribute to Dr. RAJCHMAN, who had been the driving force behind the Health Organisation for eighteen years and had worked with great ability and enthusiasm and with unremitting energy for the success of an undertaking which he had very much at heart.

Dr. RAJCHMAN having left on January 31st, Dr. R. GAUTIER has been placed temporarily in charge of the Section.

(2) *Biological Standardisation and South America.*

The Bogotá Pan-American Sanitary Conference (September 1938) recommended that the Bacteriological Institute of Buenos Aires should be asked to distribute international biological standards, on behalf of the Health Organisation, to the central laboratories of South-American countries. Up till now, this has been done by the National Institute for Medical Research, London, and the State Serum Institute of Copenhagen.

This recommendation, which is intended to simplify distribution, has been accepted, and the Pan-American Sanitary Bureau has been requested to arrange for it to be carried into effect.

(3) *European Conference on Rural Life.*

For the technical preparation of this Conference, the Health Committee thought it desirable to enlist the support of various international organisations.

The *Association professionnelle internationale des médecins* has very kindly agreed to undertake an enquiry and collect material on the various questions which arise out of the practice of medicine in rural areas. It will publish its findings in the May issue of its review.

The questions considered will comprise : the distribution of medical practitioners in rural areas ; the co-operation of the practising physician in maternal and infant welfare work ; the control of tuberculosis, venereal disease, diphtheria, cancer and contagious diseases generally ; facilities available to family physicians for the use of official laboratories, etc.

The *League of Red Cross Societies*, for its part, has undertaken to prepare a paper on the Junior Red Cross, a school organisation which encourages children to form voluntary groups for the purpose of observing the rules of health and practising social mutual aid. This organisation, which is very popular in rural areas, has a membership of twenty million children. The paper submitted will deal primarily with the educational results achieved in the European rural environment.

(4) *International List of Diseases.*

The Conference recently held to revise the international list of causes of death asked that the Joint Committee[1] set up by the International Institute of Statistics and the League Health Organisation to prepare the Conference's work should be kept in being. This body would be instructed, not only to start at once on the preparation of the next decennial revision in 1948, but also to prepare international lists of diseases by that date.

The general principle of this proposal was endorsed by the International Institute of Statistics and the Bureau of the Health Committee, and consideration is now being given to the planning of the work. International lists of diseases would

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[1] The composition of the Joint Committee was as follows :

International Institute of Statistics:

Dr. L. DE BERARDINIS, Head of the Demographic Statistics Division of the Central Institute of Statistics of Italy ;
Dr. A. BOHAČ, Vice-President of the Statistical Office of Czecho-Slovakia ;
Dr. C. BRÜSCHWEILER, Director of the Swiss Federal Bureau of Statistics ;
Dr. F. W. BURGDÖRFER, Director of the Reich Statistical Office ;
M. M. HUBER, Honorary Director of the French General Statistical Office ;
Dr. N. M. Josephus JITTA, President of the Health Council of the Netherlands.

Health Organisation of the League of Nations:

Mlle. J. BACKER, Chief of the Division of Demographic Statistics of the Norwegian Central Statistical Bureau ;
Professor Haven EMERSON, Chairman of the Nomenclature Committee of the American Public Health Association ;
Dr. M. KACPRZAK, Head of the Service of Sanitary Statistics of Poland ;
Dr. S. MANUILA, Director of the Central Institute of Statistics of Roumania ;
Sir Sylvanus P. VIVIAN, Registrar-General of England and Wales.

certainly be of the utmost value in the study of hospital statistics, for instance, and in the international comparison of the statistics of public health departments, social insurance organisations, hospitals, army medical services and the like.

The " Commission internationale de Standardisation et d'Etudes du Matériel sanitaire des Armées " (International Red Cross Committee) recently approached the Health Organisation with the request that it should undertake the study of a simple and practical uniform nomenclature of diseases for the use of army medical services.

(5) *London School of Hygiene and Tropical Medicine.*

The Health Committee is represented by one member on the Court of Governors of the School. This member is Dr. F. Norman WHITE, who has just been reappointed for the years 1939, 1940 and 1941.

(6) *New York World's Fair, 1939.*

There will be a League of Nations pavilion at the World's Fair, comprising five rooms, of which the second will be reserved for health questions. The material presented will relate to the following subjects : Epidemiological intelligence and the Singapore Bureau ; malaria ; nutrition ; biological standardisation ; co-operation with Governments. The Health Section, which is only required to furnish the exhibits, has agreed to collect documentary material of a kind that will be readily understood by the public and will fit in with the exhibited material as a whole. The general lay-out of the pavilion and the arrangement of the exhibits is in the hands of specialists.

II. STUDIES ON BILHARZIASIS

The Egyptian authorities requested the Health Organisation to include the question of bilharziasis among the problems listed for study, the disease having spread to a dangerous degree in the Near East and in other tropical countries, and having created a serious medical and social problem for the public health authorities.

The Health Committee accordingly convened a meeting of experts, who were asked to submit their observations as to the various technical questions to which attention might be given.

Their report (document C.H.1395) begins by recalling the fact that the scientific knowledge so far available in the matter of epidemiology, treatment and prophylaxis affords an adequate

basis for the control of the disease. At the same time, the difficulties connected with the variability of local factors and practical exigencies of prophylaxis are far from negligible. The vector species and its ecology, the conditions of life and the habits and customs of the population, and methods of agriculture and irrigation vary considerably from one country to another. Treatment is long, painful and difficult to enforce. Finally, prophylaxis, which must be organised on an extensive scale, is extremely expensive.

The experts[1] proposed — and their recommendation has been adopted by the Bureau of the Health Committee — that, in the first place, a monograph should be prepared for use by health officers in the field. Such a survey would indicate the existing state of our knowledge and review the means of action available at the present time in the field of epidemiology and prophylaxis, and would, in addition, endeavour to clear up points that remain obscure. It would be accompanied by a nomenclature and illustrations of the species of molluscs which act as intermediate hosts.

The experts also pointed out that the problem of bilharziasis is, in fact, bound up with the general health conditions of the community, since factors such as the relation of man to the soil, agricultural methods, irrigation and housing, water supply, nutrition and sewage disposal have a bearing upon it. A study of bilharziasis may therefore be regarded as a contribution towards the solution of the wider problem of rural hygiene. With these considerations in mind, they drew up a programme of research work covering epidemiology and prophylaxis, as well as propaganda which, in their view, should be encouraged by all available means.

III. PUBLICATIONS

The Health Section will soon publish a handbook bearing the title *Guiding Principles for Studies on the Nutrition of Populations*. It has been written by Professor E. J. Bigwood, of Brussels University.

The investigations which have been conducted under the auspices of the League of Nations point to the absence of accurate knowledge of the conditions under which the food requirements of communities — and of rural communities in

[1] Dr. O. F. H. Atkey (late Director of the Sudan Medical Service), Dr. E. Burnet (Director of the Pasteur Institute, Tunis), Dr. R. T. Leiper (Professor of Helminthology and Director of the Department of Parasitology at the London School of Hygiene and Tropical Medicine), and Professor Edmond Sergent (Director of the Pasteur Institute, Algiers).

particular — are met. The state of nutrition is often demonstrably defective, this is known ; but most countries lack clear and precise data as to the true extent and gravity of malnutrition and as to the defects of the prevailing diet.[1]

The Health Committee accordingly undertook to work out methods of enquiry which could be generally applied and would yield useful indications as to the actual food consumption and the state of nutrition of given population groups. The problem was to devise simple, yet fully adequate and scientific, methods that would enable surveys to be conducted and would yield findings in internationally comparable form.

Proceeding from the principle that a complete study should comprise both an enquiry into the food consumed and an investigation of the effect of dietary habits on the state of nutrition, Professor Bigwood has divided his handbook into two parts.

A. *Dietary Surveys.*

There are four types of dietary survey which the author begins by defining. Investigations may extend over a whole country or be limited to population groups (well-defined communities or institutions) or to families or even to individuals.

The author then proceeds to describe the technique of these surveys — that is to say, the methods to be used (weighing method, method of records in household books, questionnaire method, etc.). Chapters IX and X deal with physiological questions — namely, the analysis of the collected data from the standpoint of the physiology of nutrition. The author discusses the highly important question of food-composition tables, the computation of the energy-value of the diet and its composition in respect of protective principles. Here the reader will find the essential facts concerning proteins, inorganic elements, the acid-base equilibrium of the diet and vitamins. A further chapter is devoted to the study of scales of family consumption coefficients which have to be used in comparing the results of enquiries concerned with groups of different age and sex composition.

The last two chapters of Part I deal with diets from the economic standpoint and the statistical significance to be assigned to the results of surveys. Since the investigator must necessarily confine his attention to a certain portion of the community, he must be able to determine how far observed mean values are likely to coincide with the true mean values for the whole.

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[1] See in this connection pages 200 and 300 *et seq.* of document A.13.1937.II.A.

B. *Enquiries into the State of Nutrition of Populations.*

In this part of his handbook, the author discusses in turn the somatometric (biometric, clinical and physiological) methods that may suitably be employed in these investigations. Special attention is given to the physiological methods capable of yielding early specific evidence of unapparent conditions of latent pre-deficiency, which clinical examinations fail to disclose. The author deals more especially with methods for detecting latent hypovitaminoses (vitamins A, D and C) and iron deficiency.

The guide-book is completed by examples of surveys of various types in a number of different countries ; it also comprises a terminological index, bibliographical references and some twenty specimens of record cards and biometric tables.

* * *

To rural health problems, the latest issue of the *Bulletin of the Health Organisation* is mainly devoted (No. 6, 1938). This reflects the responsibility of the Organisation to prepare for the *European Conference on Rural Life* to be held in the autumn of 1939 and for the Conference of American Countries on Rural Hygiene in Mexico City, the date of which is to be announced later.

(1) The European Conference on Rural Life will consider the rôle of the public authorities in improving living conditions in European rural areas. The agenda covers public health, nutrition, demography, agricultural questions, rural planning, the co-operative movement and education.

Medico-social policy will be one of the main items of discussion, preparations for which have been allotted to the Health Organisation. The latter is here reinforced by its own experience and by that of the administrations directly concerned : as the result of consultation, last October, with various officials responsible for medico-social policy in their own countries, a Drafting Committee[1] was asked to draft a technical document which, introducing the work of the Conference, would clearly and simply define certain first principles. This is appearing in the *Bulletin* as the *General Survey of Medico-Social Policy in Rural Areas*. After a general introduction, it deals with the part played by *curative medicine* in rural areas and the methods

[1] This Committee was composed of :

Dr. B. Borčić, Director of the Institute and School of Hygiene, Zagreb ;
Dr. N. M. Goodman, Medical Officer, Ministry of Health, London ;
Dr. Bela Johan, Secretary of State, Ministry of the Interior, Budapest ;
Dr. M. Kacprzak, Chief of Section, Ministry of Labour and Social Welfare, Warsaw ;
Dr. René Sand, Secretary-General of Public Health, Ministry of the Interior and Public Health, Brussels.

best adapted to provide the rural population with such medical attention as is required. *Preventive medicine* is then discussed in greater detail, fundamental principles capable of rapid application at a reasonable cost being concisely outlined. Social insurance is treated in a special chapter, and notes are presented on nutrition, physical training, rural planning and the education of rural populations in health matters. In a chapter on " The Training of Doctors and their Assistants in Preventive and Social Action", the need for training an adequate body of competent personnel to establish the practice of public health as an integral part of rural life is emphasised.

(2) Dr. J. de Barros Barreto, Director-General of Health to Brazil, draws attention to conditions in South-American countries in discussing *Curative Medicine in Rural Areas.*

In this article, Dr. Barreto expounds the organisation of medical care, using the term in its widest sense to connote the endowment of the people with all the resources of medicine for the treatment and prevention of disease. While realising the importance of imparting to rural communities a knowledge of the rudiments of public health, Dr. Barreto is not blind to the necessity of introducing measures of curative medicine as a preliminary to the acceptance of a public health policy in the conditions prevalent in the areas under review. He examines in turn the financing of such a scheme, the establishment of a network of hospitals in large, thinly populated regions, the creation of dispensaries and the provision of drugs. He concludes with an examination of the much canvassed problem of a State Medical Service.

(3) *The International Lists of Causes of Death*, adopted by the fifth International Conference on Revision, which sat in Paris from October 3rd to 7th, 1938, are also published in the *Bulletin.* This Conference, it will be recalled, was prepared for by a Joint Committee of the International Institute of Statistics and the Health Organisation. It resulted in the signature of a Convention recommending to Governments, as from January 1st, 1940, the adoption of the three revised international lists : detailed (200 headings), intermediate (87 headings) and abridged (44 headings), accompanied by the recommendations of the Conference.

(4) *The Present Use of Naturalistic Measures in the Control of Malaria*, by L. W. Hackett, P. F. Russell, J. W. Scharff and Senior White, is the title of the *Bulletin's* final article, written on behalf of the Malaria Commission. The problem thus dealt with derives from the Commission's programme of study and relates mainly to the special case of rural malaria in poor countries. The article deals with the first step towards solution of the problem by critically surveying all action taken so far on naturalistic

lines. This is defined as " the deliberate extension or intensification of natural processes which tend to limit the production of mosquitoes or their contact with man ". The authors discern the need for more thorough research into the biology and œcology of anopheles. They stress the desirability of creating experimental centres and of ascertaining the cost of methods before applying them. The latter development should be included in an agricultural and piscicultural programme, especially in districts where it has not been possible to use other methods of anopheles control.

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LEAGUE OF NATIONS

CHRONICLE
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HEALTH ORGANISATION

Vol. I, No. 5 April 1st, 1939

I. CURRENT NEWS

(1) *Anti-epidemic Mission in China.*

In September 1938, it was decided that the assistance in epidemic disease control which the League of Nations has been giving to the Chinese Government should be continued for another year.

A member of the Health Section, Dr. M. D. MACKENZIE, has just left for China, where he will review the situation with the national authorities and with the Commissioners sent out by the League. Whilst it is clear that the help which is being afforded to the Chinese Government will continue to be provided as heretofore on the general principle of placing specialists and equipment at the disposal of the national authorities, which remain fully responsible for epidemic control, it is probable that the system of three units operating in various regions of the country will be replaced by some more elastic machinery better adapted to meet changed conditions.

(2) *Bilharziasis.*

It was announced in the *Chronicle* of March 1st that, in pursuance of a proposal by the Egyptian Government and on the recommendation of a group of experts, the Bureau of the Health Committee had decided to arrange for the preparation of a comprehensive monograph on the present state of our knowledge and on the means of action available in the field of bilharziasis epidemiology and prevention.

Professor R. T. LEIPER, Director of the Department of Parasitology at the London School of Hygiene and Tropical Medicine, has kindly undertaken to have this monograph prepared under his own direction.

(3) *Assembly of the General Advisory Health Council and Session of the Health Committee.*

The General Advisory Health Council, which is one of the constitutional bodies set up under the Statute of the Health Organisation, holds its annual assembly after the spring session of the Permanent Committee of the Office international d'Hygiène publique. The General Council comprises the members of the latter Committee ; in addition, States Members of the League of Nations which are not represented in the Office international d'Hygiène publique are invited to send a delegate. Finally, the members of the Health Committee attend *ex officio*.

This assembly will be held in Paris on May 1st and 2nd, 1939, under the Presidency of Dr. M. T. MORGAN, President of the Permanent Committee of the Office international d'Hygiène publique.

The report which the Health Committee is presenting to the annual assembly is now in preparation.

Immediately after the Paris meeting, the thirtieth session of the Health Committee will be held at Geneva (May 4th to 8th, 1939).

(4) *Sixth International Course in Malariology.*

The sixth International Course in Malariology will be held from April 17th to May 24th. The object of this course is to give further instruction to young malariologists engaged in malaria control work who already have a certain amount of experience.

The work of the first part, which will last until May 6th, will be based on the Institute for Medical Research, Kuala Lumpur, the Director of which is Dr. KINGSBURY, with practical field demonstrations in the State of Selangor. This part will comprise lectures on practical entomology, hæmatology, protozoology and chemotherapy, by Dr. J. W. FIELD and Mr. E. P. HODGKIN. There will also be lectures on malaria control works in urban and rural areas with the co-operation of Dr. CAMERON, Dr. HOLMES and Dr. WILSON.

The second part of the course (from May 8th to 20th) will be based on the College of Medicine, Singapore, and will be directed by Dr. SCHARFF, Chief Medical Officer of the Straits Health Service, and Dr. NICHOLAS, with the co-operation of Lieut.-Colonel COVELL, Director of the Malaria Institute of India. Theoretical and practical instruction, principally in epidemiology and malaria control methods, will be given from May 8th to 14th, and engineers will be admitted to this part of the course.

Lectures on special entomology (Professor GATER), clinical malaria and pathology (Professor HAWES) will be given from May 15th to 20th.

Practical field demonstrations will be held in the Singapore district, in the State of Johore and in Penang under Dr. SCHARFF's direction.

An exhibition of photographs, maps, diagrams, apparatus used for control of mosquitoes, etc., will be held during the course, in the Hygiene Museum of the College of Medicine, Singapore.

(5) *Rabies.*

On the occasion of the fiftieth anniversary of the introduction of anti-rabic vaccination into Roumania, and as a tribute to the memory of Professor Victor BABES, delegates of anti-rabies Institutes of Central and Eastern Europe met in Conference at Bucharest in May 1938.

This Conference urged that close co-operation should be established between the anti-rabic institutes of Central and Eastern Europe, under the auspices of the Health Organisation. It was contemplated that facilities should be provided for members of the scientific staff of one institute to spend some time at other institutes in order to study their special methods of vaccination.

This suggestion was favourably received by the Health Committee, and arrangements have just been made for a member of the Jassy Anti-rabic Institute to proceed to Novisad to study Hempt's method.

The proceedings at the Bucharest Conference also showed the need for a further international rabies conference to be attended by representatives of anti-rabic institutes throughout the world. Before considering the possibility of convening such a conference, the Health Committee felt that it should have further information as to the main problems calling for attention at the present time in the field of rabies prevention. Professor G. PROCA, former Director of the Babes Institute at Bucharest, has kindly undertaken to prepare a general report on the various aspects of this question.

(6) *Public Health Organisation in the Rural Areas of Belgium.*

Dr. René SAND, Secretary-General of the Public Health Department at the Ministry of the Interior and of Public Health at Brussels, has just sent in a monograph specially written for the European Conference on Rural Life. This monograph will be published in the *Bulletin of the Health Organisation.*

After defining the term " rural area ", and describing the characteristics of Belgian agriculture, the author makes a general survey of the public administrative machinery and,

especially, of the public health organisation. He then indicates the particular problems that arise in village communities.

Taking up the main theme of his subject, Dr. René Sand then discusses the public health personnel, its training and duties. He deals with the public health and social medicine institutions in rural areas, adduces statistical data on the treatment of disease, and indicates the ratio of doctors, dentists, pharmacists and midwives to total population in the country districts.

The subsequent chapters are concerned with environmental hygiene, nutritional hygiene, communicable disease control, prevention generally, and social welfare. The report concludes with a general appraisal of public health work in Belgium.

It comprises an annex dealing with Belgian Luxemburg and including a statement on " health indices " in that Province.

II. PUBLICATIONS

(1) *Rural Housing and Planning.*

The agenda of the European Conference on Rural Life includes certain questions on rural planning — such as the hygiene of the rural house and its outbuildings ; community planning ; regional organisation of communications, water supply, sewage and garbage disposal, gas and electricity supplies, etc. — on which the Health Committee has been asked to present a general report for submission to the Conference. The Committe has had this report prepared by the same procedure as was applied to the " General Survey of Medical-social Policy in Rural Areas ". It appointed a Rapporteur in the person of M. VIGNEROT, Chief Engineer of the Rural Engineering Service at the French Ministry of Agriculture. During 1938, M. Vignerot made a tour of study in Belgium, Czecho-Slovakia, Latvia, the Netherlands, Poland, Sweden and Yugoslavia. He then presented a draft report which was examined by a Committee of Experts in December 1938.[1]

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[1] This Committee was composed as follows :

Professor J. PARISOT, Director, Health Institute, Nancy, President of the Health Committee and of the Housing Commission of the Health Organisation, *President* ;

Dr. N. M. GOODMAN, Medical Officer, Ministry of Health, London ;

M. H. VAN DER KAA, Chief Inspector of Health, Member of the National Housing Committee, The Hague ;

M. W. F. J. M. KRUL, Director, State Bureau for the Supply of Drinking-water, The Hague ;

M. V. MADERA, Municipal Engineer, Prague ;

M. Anders O. MOLIN, Civil Engineer, Stockholm ;

M. Z. RUDOLF, Chief of the Sanitary Engineering Division, Ministry of the Interior, Warsaw ;

M. Vignerot's report is now ready. It will be published during the month of April, both in the *Bulletin of the Health Organisation* and, separately, as a Conference document under the title " Rural Housing and Planning ". The first part of the report deals with the rural house and its outbuildings. The author reviews the general measures which should be taken to improve the standard of rural housing, and points out that if the housing conditions of the rural worker are to be fundamentally changed, this can only be done with the active support of the whole community. Various official or private organisations should provide model plans and technical advice, as well as long-term loans, subsidies or other forms of financial support. Developments in this field will, moreover, afford an opportunity for enforcing the essential sanitary laws and regulations.

Dealing with the house itself and its outbuildings, M. Vignerot discusses in turn the question of the internal lay-out of the dwelling and of farm premises, the number and size of rooms, building materials and methods of construction and the internal fittings of the living-quarters. One important matter is that of the drinking-water supply, which links up with the question of sewage and refuse disposal. After discussing these points, the author draws attention to the desirability of providing special training for engineers regularly engaged in the type of work which comes under the rural engineering services.

The second chapter deals with community planning. It is divided into two parts. The first considers the establishments and equipment which are essential to community life : administrative buildings, community centres, sanitary and health premises, buildings for public worship, playing-fields, public and collective services. The second relates to the preparation of general plans designed to improve local amenities and provide for subsequent expansion.

The third chapter is concerned with area planning. Viewing the problem from this wider angle, the author takes up the questions of public services for water supply, sewage and refuse disposal and treatment, and for the supply of gas and electricity. He gives an account of the present position in various countries and of the tendencies which are apparent, and describes the part which is played in these matters by various national organisations.

M. Vignerot devotes a special passage to fly control. Observing that the local conditions vary according to countries, he argues that it would be difficult to advocate very generally

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M. F. Sentenac, General Inspector for Roads and Bridges, Chief of the Services of Water Supply and Sanitation, Paris ;

M. M. Vignerot, Senior Rural Engineer, Ministry of Agriculture Paris ;

Dr. H. A. Whittaker, Director, Division of Sanitation, State Department of Health, Minneapolis (U.S.A.) ;

Dr. Nils H. Wranne, Chief Medical Inspector, Linköping (Sweden).

applicable methods and concludes that this is a matter which should be separately studied in each country.

Propaganda for the improvement of health and social conditions in rural communities forms the subject matter of the last chapter.

The report also comprises a number of annexed notes, in which the author discusses the work that is being done in various countries. These notes are presented in such a way that comparisons as regards action taken and results achieved can be made from country to country.

* * *

When M. Vignerot's report was presented in December last to the Committee of Experts, the members of that body presented memoranda dealing with the developments that are taking place in their own countries.[1] Of these the following may be mentioned :

" L'habitation rurale aux Pays-Bas ", by M. H. VAN DER KAA (document C.H./Com. Hab./78) (available in French only).

The author describes the characteristic defects of rural dwellings, the obstacles that stand in the way of improvement, and the measures taken by the Netherlands Government. By means of plans, he shows in detail the types of house approved for the various parts of that country.

Another note by M. VAN DER KAA (document C.H./Com. Hab./69) deals with the questions arising out of free-space planning considered in relation to population density.

A further note by the same author entitled " La construction d'habitations rurales aux Pays-Bas " (document C.H./Com. Hab./79) (available in French only) discusses at greater length the measures taken by the public authorities in connection with the planning of dwelling-houses and barns, the designing of liquid manure tanks and manure pits, the provision of water supplies and roof coverings.

A report by M. Zygmunt RUDOLF (Poland) deals with the question of rural planning in Poland as a public health problem (document C.H./Com. Hab./80). This paper is essentially a statement of the measures adopted by the Polish authorities to improve standards of material comfort and hygiene and cultural facilities. The author also reviews the developments that are taking place in other countries. He adduces an abundance of statistical matter and other data showing the special aspects of this problem in Poland.

[1] These memoranda, which are available in multigraphed form, can be obtained on request from the Health Section.

In regard to the questions of water supply and sewage disposal, the following documents may be mentioned :

Dr. H. A. WHITTAKER (United States) approaches the problem from the angle of the isolated dwelling-house. He describes the various types of lay-out that engineers may adopt, and illustrates his paper by a number of plans and photographs (document C.H./Com. Hab./70).

M. W. F. KRUL describes the manner in which the problems of drinking-water supply have been solved in the Netherlands (document C.H./Com. Hab./71) (available in French only).

M. H. J. KESSENER deals with sewage disposal in the Netherlands (document C.H./Com. Hab./72).

M. Zygmunt RUDOLF, in another paper, explains the way in which the Polish Government assists water supply and sewage disposal schemes (document C.H./Com. Hab./82).

M. Anders MOLIN discusses special technical problems that arise in Sweden (document C.H./Com. Hab./83).

Mr. N. WRANNE examines the administrative and financial problems with which the Swedish authorities have been confronted (document C.H./Com. Hab./76).

In connection with refuse disposal, the following may be mentioned :

An elaborate report by Dr. M. F. DE BRUYNE (Rotterdam), in which the author deals with the special sites to be reserved for domestic refuse, and the technical methods to be applied to its removal and disposal. The document is illustrated by photographs (document C.H./Com. Hab./77).

Mr. J. C. DAWES (London) presents a note on the so-called biological method of refuse destruction, or controlled tipping (document C.H./Com. Hab./74).

(2) *Nutrition in the Far East.*

Dr. A. G. VAN VEEN, Head of the Chemical Department of the Batavian Medical Laboratory and member of the Technical Commission on Nutrition, has sent in a note[1] explaining the assistance which the Batavian Nutrition Research Institute can give in the studies on nutrition problems in the Far East which have been recommended by that Commission. He draws attention to the fact that the Institute has for many years past been studying the composition of the foodstuffs which are peculiar to the Far East and that, since 1933, it has been

[1] Available in multigraphed form under document C.H./Com. Exp. Alim./54.

investigating the conditions of nutrition in Java.[1] Turning to the " nutritional standards ", the author discusses the Institute's findings as to the requirements of the Javanese population in proteins, fats, vitamins and inorganic elements. The state of nutrition of children is frequently poor, but this is the result of ignorance rather than of poverty. Moreover, the prevalence of disease, and of intestinal infections in particular, makes it difficult in many cases to arrive at a correct assessment of the state of nutrition.

The Batavian Institute would be glad to co-operate with other workers under the auspices of the Health Organisation's Technical Commission in studying a number of questions including : " consumption units " ; the assimilation of iron ; requirements of animal protein and fats ; and the influence of intestinal infections on the assimilation of certain vitamins, iron, protein, etc. It would also be desirable to study the " supplementary value " of the proteins in tropical foodstuffs. In the third part of his paper, the author gives an account of the work which has already been done in Java on the problems earmarked by the Technical Commission on Nutrition.[2] He appends " Tables on Nutrition ", prepared by C. C. W. F. Donath and D. R. Koolhaas, and A. G. van Veen. These tables show the content of various local foodstuffs in protein, fat, mineral elements and vitamins. A second annex deals with the question of rice and, more especially, with the variation of vitamin-B_1 content according to the manner in which the rice is grown, the extent to which it is polished and the manner in which it is prepared.

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[1] The organisation and programme of work of this Institute are dealt with in document C.H./Com. Exp. Alim./55.

[2] See *Bulletin of the Health Organisation*, Volume VII, No. 3, page 461.

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LEAGUE OF NATIONS

CHRONICLE
OF THE
HEALTH ORGANISATION

Vol. I, No. 6 May 1st, 1939

I. CURRENT NEWS

1. *Studies on Housing.*

The Housing Commission will meet from June 26th to July 1st, 1939, and will be assisted by a number of experts. It will consider the health aspects of planning in the broadest sense of the term. These comprise the planning of space, including town and country planning, zoning and open spaces; the planning of water resources, including water-supply and sewage disposal; and, in addition, measures against air pollution and the problems of hygiene connected with the organisation of communications and transit.

The Commission will take advantage of this meeting to review the whole of the work on the hygiene of housing that has been accomplished under its auspices in the course of the last three years, and will consider its future plan of action.

2. *Study of Anti-malarial Drugs.*

From the inception of its work, the Malaria Commission has consistently sought to reduce the cost of treatment and raise the consumption of anti-malarial drugs, in order that increasingly large numbers of patients may benefit by the treatment. Even the most rudimentary statistics disclosed an enormous disproportion between the world output of quinine and the quantity required to treat known cases. The matter was the more deserving of attention as malaria-ridden countries are usually countries of limited economic resources and are unable for that reason to meet the expense of collective treatment and prophylaxis by anti-malarial drugs.

Only a passing reference need be made here to the research work that enabled the Malaria Commission to recommend the use of *totaquina*, a mixture of cinchona bark alkaloids that can be produced at a price well below that of quinine.

The Commission has also carried out extensive comparative experimental work on the so-called synthetic drugs. The results of this work will be found in its third and fourth general reports, in which the Commission states its views on the resources now available to the health administrations in endemic areas for the treatment and drug prophylaxis of malaria.

There can be no doubt that the available and potential supply of anti-malarial drugs is now much more abundant than in the past. Indeed, this quantity is greatly in excess of the present consumption capacity of the malarious countries. At the same time it would seem that consumption has definitely increased. Despite the appearance on the market of the synthetic drugs, the world price of quinine appears to have undergone no substantial variation for more than ten years; moreover, during 1936 and 1937, the export figures for quinine bark and salts rose appreciably.

The Malaria Commission has taken the view that the time has now come to approach these problems on practical lines. It has drawn the Health Committee's attention to the desirability of affording producing and consuming countries an opportunity of jointly examining the various factors affecting the capacity to consume anti-malarial drugs. The Health Committee has accordingly proposed that a conference should be convened to study the present state of production, the requirements of malarious countries and future possibilities, and to consider how the consumption of these drugs could be promoted, if possible by agreement between the countries concerned.

Governments as a whole are satisfied that such a conference would be useful, and, at the beginning of May, the Health Committee will have to consider whether to propose that it should be held in 1940.

The Secretariat of the Commission has already started to collect all available documentary material on the real and potential consumption of febrifuge drugs, on the present state of production and on economic conditions affecting production and consumption.

3. *The Campaign against Narcotic Drugs.*

Under the terms of the international Opium Conventions, the Health Committee and the Permanent Committee of the Office international d'Hygiène publique act as technical advisory bodies. As such, they have to consider jointly whether certain substances ought to be brought under the provisions of the Conventions owing to their habit-forming properties, and whether certain preparations may be exempted on the ground that they are not liable, in practice, to cause addiction.

When the Health Committee meets on May 4th next, it will have to consider the findings of the Permanent Committee of the Office international d'Hygiène publique with regard to a new substance, desomorphine, and preparations made from extract and tincture of Indian hemp.

The question of *desomorphine* was raised by the Government of the United States of America, which has prohibited the manufacture, sale and distribution of this substance. The Permanent Committee of the Office international d'Hygiène publique has now arrived at the conclusion that it is habit-forming. The question of *preparations made from extract and tincture of Indian hemp* is more complex. Extract and tincture of Indian hemp are already covered by the Convention, and, in reply to an enquiry by the Egyptian Government in 1935, the Health Committee had expressed the opinion that preparations containing this extract or tincture could give rise to the same kind of abuse. A number of Governments have pointed out, however, that it would be difficult to bring certain preparations intended exclusively for external use under the provisions of the Conventions. The Permanent Committee of the Office international d'Hygiène publique has declared its acceptance of this view.

4. The *Weekly Epidemiological Record* of April 13th gives a summary of the course of this winter's *influenza epidemic* in Europe and in the United States of America.

It appears that the epidemic outbreak of 1938/39 in Europe and the United States has been definitely milder in character than the three most serious epidemics of recent years, those of 1928/29, 1932/33 and 1937.

The progress of the epidemic was marked by a series of sporadic outbreaks whose peak occurred as early as January in Scotland, northern England, Ireland, Hungary and Poland; in February in Switzerland, Germany, Denmark, Norway, the Netherlands, Belgium and central and western England; and during the first half of March in Greater London and in the United States.

The general death-rate for the first quarter of 1939 in the great towns of England and Germany compares favourably with the rates for the corresponding period of 1937 and 1938.

II. PUBLICATIONS

1. *The Annual Report of the Health Organisation.*

This report was published during the month of April. It appeared in the form of an advance off-print of the next issue of the *Bulletin*.

This report covers the period June 1938 to April 1939.

The first chapter, which is headed " Prevention and Treatment ", describes the work carried out under the auspices of the Health Committee on malaria, cancer, leprosy, bilharziasis and rabies.

The second chapter deals with *medico-social action* : rural hygiene, nutrition, housing and physical education. Under the heading of rural hygiene, it gives an account of the measures taken in various Eastern countries in pursuance of the recommendations of the Intergovernmental Conference on Rural Hygiene (Bandoeng, August 1937). It goes on to show how the Health Committee has undertaken its own share in the technical preparation of the European Conference on Rural Life.

The third chapter deals with *epidemiology and health statistics*, that is to say, with the current work of the Epidemiological Intelligence Service, the technical assistance rendered in the recent decennial revision of the international lists of causes of death and the studies on " health indices ".

The subsequent chapters are concerned respectively with the proceedings of the Permanent Commission on Biological Standards, the Health Committee's technical activities in the campaign against narcotic drugs, and the work of the Commission on the Unification of Pharmacopœiæ.

Finally, Chapter VII discusses the assistance given to China by the League of Nations in the field of anti-epidemic action.

This report, which contains much technical detail, may at first sight give an impression of great variety, but, as has been pointed out in the Introduction, from which the following passages are quoted, the deeper unity of purpose of the work of the Health Organisation can none the less be easily discerned.

> " This work consists in providing public health administrations with data, and with information on means for solving their technical problems, and even giving them the direct assistance which they may require in the fulfilment of their daily tasks.
>
> " The data furnished consist, in the first place, in the publications of the Service of Epidemiological Intelligence and Public Health Statistics, and also in the results of the investigations designed to throw light on the conditions

surrounding certain public health problems. An instance in point is the report on *bilharziasis* now under preparation, the monographs which will be laid before the European Conference on Rural Life, and, lastly, the collective study tours and the international course in malariology.

" In the second place, this international information has reference to the means of action which are available to public health administrations, for the purpose both of combating disease by organised action and of raising the level of health. Examples are afforded by the general reports of the Malaria Commission and of the Housing Committee. Similarly, conferences and meetings of experts are held in order to collate and compare the experience gained in various ways on the national plane and to arrive in this way at general conclusions, with the help of special technical enquiries where necessary.

" The Health Committee is also endeavouring to introduce some measure of international uniformity into the standards, units of measurement, formulæ, terminology and even methods of investigation used in the various countries. Examples of this kind of work are biological standardisation, unification of pharmacopœiæ, studies of public health indices and malaria terminology, and the handbook on nutrition surveys.

" Finally, the help given by the Health Committee to public health administrations may be of a direct character, as in the case of the assistance given to China in its anti-epidemic campaign.

" All this activity can be summed up in the expression ' international collaboration '. Such collaboration is of value only if it rests upon a sound technical basis — that is to say, upon the best scientific knowledge available in the various countries. This is why it is incumbent upon the Health Committee to extend its thanks to the members of its various technical Committees."

2. *Annual Report of the Singapore Bureau.*

The Director of the Eastern Bureau has just published his report on the work of the Bureau in 1938.

In the first part, he gives a brief review of the work of the Epidemiological Intelligence Service. It will be remembered that the Singapore Bureau acts as a Regional Epidemiological Bureau under the International Sanitary Convention of 1926. It is in constant touch with 180 ports of the southern and eastern coasts of Asia, of Australasia, of the Indian Archipelago and of the east coast of Africa. The information received

as to the incidence of plague, cholera and smallpox is broadcast by eleven transmitting stations as follows :

In AA Code.

Station	*Day*	*G.M.T.*	*Wave-length*
Malabar (Java)	Saturday	01.00	26.22 m.
Radio-Nations (Genève)	Friday	07.20	26.31 m.
	"	08.40	20.64 m.
	"	08.40	16.23 m.
Saïgon	Thursday	24.00	25.02 m.
	Friday	05.30	18.48 m.
Singapore (R.N. Stations)	Thursday	14.00	22.46 m.
Tananarive	Saturday	05.30	34.50 m.

Summary in clear.

Hong-Kong (Cape d'Aguilar)	Friday	04.00	600 m.
Karachi	Saturday	08.30 & 16.30	1 550 m.
Madras	Saturday	09.00 & 17.00	1 000 m.
Malabar (Java)	Daily	01.00	26.22 m.
Sandakan (Borneo Br.)	Sunday	01.00	600 m.
Shanghai (Zikawei)	Saturday	03.00	600 m. 36 m. 24 m.
Tokio	Friday	12.03 — 12.45	7 700 m. 55.5 m.

The map on the opposite page shows the area served by the broadcast epidemiological message of the Singapore Bureau.

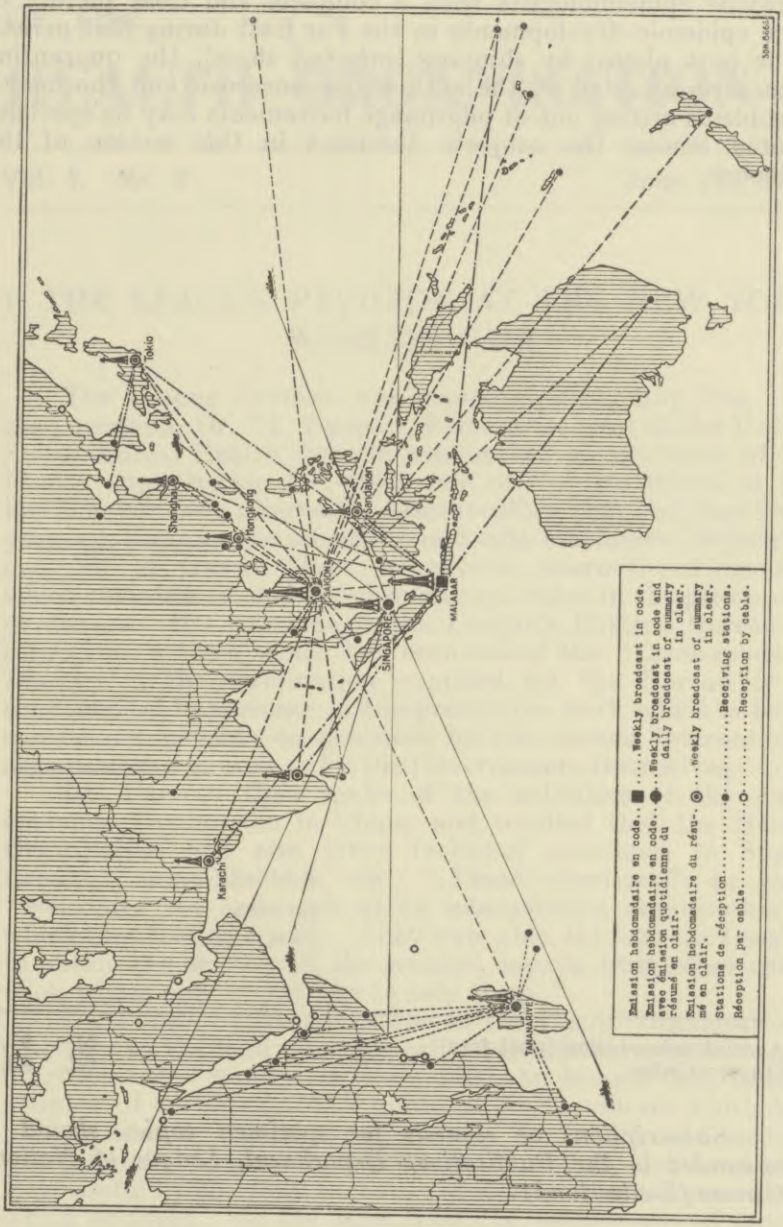
It should be noted that the message is sent out once a week. The Malabar (Java) station repeats it daily, however, including, in addition, any further information received during the preceding twenty-four hours.

Six ports are still unable to pick up the Singapore Bureau's message. The Bureau is therefore obliged to communicate to these by cable. These ports are : Vladivostok, Bushire, Baghdad, Victoria (Seychelles), Aden and Berbera.

Up to 1938, the Indian Government merely supplied data for a certain number of the most important ports. It has recently decided to furnish information for all Indian ports which engage in international trade.

In the second part of his Report, the Director discusses the work carried out by the Bureau in 1938 as a liaison centre between the public health administrations of the East. It will be remembered that the Intergovernmental Conference of Eastern Countries on Rural Hygiene (Bandoeng, August 1937) had requested the Singapore Bureau to assist the various Governments concerned in giving effect to the Conference's recommendations. This part of the report accordingly describes the action taken by the public health services in pursuance of the Conference's conclusions (health surveys, campaign against tuberculosis and pneumonia, nutrition, malaria, etc.).

Broadcasting of the Weekly Epidemiological Bulletin of the Singapore Bureau



The third part of the Report gives a general account of the incidence of infectious diseases in the Bureau's area in 1938. This survey, which is illustrated by maps and graphs, will provide epidemiologists with a complete and clear picture of the epidemic developments in the Far East during that period. The part played by shipping (infected ships), the quarantine measures adopted by the authorities concerned and the health problems arising out of pilgrimage movements may be specially noted among the subjects discussed in this section of the Report.

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LEAGUE OF NATIONS

CHRONICLE
OF THE
HEALTH ORGANISATION

Vol. I, No. 7 June 1st, 1939

I. THE LEAGUE PAVILION AT THE NEW YORK WORLD'S FAIR

The League Pavilion was inaugurated on May 2nd. On that occasion, Dr. Th. PARRAN, Surgeon-General of the United States Public Health Service, commented on the work of the Health Organisation for which one of the five rooms in the Pavilion has been reserved. After recalling that less than forty years ago there was no international health machinery, he pointed out that at present there are several international agencies which complement and supplement each other in the prevention of disease. One of these is the League's Eastern Bureau at Singapore, a town which has been called the " Cross-roads of Disease ". The information supplied by the Bureau is of fundamental importance in the preventive work which is being carried out in close co-operation by the various international organisations, as well as by the Governments themselves.

Dr. PARRAN then spoke of the activities of the Anti-epidemic Commission in China, and recalled that the Health Organisation had also given technical assistance to Spain, Greece, Czecho-Slovakia, etc. " These countries ", he said, " welcomed the assistance of an international organisation of which they formed a part. They were able, through the League, to obtain the services of the greatest experts from other countries, whose only object was to help them. "

Dr. PARRAN gave an outline of the Health Organisation's activities in the field of biological standardisation, syphilis and nutrition. He recalled that, in 1926, he himself had been a member of an international group of health officers which had been invited by the League to study the health and medical institutions of Denmark. Such collective study tours had been most useful by the daily exchange of information and experience which occurred. At the same time, the opportunity of having one's work examined by the critical eyes of an experienced

outsider was invaluable, and Dr. PARRAN hoped that the League would find the means to maintain this important aspect of its work.

Americans had played a prominent part in the activities of the Health Organisation. Leading experts were members of technical committees, while Surgeon-General H. S. CUMMING had been on the Health Committee from the outset. The American Government, said Dr. PARRAN, had made it a policy to participate as fully as possible in the health work of the League for, quite apart from any humanitarian motive, it had always recognised that it was to its own interest to do so. It was indeed impossible to make the best use of the opportunities afforded by science unless countries joined together in the organisation of international health relationships. The views of the United States Government as regards the health and other technical work of the League had been clearly expressed in an official message from the Secretary of State of the United States of America to the Secretary-General of the League : " The growing complexity of the modern world has, for many years, made increasingly clear the need for intelligent co-ordination of various activities and the pooling of information and experience in many fields. . . . The League has been responsible for the development of mutual exchange and discussion of ideas and methods to a greater extent and in more fields of humanitarian and scientific endeavour than any other organisation in history. The United States Government is keenly aware of the value of this type of general interchange and desires to see it extended. . . . It will consider in a sympathetic spirit means of making its collaboration more effective."

In conclusion, Dr. PARRAN expressed his gratification that the League of Nations had been able to send an excellent exhibit of its work to the New York World's Fair.

II. ANNUAL ASSEMBLY OF THE GENERAL ADVISORY HEALTH COUNCIL

As announced in our April 1939 issue, this assembly was held on May 1st in Paris, at the headquarters of the Office international d'Hygiène publique. The assembly had to consider the work of the Health Organisation during the past year on the basis of the annual report discussed in the last number of the *Chronicle*.

After an introductory statement by Professor J. PARISOT, Président of the Health Committee, Dr. Th. MADSEN, Director of the Copenhagen State Serum Institute, and Dr. R. GAUTIER, Acting-Director of the Health Section, described the work of the Permanent Commission on Biological Standardisation, of

which they are respectively the Chairman and the Secretary. Dr. MADSEN dealt more particularly with serological questions, and Dr. GAUTIER with the standardisation of hormones and vitamins. Speaking in the debate, Dr. CHODZKO, former Polish Minister of Health, urged the importance of endeavouring to make records of tuberculinisation among groups of population comparable from country to country, especially by the use of standardised tuberculins and through the unification of methods of enquiry.

Dr. M. CIUCA reviewed the work of the Malaria Commission in the field of anti-malarial drugs. Dr. R. SAND, Secretary-General of the Belgian Ministry of Public Health, who is one of the main authors of the pamphlet entitled *General Survey of Medico-Social Policy in Rural Areas*,[1] gave an account of the preparatory work undertaken for the forthcoming European Conference on Rural Life, laying special stress on the problems connected with the organisation of preventive medicine in the rural environment. This statement was commented upon by Surgeon-General BLANCHARD, Head of the French Colonial Health Service, who emphasised the importance of preventive medicine in the colonies and recorded his view that the *General Survey* would be of considerable value to colonial health services.

Dr. N. M. GOODMAN discussed the results of the recent decennial revision of the international lists of causes of death, and M. A. MISSENARD, professor at the Paris Ecole des Beaux-Arts and the Ecole des Travaux publics described the work of the Housing Commission.

The Minutes of this meeting will be published by the Office international d'Hygiène publique.

III. THIRTIETH SESSION OF THE HEALTH COMMITTEE

The Health Committee met from May 4th to 6th, 1939, to consider the progress made in the work of the Health Organisation, of which it is the directing body.

We shall refer only to the main questions discussed.

1. In the first place, the Committee had to give a preliminary opinion on a proposal which the Government of the Argentine Republic intends to lay officially before the next Assembly. The proposal is to set up a *Cancer Commission* to study the organisation of the campaign against cancer, with special reference to the responsibility devolving upon the public authorities.

In its communication, the Argentine Government refers to the demographic and anthropometrical research work and the

[1] Document C.60.M.22.1939 [Ser. L.o.N. P. Eur. Rural Life Conf. 13].

clinical investigations which the Health Organisation has carried out in the field of cancer.[1] It contends, however, that these are but special aspects of the problem. There can be no doubt that the organisation of the campaign against cancer is engaging the attention of public health authorities to an ever increasing degree and that it presents itself as a real problem of social medicine. The Health Organisation might undertake work similar to that which it has successfully carried out on such subjects as tuberculosis prevention and the campaign against infant mortality.

The Health Committee declared its readiness to undertake new studies, the exact scope of which will be delimited later on in the light of the supplementary information to be supplied to the Assembly by the Argentine Government. Such studies would be carried out, within the limits of the resources available to the Committee, in liaison with international bodies already dealing with questions of cancer, in order that overlapping may be avoided.

2. Another informal communication received from the medical adviser of the British Colonial Office had a reference to the organisation of another *Pan-African Health Conference.*

Two such conferences have already been held under the auspices of the League, one at Cape Town, in November 1932,[2] the other at Johannesburg, in November 1935.[3] They considered the public health problems which are of common interest to the various African territories : yellow fever, plague, malaria, smallpox, sleeping-sickness, health and medical services in rural areas and the co-ordination of public health work in Africa.

The proposed conference would be called upon to continue this work, the further prosecution of which was held to be necessary by both preceding conferences. It has been asked for by the Governments of Kenya, Tanganyika and Uganda, which will offer their hospitality to the participating delegates. It might take place at Nairobi in March 1940.

This again is a matter which the League Assembly will have to decide when it has the official proposal before it. The Health Committee, for its part, recorded its view that the conference would undoubtedly be useful, and offered its technical assistance.

3. The Health Committee again examined the question of a *Conference on Anti-malarial Drugs*, to which reference was made in the *Chronicle* of May 1st. Taking note of the fact that

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[1] An account will be given in one of the subsequent issues of the enquiry into the radiological treatment of cancer of the *cervix uteri* which is at present being conducted by the Health Organisation.

[2] *Bulletin of the Health Organisation*, Vol. II, No. 1.

[3] *Bulletin of the Health Organisation*, Vol. V, No. 1.

nineteen countries have pronounced in favour of this conference, it concluded that it should take place during the last months of 1940.

The discussion showed that the public health administrations of malarious countries are satisfied that such a conference would be useful. It may be of value in bridging over the — sometimes appreciable — differences of view between the countries which produce and those which consume anti-malarial drugs, thereby facilitating the solution of the essentially economic difficulties which hamper the supply, distribution and consumption of these substances.

4. In connection with the *campaign against narcotic drugs*, the Health Committee recorded its view that a morphine derivative, *desomorphine*, and *preparations made from extract and tincture of Indian hemp* (except for those which lend themselves only to external use) are likely to give rise to the same abuses as the substances covered by the international Conventions. It therefore proposes that these preparations should be brought under the control provided for in the said Conventions. Its conclusions are in accordance with the provisions of Article 10 of the 1925 Convention and are presented after an opinion has been obtained from the permanent Committee of the Office international d'Hygiène publique.

The Health Committee requested Professor M. TIFFENEAU, Dean of the Paris Faculty of Medicine, to represent it as heretofore on the Supervisory Body set up under the Convention of July 13th, 1931, for the Limitation of the Manufacture of Narcotic Drugs.

Finally, the Health Committee requested the permanent Committee of the Office international d'Hygiène publique to examine the question of the dangers which may attach to codeine as a habit-forming substance and drug of addiction. To that end, it referred to that body a report prepared on the basis of a survey of the available literature, and published in the *Bulletin of the Health Organisation* in 1938.[1]

5. The Committee took note of the annual reports of the Singapore Bureau and of the International Centre for Leprosy Research. It took a number of decisions concerning its programme of work, more especially on the following questions : training of visiting nurses, international lists of diseases, hygiene museums, physical fitness, nutrition, the hygiene of clothing, etc. These various matters will be subsequently taken up in the *Chronicle*. For the moment, only a few supplementary particulars will be given on two meetings of experts which are to take place in the autumn of 1939 : one on the sero-diagnosis of syphilis, the other on the standardisation of vitamins.

[1] Vol. VII, No. 3.

(a) *Vitamin Standardisation.* — In the first place, the experts will be called upon to revise two of the previously adopted standards : those of vitamins A and D. In the case of *vitamin A*, the conversion factor used to express the results of spectrophotometric analysis in terms of international units has given rise to some controversy in the past two years. It will accordingly have to be discussed and, if need be, modified. Consideration will also be given to the possible advantages of esters of pure vitamin A over carotene, which constitutes the present standard for that vitamin.

In the case of *vitamin D*, the question will arise whether the present standard of irradiated ergosterol, which consists of vitamin D_2, should not be replaced by a standard of vitamin D_3, since the latter produces more readily comparable effects in the various animal species.

In addition to this, the progress of scientific knowledge has now made it possible to contemplate the standardisation of two new principles : vitamin E and the B_2 complex.

In the case of *vitamin E*, a decision will have to be taken as to the substance to be adopted as the international standard and as to the value of one unit of activity in terms of that standard substance.

The study of the B_2 complex will bear upon the possibility of standardising nicotinic acid, riboflavine and vitamin B_6.

It would also be desirable that advantage should be taken of this meeting to arrive at an understanding concerning nomenclature.

(b) *Sero-diagnosis of Syphilis.* — In this connection, the object of the meeting will be to reconsider the conclusion arrived at by the Conferences at Copenhagen in 1928 and at Montevideo in 1930 — namely, that the sensitiveness of flocculation tests — the Kahn and Meinicke tests, for instance — was greater than that of the best methods based on complement fixation.

It appears that the methods of the Bordet-Wassermann, type, which have been much improved in the meanwhile, can now be regarded as equal to those based upon flocculation. This is one of the questions which the proposed conference will have to solve. For that purpose, it will need a large number of samples of blood and cerebro-spinal fluid which are neither clearly positive nor clearly negative, and will thus enable both the sensitiveness and the specificity of the methods under test to be accurately judged.

This meeting, which will be held at the State Serum Institute at Copenhagen, will be attended by American, Belgian, British, Danish, French, Hungarian and Roumanian serologists.

IV. NEW INTERNATIONAL HORMONE STANDARD

The international standard for the gonadotrophic hormone derived from the human urine of pregnancy, which was adopted last year by the Conference for the Standardisation of Hormones, is now ready for distribution.

It consists of a mixture of six samples of hormone, which have been given by various manufacturers, and is presented in the form of tablets containing each about 100 international units of activity.

The National Institute for Medical Research at Hampstead has already sent supplies of this new standard to the national centres which have been set up in numerous countries for the distribution to the scientific and commercial laboratories concerned of the international biological standards established under the auspices of the Health Organisation.

V. EUROPEAN CONFERENCE ON RURAL LIFE

Up to the present, the following preparatory documents have been issued :

1. National monographs :

Belgium :

67 illustrated pages (Ser. L.o.N. P. Eur. Rural Life Conf.2).

Finland :

58 illustrated pages (Ser. L.o.N. P. Eur. Rural Life Conf.1).

Latvia :

90 illustrated pages (Ser. L.o.N. P. Eur. Rural Life Conf.11).

Lithuania :

46 illustrated pages (Ser. L.o.N. P. Eur. Rural Life Conf.12).

Netherlands :

About 55 illustrated pages (Ser. L.o.N. P. Eur. Rural Life Conf.10).

2. Technical documents :

Co-operative Action in Rural Life,
prepared by the International Labour Office.
42 pages (Ser. L.o.N. P. Eur. Rural Life Conf.9).

General Survey of Medico-social Policy in Rural Areas,
prepared by the Health Organisation.
46 pages (Ser. L.o.N. P. Eur. Rural Life Conf.13).

The Organisation of Technical Instruction for Agriculturists,
by J. VAN DER VAEREN, President of the International Commission for Instruction in Agriculture.
29 pages (Ser. L.o.N. P. Eur. Rural Life Conf.14).

Intellectual Aspects of Rural Life,
prepared by the International Institute of Intellectual Co-operation.
56 pages (Ser. L.o.N. P. Eur. Rural Life Conf.16).

Recreation in Rural Areas,
prepared by the International Labour Office.
34 pages (Ser. L.o.N. P. Eur. Rural Life Conf.17).

VI. INTERNATIONAL COURSE IN MALARIOLOGY

The sixth international course in malariology, the programme of which was given in the April 1st number of the *Chronicle*, was opened on April 17th at the Medical Research Institute, Kuala Lumpur, by the Federal Secretary of the Federated Malay States. The Director of the Institute and the Director of the Health Organisation's Singapore Bureau were present.

The course is being held on the initiative of the League of Nations and is attended by thirteen medical men and twenty-five sanitary engineers nominated by the Health Administrations of Ceylon, the Netherlands Indies, French Indo-China, Malaya, the Philippine Islands and Siam.

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LEAGUE OF NATIONS

CHRONICLE
OF THE
HEALTH ORGANISATION

Vol. I, No. 8 July 1st, 1939

I. LÉON BERNARD FOUNDATION PRIZE

After the premature death of Léon Bernard in 1934, the Health Committee decided to honour his memory by creating a Foundation bearing his name. This Foundation, which although of an international character is quite separate from the League of Nations, has been established thanks to the contributions of the large number of colleagues and friends of the distinguished hygienist and tuberculosis specialist all over the world. Its object is to award an international prize in social medicine.

As this prize was to be awarded for the first time in 1939, sixteen candidatures were submitted, in conformity with the Statutes, by members of the Health Committee and by Health Administrations. The candidates belonged to the following countries : United States of America, Brazil, United Kingdom, Costa Rica, Estonia, Finland, France, India, Indo-China, Latvia, Malaya, Mexico, Roumania and Tunisia.

The Foundation Committee, which consists of the President and Vice-Presidents of the Health Committee, met on May 1st, 1939, to award the prize. Its choice unanimously fell upon Dr. Wilbur A. Sawyer, Director of the International Health Division at the Rockefeller Foundation. The Committee, to use its own words, " wished to pay a tribute to the valuable work done by Dr. Sawyer in combating yellow fever, and in the sphere of medico-social protection, which has benefited the populations of a large number of countries ".

The prize consists of a bronze medal, bearing the effigy of Léon Bernard, and a sum of 1,000 Swiss francs.

II. ANTI-EPIDEMIC ACTION IN CHINA

In the *Chronicle* for April 1st, 1939, an announcement was made of the departure of Dr. M. D. Mackenzie for China, to determine with the national authorities and the members of the

Epidemic Commission the form to be taken by the League's assistance to the Chinese Government in carrying on the anti-epidemic campaign during 1939.

Dr. Mackenzie has just returned and reports that the plan of collaboration is now in operation.

Experts in plague and cholera, fully equipped with laboratory material and the necessary means of transport, are now working in the north-west and centre of China. A transport service has been established by the League to provide them with the stores required.

At the request of the Chinese Government, much of the work of the medical and engineering experts has been concentrated on the road leading from China to Burma. This road runs through regions where malaria is particularly malignant and represents a serious menace to the transport workers, the road-menders and the regions to which the road leads. One of the League experts has been appointed by the Chinese Government as technical adviser for the supervision of health conditions along that road. He has been provided with the necessary material and personnel and is engaged in anti-malaria work in close collaboration with the Chinese Government medical units stationed along the road. One of the League engineers is responsible for supervising the upkeep of the road, especially during the rainy season, which lasts from June to November.

The League has also provided considerable quantities of medical and sanitary stores, particularly quinine, several tons of chloride of lime for disinfecting wells in cholera-infected areas, several million doses of cholera and smallpox vaccine, equipment for thirty mobile bacteriological laboratories and the necessary drugs for the treatment of cholera, dysentery, relapsing fever, etc.

III. UNIFICATION OF PHARMACOPŒIAS

The Technical Commission of Pharmacopœial Experts held its second session from May 10th to 16th, 1939.

The *Chronicle* of February 1st, 1939, explained the function of this Commission in paving the way for the ultimate unification of pharmacopœias and how it organised its work at its first session in 1938.

During the past year, members of the Commission prepared draft monographs on eighty-five drugs, and a report on maximum and usual doses. At the same time, the *Reference Sub-Committee on Galenical Pharmacy* considered the general principles to be followed in obtaining tinctures, extracts, etc.

In the important group of cinchona alkaloids, differences in the standards of purity of these alkaloids and their salts exist

in various national pharmacopœias, resulting in differences of price. In the campaign against malaria in countries with small financial resources, efforts are made to use the preparation which produces the best effects at the lowest costs. The Commission, after discussing the question of principle, appointed two of its members to study this problem further and to report on methods of analysis applicable to these alkaloids and their salts, taking into account the results of the research carried out with regard to prevention and treatment by the Malaria Committee.

As regards ergot, the former methods of assay, biological and chemical, are no longer in line with present-day knowledge concerning the active constituents of this drug. The Commission therefore appointed certain of its members to investigate the possibility of elaborating a chemical method for the determination of ergometrine in ergot and its preparations.

The Commission embarked on the study of certain crude extracts of plants, such as aconite, belladonna, ipecacuanha and cinchona, and settled the general principles to be followed in the relevant descriptive monographs. Some of the members were instructed to study the technical problems involved in the assay of alkaloids contained in such extracts.

The Commission also dealt with cocaine, atropine, physostigmine, pilocarpine and their salts, as well as with procaine, acetylsalicylic acid and various barbiturics.

Finally, arrangements were made for re-drafting all the monographs in accordance with the general principles laid down by the Commission. These monographs will receive further consideration at a later date.

In a number of countries, the law forbids pharmacists to supply medicines containing a dose in excess of the maximum fixed in the pharmacopœia. It is therefore important that maximum doses should be the same in all countries as well as the average doses stated in the pharmacopœias. The Commission examined the draft report on this subject and drew up certain suggestions for the National Pharmacopœia Commissions.

IV. ADJOURNMENT OF THE INTER-GOVERNMENTAL CONFERENCE OF AMERICAN COUNTRIES ON RURAL HYGIENE

As the outcome of a suggestion made by the Mexican Government and accepted by the League Council on May 22nd, 1939, the Inter-Governmental Conference of American Countries on Rural Hygiene has been adjourned *sine die*.

The Mexican Government made this suggestion on account of the present international situation. That Government

considers that in view of the grave political conditions confronting the world, there can be no certainty that the Conference can be organised and held in a favourable atmosphere. It should therefore not be convened until there is a reasonable prospect that it will meet with all the success desired.

V. APPOINTMENT OF A RAPPORTEUR TO SERVE ON THE PHYSICAL FITNESS COMMISSION

In accordance with a suggestion of the Health Committee, Governments have been invited to set up National Committees on Physical Fitness. The latter are represented by one of their members on the International Commission constituted by the Health Committee.

This Commission also includes five rapporteurs,[1] who met in July 1938 and drew up a report which has been published in the *Bulletin of the Health Organisation* (Volume VII, No. 4).

The Health Committee has just appointed a sixth rapporteur — Dr. Hernando ORDONEZ, Director of the Institute of Physical Education at Bogotá. This decision was based on the interest which the investigations of the Health Organisation have aroused in Latin America, where several countries have set up National Committees on Physical Fitness, and on the important scientific contribution which the Bogotá Institute is in a position to make to these investigations as a result of its researches into the physiology of physical exercise at high altitudes.

The rapporteurs will probably meet again early in September to examine the observations submitted on last year's report and, in the light of those observations, to draw up practical conclusions for the execution of the Commission's future work. Further reference will be made to this meeting in due course.

VI. CANCER

For the past ten years or so, the Health Committee has been studying the effects of radiological treatment on carcinoma of the *cervix uteri*. It was decided to initiate this enquiry on account of the divergent opinions expressed as to the real value of the treatment of cancer by radium and X-rays. The original intention was to publish information about the methods employed in the principal clinics which had favourable results to record.

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[1] Professor H. LAUGIER, French *(Chairman)*;
Professor J. DILL, American;
Professor E. HANSEN, Danish;
Professor B. A. MCSWINEY, United Kingdom;
Dr. C. WROCZYNSKI, Polish.

It was thus hoped to throw light on the comparative value of these various methods and thus to dispel possible misunderstandings as to the value of radiological treatment. The *cervix uteri* was selected as being the site where radiological treatment had most frequently been employed.

A Committee of Experts met in 1928 under the chairmanship of Professor Claude REGAUD, but soon came to the conclusion that it would be useless to attempt to utilise the data published by the clinics without first standardising their methods of observation, their clinical records and the methods employed in the statistical assessment of recurrences and survivals.[1]

The Committee accordingly reported that it was necessary to adopt a uniform nomenclature for the definition of the various stages of the disease. It proposed to divide cancer of the *cervix uteri* into four stages according to the degree of infiltration of the parametrium. A few years later (1938), this nomenclature was completed by a series of illustrative diagrams published in the form of an atlas under the direction of Professor J. HEYMAN, Director of Radiumhemmet, Stockholm.[2]

The Committee of Experts had also proposed a system of enquiry and a uniform type of case record cards to be used for recording the results of treatment, it being understood that the extent to which the treatment had been successful should not be determined until a period of five years had elapsed after its completion.

The first report did not appear therefore until 1937.[3] It described the clinical condition in 1936 of patients treated in 1930 and previous years. As the enquiry was still of a more or less experimental character, this first report simply gave the results communicated by six clinics.

The second report appeared in 1938.[4] It contained the results observed in 1937 in cases treated in 1931 and covered nine clinics.

The third report is now being printed. It will publish data communicated by twenty-four clinics.

The enquiry is directed by an Advisory Committee to whose labours and ability tribute should be paid.[5] This Committee's first concern is to obtain uniform statistical presentation. It has decided not to include clinics whose data do not comprise at least a hundred cases — on the understanding, of course, that

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[1] Document C.H.788.

[2] " Atlas illustrating the Division of Cancer of the *Uterine Cervix* into Four Stages according to the Anatomo-clinical Extent of the Growth ", issued by the Publications Department of the League of Nations.

[3] Document C.H.1225 [Ser. L.o.N. P. 1937.III.2].

[4] Document C.H.1338 [Ser. L.o.N. P. 1938.III.2].

[5] This Committee has the following composition :
Professor J. HEYMAN, Radium Institute, Stockholm *(Chairman)* ;
Dr. A LACASSAGNE, Radium Institute of the University, Paris ;
Lt.-Col. A. B. SMALLMAN, Ministry of Health, London.

their results may be dealt with later when they arrive at that figure.

It would obviously be too soon to try to draw conclusions now from this documentation. As the Advisory Committee observed, the study of differences in the cure-rates obtained by different clinics and their methods of treatment must be postponed until there is greater certainty that factors, other than the actual treatment used, which are liable to vitiate the reliability of cure-rates stated numerically, have as far as possible been eliminated.

In any case, this enquiry is of interest as an experiment of what should be done in the sphere of international nosological statistics to obtain an accurate analysis of the value of various methods of treatment.

VII. PUBLICATIONS

A new number of the *Bulletin of the Health Organisation* is about to appear.[1] It starts with the *Annual Report of the Health Organisation* (from June 1938 to April 1939), a summary of which was given in the *Chronicle* of May 1st.

The second article is the framework of a standard report for use in surveys, the aim of which is to appraise the state of health and vitality of a given population. This report is entitled *Health Indices.*

This question has been studied by the Health Organisation for a long time past. In December 1936, a series of " Health Indices " advocated by Stouman and Falk for health surveys was published in the *Bulletin.* These indices were applied experimentally, first in the town of New Haven (United States of America), and then in rural districts of Hungary and Poland and in the City of Brussels. These trials showed that it was necessary to simplify the indices and to adapt them to local conditions.

The question was re-examined in November 1937 at a meeting of Directors of European Schools and Institutes of Hygiene and again in April 1938 by a group of experts. Finally, in October 1938, a Special Committee on Health Indices, set up by the Health Committee,[2] drew up not merely

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[1] Vol. VIII, No. 1-2.

[2] Composed as follows :
Dr. R. Atwater, Secretary, American Public Health Association, New York *(Chairman)* ;
Dr. M. Kacprzak, Chief of Service at the State Hygienic Institute, Warsaw ;
Dr. J. Paterson, Medical Officer of Health, Maidenhead, Berks, England ;
Professor J. Tomcsik, Director of the State Hygienic Institute, Budapest.
Members absent :
Professor J. Parisot, President of the Health Committee, Director of the Regional Hygienic Institute, Nancy, France ;
Dr. A. Höjer, Director of the Health Administration of Sweden.

a revised list of indices, but the framework of a standard report on public health, with numerical indices incorporated in its various chapters applicable equally to urban or rural areas or to a whole country. It is this standard report which is published in the Bulletin in question.

Next comes the report drawn up by M. Vignerot (France) on *Rural Housing and Planning*. This report, a full account of which was given in the *Chronicle* of April 1st, was drawn up, under the auspices of the Housing Commission, for the European Conference on Rural Life.

The last article in the *Bulletin* is an important study on *leptospiroses*, drawn up at the request of the Health Committee by Dr. B. Walch-Sorgdrager, of Professor Schüffner's laboratory, Institute of Tropical Hygiene, Amsterdam.

This Institute was called upon to diagnose and study the large number of cases of leptospirosis icterohaemorrhagica which occurred in the Netherlands in the form of summer epidemics. The bacteriological, clinical, epidemiological and therapeutic observations collected by the author and by Professor Schüffner's other collaborators are summarised in the first part of the monograph.

This experiment enabled the members of the Amsterdam Institute to investigate and define the relationship between the classical Weil's disease and other leptospiroses of widely different epidemiology and gravity, prevalent in the five continents. Dr. Walch was able systematically to compare the virulence and antigenic properties of a very large number of strains from all parts of the world and brought out the relationship between diseases so dissimilar at first sight as those affecting reapers in Central Europe, miners in Japan, sugar-cane cutters in Queensland, sewermen in England, convicts in the Andaman Islands and bathers in the Netherlands. The comparisons and synthesis made by the author have yielded fruitful results as, for example, by showing the connection between Stuttgart dog disease and Weil's disease, and the part played by dogs in the transmission of certain human leptospiroses.

Dr. Walch's conclusions are supported by a large number of tables summarising his original experiments.

* * *

VIII. EUROPEAN CONFERENCE ON RURAL LIFE

Preparatory documents issued in June 1939 :

Technical documents :

" Sickness Insurance and Rural Medical Assistance ",
prepared by the International Labour Office.
33 pages (Ser. L.o.N. P. Eur. Rural Life Conf. 15).

" Rural Housing and Planning ",
prepared, under the auspices of the Health Committee, by M. VIGNEROT.
58 pages (Ser. L.o.N. P. Eur. Rural Life Conf. 18).

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LEAGUE OF NATIONS

CHRONICLE
OF THE
HEALTH ORGANISATION

Vol. I, No. 9 August 1st, 1939

I. DEATH OF PROFESSOR EDGARD ZUNZ

The news of the death of Professor Edgard ZUNZ, Director of the Pharmacodynamic and Therapeutic Laboratory of Brussels University, came as a painful shock to those who had been in touch with him at the meeting of the Technical Pharmacopœia Commission in May last. He had been a member of this Commission since its inception, and had given it unstinted service and the full weight of his acknowledged authority.

The Health Organisation, which has thus been suddenly deprived of one of its most valuable collaborators, is fully conscious of the loss which the premature decease of this eminent scientist has entailed both for itself and for the University of Brussels.

II. ENVIRONMENTAL HYGIENE IN THE TOWN AND THE COUNTRY

The Housing Commission held a meeting from June 26th to July 1st, 1939, with the assistance of a number of experts.[1]

It has thereby carried its programme of work one stage further. From 1926 to 1938 it studied the various questions of hygiene which are connected with *indoor life* — that is to say, the environmental conditions governing bodily heat exchanges,

[1] The following attended the meeting :

Housing Commission :

Professor J. PARISOT (*President*), President of the Health Committee, Professor of Hygiene and Social Medicine, Nancy.

Dr. G. P. CROWDEN, Dr.Sc., M.R.C.P., Department of Industrial Physiology, London School of Hygiene and Tropical Medicine, London, W.C.1.

Dr. J. Axel HÖJER, Director General of the Swedish Medical Administration, Stockholm.

M. H. VAN DER KAA, Chief Inspector of Public Health, The Hague.

Professor B. NOWAKOWSKI, Professor of Hygiene at the Stefana Batorego University, Wilno (Antokol).

Professor C. E. A. WINSLOW, Professor of Public Health, Yale University, New Haven (Connecticut).

Continued overleaf.

noise abatement,[1] insolation and natural and artificial lighting,[2] For the past twelve months or so, the Commission has been dealing with the environmental conditions for individual and community life *out of doors*. In this connection, it will be remembered that, in December 1938, the Commission prepared for the European Conference on Rural Life a first report dealing exclusively with rural environment and entitled : " Rural Housing and Planning ".[3]

At the session here under review, the Commission considered methods of space planning, both urban and rural, smoke, dust and toxic-gas abatement, water supply and methods of sewage and refuse removal and treatment.

Following the procedure which it has always applied in the past, the Commission considered in turn the importance of these various factors in the promotion of healthy living conditions, the value of the various methods used to determine their effects on the human body and the methods of planning and of sanitary technique which are capable of satisfying the physiological and psychological requirements of the individual and of the community.

The object of space planning is to ensure the rational use of the land, both in the town and in the country, and to provide the best possible conditions of work, housing, communications, recreation and rest. The Commission laid down several criteria regarding density of buildings in relation to area, the size of building-plots, space reserved for recreation, workers' allotments, suburban settlements, etc.

Smoke, toxic gases and dust have the effect of polluting the atmosphere ; and it has been estimated that, in England,

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Experts :

Professor Frederick J. Adams, Associate Professor of City Planning, School of Architecture, Massachusetts Institute of Technology, Cambridge (U.S.A.).

Professor S. D. Adshead, M.A., M.Arch., F.R.I.B.A., Town Planning Institute, London.

M. H. J. N. H. Kessener, Director of the Netherlands Government Sewage Treatment Institute, The Hague.

M. E. Kohn-Abrest, Director of the Toxicological Laboratory of the Paris Police Prefecture, Paris.

M. André Menabrea, Secretary-General of the French Town Planners' Society, Paris.

M. Anders O. Molin, Civil Engineer, Stockholm.

Sir William Savage, M.D., B.Sc., Medical Officer of Health, Taunton (Somerset).

M. L. S. P. Scheffer, Chief Engineer of the Town Planning Section of Amsterdam City, Public Health Department, Amsterdam.

M. François Sentenac, Inspector General of the Bridges and Highways Service, Chief of the Water Supply and Sanitation Service of the City of Paris, Professor at the Paris Town Planning Institute, Paris.

M. Alexander B. Szniolis, Chief of the Water Division of the State Institute of Hygiene, Warsaw.

The International Labour Office was represented by :

Mr. Carl Major Wright, Member of the Economic Section.

[1] *Bulletin of the Health Organisation*, Volume VI, No. 4, pages 518 and 541.
[2] *Ibid.*, Volume VII, No. 3, page 581.
[3] Series L.o.N. P. Conf. Eur., No. 18.

for instance, the total cost of the smoke nuisance amounts to at least £80 million a year. The Commission examined the means applied to assess the degree of pollution of the atmosphere and the effects of smoke, toxic gases and dusts on health and the methods at present available for the abatement of these nuisances.

The Commission dealt on similar lines with the question of water supply (methods of purification, *per capita* requirements, chemical, physical and bacteriological processes for the control of purity), methods of sewage treatment (their advantages and drawbacks, criteria of the degree of purification, fly control and the abatement of smells) and, finally, methods of removal and treatment of domestic refuse.

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* *

Such, briefly stated, was the work accomplished by the Commission at its recent meeting. Its report, the fourth which it has published to date, will appear in the *Bulletin of the Health Organisation*.

The Commission has still to take up the question of housing in tropical regions, after which it will draw conclusions from the whole of the work it has completed so far. With this object in view, it proposes to deal with the following questions over a period of about two years :

Definition of healthy urban and rural dwellings, as well as healthy cities and rural areas ;

Regional types of dwellings and urban and rural planning ;

Methods of housing surveys ;

Questions of organisation, administration and legislation in relation to the hygiene of housing and the hygiene of towns and rural areas.

III. INSTITUTES AND SCHOOLS OF HYGIENE

For many years past, the Health Committee has, from time to time, convened meetings of the directors of the principal European institutes and schools of hygiene. This gives them an opportunity, in the first place, of exchanging views and concerting their action in regard to various questions connected with the work of their institutes. In the second place, it enables them to organise joint investigations of certain technical subjects and to devise ways and means of carrying them out on co-ordinated lines.

Recently, the Health Committee has made certain arrangements with a view to preparing for the next meeting of directors of institutes and schools of hygiene.

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In the past, the directors have considered the question of *the teaching of hygiene*, which has formed the subject of two successive reports. The first, by Professor Carl PRAUSNITZ (Germany), was published in 1930;[1] the other, drawn up by Sir Wilson JAMESON (London), Professor J. PITTALUGA (Madrid) and Professor A. STAMPAR (Zagreb), appeared last year.[2] This second report, which was prepared on the same lines as that of Professor PRAUSNITZ, reviewed the changes which had occurred since 1930 in the organisation and development of the principal European schools and institutes of hygiene.[3] It was preceded by a series of recommendations drawn up by the directors of these institutes and schools at their meeting in November 1937 and bearing upon the mode of operation and resources of these institutions, the different types they represent, and their various methods of approach to their essential work, which is to promote the teaching of hygiene. In addition to this, the directors pointed out the need for developing their action on the side of scientific research, intensifying educational propaganda and organising practical co-operation with health administrations, the medical profession and social insurance organisations, especially in the rural environment.

Two related questions are now on the agenda of the Health Committee, and the directors of institutes and schools of hygiene will be called upon to consider them at their forthcoming meeting. They are the *training of visiting nurses* and *hygiene museums*.

The first of these questions will be studied in consultation with the Advisory Committee on Social Questions, which is at present examining the way in which the personnel of the social services should be trained for its work.

As regards *hygiene museums*, it has been decided to ask two rapporteurs to collect preliminary documentary material concerning the manner in which these museums are planned and maintained, viewing the question from the twofolh standpoint of specialised technical instruction and healtd propaganda. Consideration will also have to be given to the type of building which should be provided and to the various ways in which this latter problem has been solved. The rapporteurs will travel together to Paris, London, Warsaw, Belgrade, Zagreb and Budapest (September 1939).

The Health Committee will also give its attention to cinematographic films dealing with specialised instruction in hygiene on the one hand and public health propaganda on the other.

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[1] Document C.H. 888.

[2] *Bulletin of the Health Organisation*, issue of April 1938.

[3] The institutes studied were those of the United Kingdom, Bulgaria, Czecho-Slovakia, France, Greece, Hungary, Italy, Poland, Roumania, Spain, Turkey and Yugoslavia.

Finally, realising the great value for instructional purposes in schools of hygiene of the statistical material, maps and graphs prepared by the Epidemiological Intelligence Service of the Health Section, the Committee has arranged for consideration to be given to the possibilities of placing this material — both epidemiological and demographic — at the disposal of schools of hygiene and of keeping it up to date.

* * *

The other work undertaken, under the auspices of the League of Nations, by the directors of European institutes and schools of hygiene has reference to *rural hygiene*. They carried out the technical preparation of the *European Rural Hygiene Conference* of 1931 and have, since then, conducted practical research work on a number of problems affecting the standard of health in rural areas (sanitation and sanitary engineering, the organisation of medical care, the control of typhoid fever, the treatment of manure and fly control, health centres, nutrition and housing, milk supply, etc.). In this connection, reference may be made to the Exhibition on the Hygiene of Rural Housing and Rural Life, which was organised with their assistance and for which the French Government erected a special building at the Paris International Exhibition of 1937.

The agenda of the next meeting will comprise a review of recent developments in the technique of sanitary engineering. For the purpose of collecting preliminary documentary material, three engineers, who are heads of sanitary engineering departments in institutes of Central Europe and the Balkans, are to proceed, after the vacation period, to Yugoslavia, Roumania, Poland and Hungary to study the following questions :

(*a*) The general water-supply policy of the country and of its rural areas, the provision of a water-supply system for small communities, the supervision of wells, chlorination, etc. ;

(*b*) The disposal of sewage in small communities and isolated farms, taking into consideration the problems connected with manure and fly control.

These experts will also take the opportunity of studying the type of building in which health centres are accommodated.

* * *

Finally, it is possible that the next meeting of directors of schools and institutes of hygiene may take up again the study of diphtheria and scarlet-fever immunisation, a question which was investigated by the Health Organisation in 1929.

IV. PUBLICATIONS

No. 3 of Volume VII of the *Bulletin of the Health Organisation* is about to leave the press.

1. *Campaign against Narcotics.*

This number begins with a study which the Advisory Committee on the Traffic in Opium and Other Dangerous Drugs had asked the Health Section to make on *eucodal*, *dicodide*, *dilaudide* and *acedicone*.

The object of this purely bibliographical report was to bring to light the results of the studies so far made of the anti-spasmodic, analgesic and hypnotic properties of these various substances in comparison with morphine. In each case, the pharmacological and clinical observations are recorded. The memorandum concludes with a classification of these narcotics according to their toxicity, effect on respiration and circulation, analgesic and habit-forming properties and effects on the nervous system and the intestinal tract.

2. *Physical Fitness.*

Another memorandum is devoted to *doping*. This has been prepared for the Committee on Physical Fitness by Dr. Ove Bøje, of the Laboratory for the Theoretical Study of Physical Training at the University of Copenhagen.

The expression " doping " connotes any method which, either in training or for competitions, may assist in bringing about a temporary improvement in athletic performances. For this purpose, use is made of special pharmaceutical products, dietetic preparations, the inhalation of pure oxygen and even the application of ultra-violet rays. There is no doubt that, at the present time, stimulants are very largely used by athletes who are more anxious to beat records and satisfy the public than to preserve their health.

The author assesses the various stimulants used, indicating whether their action is beneficial or harmful. He examines in turn the " manufactured " nutritive preparations (containing glucose, lecithin, vitamins, phosphates, etc.), oxygen, ultra-violet rays and various pharmaceutical products, such as alcohol, ether, ammonia salts, cocaine, caffeine, benzedrine, digitalis, barbiturics, nitro-glycerine, cardiazol, hormones, etc.

Dr. Bøje concludes thas there does exist a class of substances which, if used with discretion, will improve athletic performances. There are many others whose efficacy has not yet been demonstrated. Sometimes, the use of these various stimulants is entirely free from any danger to health ; sometimes, it cannot be determined with certainty whether their action is harmful

or not, while, sometimes again, it is quite obviously harmful. It can be affirmed that the consumption of strong doses of hormones, cocaine, benzedrine, nitro-glycerine, digitalis, strophantine or caffeine is dangerous to an athlete's health. Every athletic medical adviser should therefore strictly forbid their use. While no objection can be raised to the use of nutritive preparations of vitamins or of oxygen, an absolute ban should be placed on anything liable to provoke artificial excitement involving *direct* danger through intoxication or *indirect* danger by stimulating the organism and goading it to exceed the normal limits of effort.

3. *European Conference on Rural Life.*

This number also contains two studies prepared by Dr. E. J. McDougall for the European Conference on Rural Life. The first deals with *Rural Dietaries in Europe* and the second with *Bread in Several European Countries.*

Up to the present, the aim of the nutrition work carried out by the Health Organisation has been to provide health administrations with practical documentation covering roughly the following subjects :

The importance of nutrition as a medico-social problem ;

The physiological bases of correct nutrition (supplying the energy and protective food requirements of man) ;

Methods of estimating dietary deficiencies (food consumption and state of nutrition).

Health administrations have not, however, yet been able to put this documentary material to its full practical use. Although it is known beyond all doubt that, in many urban centres and rural areas, nutrition is very far from conforming to the findings of modern science, thorough investigations still have to be carried out in each country to ascertain wherein the dietary habits peculiar to a particular area are defective and, consequently, to determine what steps should be taken by the public authorities ; and this applies with even more force, perhaps, to the rural districts than to the towns. Some countries have already begun such investigations, but this work must take a long time.

Dr. McDougall therefore undertook to provide the Conference with data — admittedly general — on the food habits of rural populations in Europe. For this purpose, she has drawn on the documentary information of the Health Organisation and has also made a personal tour of investigation.

Her report concludes that the main characteristic of rural dietaries is their monotony, though they generally show considerable seasonal variations. In most cases, there is a marked deficiency in the consumption of protective foods, especially during the winter (milk, fruit, green vegetables,

eggs and meat). Nearly everywhere, the peasant obtains the energy he requires from cereals, because he wants to get it at the cheapest price. In Central, Eastern and South-eastern Europe, cereals often provide from 80 % to 90 % of the calories in the diet. In certain areas where they cannot be grown, potatoes, beans and various foodstuffs of animal origin are substituted, but, as a general rule, the population is underfed.

In most of the large European rural areas, deficiency diseases and hypovitaminoses are found, mainly in winter and early spring. Rickets is very widespread, which, in certain cases, is an indication that the nutrition of the mothers is defective.

The peasant is anxious to sell his produce, and it frequently happens that he consumes absolutely none of it himself. Dr. McDougall observes that, in Denmark, for example, peasants sell all their butter and eat margarine.

The peasant does, however, tend, when his income increases, to spend a greater proportion of it on foodstuffs such as meat and eggs. Nutrition therefore improves with his degree of prosperity. But poverty is not the only factor to be taken into consideration : ignorance also plays a considerable part, and it is noted, for example, that, in Latvia, instruction in fruit and vegetable preservation methods has considerably improved the winter diet.

In view of the considerable importance of bread and cereals in rural nutrition, the author has made a parallel study of the habits and regluations current in various European countries on the subject of bread-baking. The food value of bread varies considerably according to its nature and composition. That is why, in this study, Dr. McDougall deals with present-day tendencies in the consumption of cereals and with the nutritive value of bread according to its degree of milling and its mode of preparation and in relation to the dietaries of various countries.

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LEAGUE OF NATIONS

CHRONICLE
OF THE
HEALTH ORGANISATION

Vol. I, No. 10 September 1st, 1939

I. MEETING OF EXPERTS ON THE SERO-DIAGNOSIS OF SYPHILIS

In the June issue of this *Chronicle*, a brief reference was made to the purpose for which the above meeting had been called. In order to be more explicit, it may be well to refer briefly to past developments in this connection.

At the first technical Laboratory Conference, held at Copenhagen in 1923, the Bordet-Wassermann test was found to be consistently more specific and more sensitive. With regard to the flocculation tests, the Conference came to the conclusion that they could not at that time be substituted for the Bordet-Wassermann, for, taken as a whole, they showed a lower degree of both sensitiveness and specificity. As, however, they had given positive reactions in a number of proved cases of syphilis for which the Bordet-Wassermann test had given negative results, the Conference was led to recommend that the Bordet-Wassermann and the flocculation tests should be applied concurrently, this combination having given the best results.

The last two Laboratory Conferences, held at Copenhagen in 1928 and Montevideo in 1930, came to somewhat different conclusions : they considered that, speaking generally, the best types of flocculation tests had proved superior to the best type of Bordet-Wassermann test in respect of sensitiveness, and equal to the latter in respect of specificity. This meant that, where only one method could be applied, the Bordet-Wassermann could henceforward be replaced by a form of flocculation test.

It will thus be seen that, whereas at the first Conference the palm was awarded to the Bordet-Wassermann test, subsequent Conferences have shown a preference for the flocculation tests.

The question which arises to-day is whether it would not be desirable to rehabilitate the Bordet-Wassermann test, which, thanks to technical improvements in the past few years, has again emerged as a highly valuable method of diagnosis. This is a matter that will have to be settled by the meeting of experts called for September 25th, at the Danish State Serum Institute, at Copenhagen.[1]

The experts include advocates of both types of test — the complement fixation and the flocculation types ; it can therefore be taken for granted that both will be carried out with the utmost technical skill, and will therefore yield their maximum.

There would be no point, at this meeting, in examining samples of serum or of cerebro-spinal fluid of a definitely positive or definitely negative character. In order that the experiments may constitute a strict test of specificity and sensitiveness, as many as possible of the samples used must be on the border line. Thanks to the very complete records of all blood examinations kept by the Copenhagen Institute, it will be possible to obtain part of the samples for examination from individuals whose sera have at some earlier period given rise to difficulties of interpretation. It is anticipated that some 1,000 blood samples, each bearing a number without any other identification or detail, will be distributed to the experts. Once the tests have been completed, the results obtained by the several techniques applied will be collated and compared with the clinical records.

Factors other than those of sensitiveness and specificity will also have to be taken into account in estimating the value of the various methods of serodiagnosis. They include both the time required before a positive reaction appears and the duration of the positivity. On both these points, the reactions given by the complement fixation method and by the flocculation tests differ to some extent.

The experts will also have to take a decision regarding the correct interpretation of the non-specific positive reactions which are sometimes obtained in the course of certain diseases.

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[1] The following serological experts are to take part :

Dr. Paul Bordet (Belgium) ; Dr. E. Debains (France) ; Dr. L. W. Harrison (Great Britain) ; Dr. R. L. Kahn and Dr. B. S. Kline (United States of America) ; Dr. P. Krag and Dr. Th. Madsen (*Chairman*) (Denmark) ; Dr. St. Mişu (Roumania) ; Dr. G. Olah (Hungary) ; and Dr. Richardson (Great Britain).

II. MALARIA IN AFRICA

The seriousness of the problem of malaria in Africa was emphasised by the Pan-African Health Conference in November 1935. With the exception of certain highland areas and of the more southerly parts of the Union of South Africa, malaria occurs throughout almost the whole of the continent of Africa. In some parts, the disease is highly endemic and affects many hundreds of thousands of the population. Elsewhere, epidemics, which are often of great severity, occur from time to time.[1] In its resolutions, the Conference defined the work to be undertaken to combat malaria and emphasised that preliminary research was required in order to determine the bases upon which action could be taken.

Two years later, the Reporting Committee of the Malaria Commission examined a proposal submitted by Professor Schwetz (Belgium) urging that the Commission itself should undertake a study of certain aspects of the problem of malaria in Central Africa. Professor Schwetz justified his proposal by referring to a number of findings in the Belgian Congo, showing :

> That *P. falciparum* predominates, although coexistent with *P. vivax*, especially in hyperendemic areas ;
>
> That quartan fever, while hardly ever found among Europeans, is frequent among natives and affects up to 50% of native child parasite-carriers.

As a preliminary measure, the Reporting Committee decided, in 1938, to bring together material of an epidemiological character and accordingly asked the health authorities in Equatorial, East and West Africa to provide it with information on the distribution of species of *Plasmodium*, their seasonal incidence and distribution according to age-groups, and also on the geographical distribution of the anopheline varieties.

Up to the present, replies have been received from the authorities in the Belgian Congo, Kenya, Tanganyika, French Equatorial and West Africa, British West Africa, Madagascar, Egypt, the Union of South Africa, etc. All these replies confirm the extent and seriousness of malaria and explain what has so far been done to combat it. In the latter connection, the establishment of research centres has produced results of positive value, although it is difficult to compare them on account of the variety in the methods and terminology employed. The tracking-down of malaria cases has progressed in recent years concurrently with the development of a network of treatment

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[1] *Bull. Health Org.*, 1936, I, 110.

centres and research stations. Infection may occur during the first few months of life and is reponsible for a high rate of infant mortality. Hyperendemic conditions and epidemic outbreaks are both caused by *P. falciparum*, against which there does not appear to exist any degree of acquired immunity. In certain areas, a high proportion of *P. malariæ* has been noted, especially in children under 15 years of age ; *P. vivax* is less frequently found and would not appear to be a constant factor.

The replies will be examined by the Reporting Committee of the Malaria Commission early in October.

III. INSTITUTES AND SCHOOLS OF HYGIENE

In the last issue of this *Chronicle*, it was stated that the Health Committee had decided to invite a number of rapporteurs to prepare a series of documents on museums of hygiene and on recent advances in the technique of sanitary engineering.

The two rapporteurs for *museums of hygiene* are : M. Lucien Viborel, Secretary-General of the Propaganda Committee of the French Conseil supérieur d'hygiène sociale, and Dr. Gustaw Szulc, Director of the State Institute of Hygiene of Poland.

M. Viborel will investigate the possibilities of museums of hygiene as agencies for general health propaganda, while Dr. Szulc will examine the part played by such museums as instruments for the teaching of hygiene to students taking medical and public health courses, to nurses, etc.

The study tour begins at Paris, where the experts are to meet on September 1st, will include London, Warsaw, Belgrade and Zagreb, and will terminate on September 30th at Budapest.

The rapporteurs for *sanitary engineering* are M. Elemer Vass, Head for Sanitary Engineering at the Budapest Institute of Hygiene, M. Petrik, Head of the Sanitary Engineering Department at the Zagreb School of Hygiene, and M. Grigoriu, Sanitary Engineer at the Bucharest Institute of Hygiene.

These experts are to meet at Zagreb on September 4th. Their programme includes a week of study in each of the following countries : Yugoslavia, Roumania, Poland and Hungary. Their journey is also to end at Budapest on September 30th.

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LEAGUE OF NATIONS

CHRONICLE
OF THE
HEALTH ORGANISATION

Vol. I, No. 11 November 1st, 1939

I. PROFESSOR RICARDO JORGE

Ricardo JORGE has died. To those who knew him — a simple, kind-hearted man, endowed with intellectual gifts and a charm of manner that won him universal respect and esteem — the news of his passing will be a source of genuine grief. The memory of his slight figure, soft voice and kindly eyes brings to mind at the same time his attainments as a scholar and acute thinker, professing original views informed by sound common-sense, and his qualities of gentleness and simplicity.

Space does not permit of an account of his career at the head of the Portuguese Health Administration and in the international institutions. A word should be said, however, of the important share he took in the proceedings of the Health Committee, of which he was a member throughout the period 1923 to 1936. The wide range of his general knowledge, his erudition as a scientist and ability as an administrator, gave a special weight of authority to his views, and his name will remain associated with those of his colleagues whom he has now joined — Léon BERNARD, BUCHANAN, CANTACUZÈNE, CHAGAS, LUTRARIO and VELGHE — the men who made the Health Organisation what it is and whose memory will continue to live among their successors.

At a time when international technical co-operation is feeling the effects of the European crisis, Ricardo Jorge would assuredly have asserted the importance of persevering in the work that has now been going on for two decades. No other view can be taken by those who are now responsible for the continuation of that work and who will seek inspiration in the example of their predecessors.

II. THE HEALTH ORGANISATION AND THE EUROPEAN CRISIS

This *Chronicle* did not appear in October. No surprise will be felt at the fact. However, it should be specified that the September crisis followed upon the comparatively uneventful vacation period.

European events have also made necessary the postponement of the meetings and other activities that had been planned for September and October — namely :

The meetings of experts on nutrition, the sero-diagnosis of syphilis and vitamin standardisation ;

The sessions of the reporting committees on physical fitness and malaria ;

The European Conference on Rural Life ;

The study tours on sanitary engineering and museums of hygiene.

Nevertheless, the regular, permanent work of the Health Section has proceeded unimpeded. The Epidemiological Intelligence Service and the Singapore Bureau have continued to collect and distribute in the usual way information which cannot fail to be of greater value than ever under present circumstances. In this connection, the broadcasting system, which will be referred to later on, has proved to be of great value.

Similarly, there is every reason to suppose that the difficulties created by the conflict will not hamper the work of international biological standardisation, the preparatory studies for the unification of the pharmacopœiæ, the enquiries into anti-rabic vaccination and radiotherapy of cancer of the *cervix uteri*, or the investigations into nutrition which are now proceeding in the Far East under the auspices of the Health Organisation.

In September, Professor Edmond Sergent wrote to say that the Pasteur Institute of Algeria is continuing, as in the past, experiments on the use of synthetic anti-malarial drugs, its trial tests with controlled vaccination against typhus fever, its work on B.C.G. and the preparation, in association with Sir Rickard Christophers, of a textbook for the unification of malaria terminology. Many other assurances of continued support have been sent to the Health Section by various health administrations, experts and scientific institutes. The aim, in Professor Sergent's own words, is for " all men of goodwill to rally to the support of the Health Organisation in an effort to assert the pre-eminence of intellectual work as a means of promoting the welfare of all ".

Certain adjustments will doubtless be necessary, and the Health Committee will have to consider these at its regular session, which will be held before the end of the year. War will inevitably make fresh demands upon the Organisation. As early as September 14th, the Roumanian Health Minister drew attention to the danger of epidemics, and especially of typhus fever, entailed by the influx of refugees and the presence of a floating population around the Roumanian frontiers. He asked whether the Health Organisation would consider a plan of joint epidemic control action by the countries directly threatened. Shortly afterwards, the Director of the Health Section went to Bucharest and Budapest to discuss the position with the Governments concerned

and consider what safeguards against possible dangers might be required. He was able to satisfy himself that the national authorities have the situation well in hand and that, for the time being, no epidemic foci have appeared.

Whilst, however, there may be no cause for anxiety for the present, this is not true of the future. Once the cold weather sets in, typhus fever may assume an epidemic form. It is to be feared that refugees, who are completely non-immune to malaria, may contract the disease in its æstivo-autumnal form. The possible spread of bacillary dysentery must also be borne in mind. Arrangements have accordingly been made for the Health Section to be immediately advised of any epidemic foci that may appear.

In the course of his tour, the Director of the Health Section found that the European Balkan countries directly or indirectly concerned were, in principle, favourable to concerted action under the auspices of the Health Organisation. From many other parts of the world, the Section has received encouragement and offers of help, which will certainly prove valuable if circumstances should call for action. Measures have already been taken to help the Roumanian Health Administration to procure the extra stores and equipment that are required for the prevention of typhus fever.

III. THE WORK OF THE EPIDEMIOLOGICAL INTELLIGENCE SERVICE ADAPTED TO WAR CONDITIONS

The delaying of mails and telegrams, supervision of wireless messages — all these factors were bound to affect a department engaged in the rapid dissemination of information received from several hundred health and statistical authorities.

Hence a special effort was called for to speed up the operation of the Service to the utmost.

Before the war, the Singapore Bureau had already approached the Governments concerned in order to safeguard its cable and wireless communications.

Concurrently, arrangements were made at Geneva for the reception of the Bureau's wireless bulletins. This achieved the purpose of overcoming the delays in telegraphic transmissions.

A circular letter, dated September 5th, drew the attention to the fact that the bulletin of the Bureau would continue to be broadcast both by Eastern stations and by Radio-Nations at Geneva. The various administrations concerned can thus pick up the broadcast and so safeguard themselves against any delay in the distribution of the *Weekly Epidemiological Record*. That they intend to take full advantage of these facilities is shown

by the communications which the Health Section has received. Among others, the Regional Epidemiological Bureau at Alexandria and the Office international d'Hygiène publique have asked for copies of the League epidemiological code.

The broadcast from Singapore, like that from Alexandria, is now being picked up at Geneva, and the *Record* has thus continued to appear regularly, with never more than twenty-four hours' delay as compared with peace time. The information it contains is practically complete, for all the belligerent countries, except Poland, have continued to send epidemiological reports in the usual way. Notes, supplemented by statistical tables and graphs, deal with the chief diseases which have assumed special importance owing to the circumstances now prevailing — *i.e.*, typhoid fever, dysentery and especially typhus.

As regards the last-mentioned disease, it should be noted that, with the refugee problem in mind, both the Hungarian and the Roumanian authorities have agreed to expedite the despatch of their regular returns.

IV. ANTI-EPIDEMIC WORK IN CHINA

The anti-epidemic work in China has continued throughout the summer.

Dr. DOROLLE, as representative of the Secretary-General, has been engaged chiefly on the general administration of the work and its financial control and supervision. Dr. ROBERTSON, in addition to organising the antimalaria work along the Burma road, has established liaison with the Burma health authorities, particularly with reference to the possible spread of plague into China through the frontier station of the Burma road. Dr. POLLITZER has been engaged on cholera work in the neighbourhood of Kweiyang and Dr. JETTMAR on plague and cholera work in the areas about Chungking. Dr. MAUCLAIRE has been in charge of the maintenance of transport.

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LEAGUE OF NATIONS

CHRONICLE
OF THE
HEALTH ORGANISATION

Vol. I, No. 12 December 1st, 1939

The Health Committee held its first war-time session from November 20th to 24th, 1939.[1] *The outbreak of war made this session a particularly important one, for the Committee was called upon to decide upon the future activities of the Health Organisation. This number of the* Chronicle *gives an account of the decisions taken.* [2]

At the beginning of the session, the President, Professor J. PARISOT, *paid a tribute to the memory of* Professors Ricardo JORGE *and* Edgar ZUNZ, *who died during the summer.* [3]

The President also paid a moving tribute to all Polish collaborators in the work of the Health Organisation of whom no news had been received, particularly Dr. W. CHODZKO *and* Dr. G. SZULC. *The Committee associated itself with this tribute and a letter has been sent in its name to the International Red Cross Committee expressing the hope that all measures will be taken to ascertain their fate.*

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[1] The session was attended by : Professor J. PARISOT (French), *President ;* Dr. Th. MADSEN (Danish), *Honorary President ;* Surgeon-General H. S. CUMMING (American), *Vice-President ;* Dr. W. BABECKI (Polish) ; Dr. J. BALTEANU (Roumanian) ; Dr. M. CIUCA (Roumanian) ; Professor A. GIGON (Swiss) ; Dr. N. M. GOODMAN (United Kingdom) ; Dr. B. JOHAN (Hungarian) ; Dr. HUSSAMETTIN KURAL (Turkish) ; Dr. R. PIERRET (French), Director-General of the Office international d'Hygiène publique ; Sir Alexander RUSSELL (India) ; Dr. R. SAND (Belgian).

[2] The report of the Health Committee has just been published in document C.364.M.277.1939.III.

[3] See *Chronicles* of August 1st and November 1st, 1939.

THE RÔLE OF THE HEALTH ORGANISATION IN TIME OF WAR

The Health Committee's Policy in the Present Circumstances

The object of the recent session of the Health Committee was to readjust the work of the Health Organisation to the new conditions created by the war, so as to enable it to play its proper part in assisting populations which will necessarily suffer as a result of the conflict.

Influence of the War on Public Health.

1. *Epidemics.* — To judge by past experience, the present conflict is bound to affect the general standard of health. Movements of troops and population, lower standards of living and hence of hygiene, destruction and its consequences, such as the possible contamination of drinking-water, produce conditions highly favourable to the spread of infectious diseases. Moreover, the nature and course of epidemics may change, and certain diseases may be imported into regions hitherto immune.

2. *Protection of Health.* — Moreover, a number of belligerent and neutral countries have already evacuated threatened populations from war zones. These migrations give rise to medico-social problems, since the sick must be cared for and collective protection afforded to the healthy. Health authorities are therefore concerned with questions of environmental hygiene in reception areas and with individual standards of hygiene among evacuees. In addition, sanitary engineering problems frequently arise when it becomes necessary to lay out camps, to instal baths and showers, possibly to organise disinfestation, and, in any case, to provide for water supply and sewage disposal.

Lastly, the authorities are also faced with problems of food supply and the mobilisation of economic resources. Foodstuffs must be utilised in accordance with the rules of modern dietetics, especially when collective and individual diets have to be planned, either for the whole population or simply for evacuees, chiefly children and expectant mothers.

Rôle of the Health Organisation.

Health Administrations, like the Health Committee itself, consider that the Health Organisation has a part to play — a practical part, consisting, not only in giving information and guidance, but also in affording technical and material assistance and in securing international co-operation. The Health Organisation must plan ahead ; and it was therefore necessary, in the Health Committee's opinion to organise its work on different lines from peace-time conditions so as to turn documentary material and past experience to full account and to have means of action at hand. The Committee therefore endeavoured to introduce a greater measure of elasticity in the machinery of the Health Organisation, to entrust new duties to it in relation with war-time problems, and to review the work in and in order to decide which part of it should be further prosecuted and which studies might appropriately be relegated to the background for the time being.

Machinery of the Health Organisation.

To enable it to act without delay, should it receive a request for assistance, it was provided that the Health Section should be empowered to take immediate action in consultation with the President of the Committee. An *Emergency Sub-Committee* was also set up and given the necessary powers to act on behalf of the Health Committee and to co-opt experts if necessary.[1]

Emergency Activities.

In the past, the Health Organisation has lent its assistance to various countries at their request either in anti-epidemic action or in organising health services. It has thus gained experience and collected documentary material which has been supplemented by the studies carried out by the Epidemiological Intelligence Service and by certain technical commissions, such as the Housing and Rural Hygiene Commissions. Reference should also be made to the work done between 1932 and 1934 on the influence of the economic depression on public health. The Committee has decided that this experience should be mobilised forthwith and it instructed its Emergency Sub-Committee and the Health Section to take stock of the armoury of preventive and curative weapons made available by modern epidemiology, chemotherapy and serotherapy, so as to define the principles to

[1] This Sub-Committee consists of : Professor J. PARISOT (French), *Chairman* ; Professor J. BALTEANU (Roumanian) ; Dr. N. M. GOODMAN (United Kingdom) ; Dr. B. JOHAN (Hungarian) ; and Dr. R. SAND (Belgian).

be followed in the control of those epidemic diseases which must be regarded as most important in the present circumstances. [1]

A similar rôle has been entrusted to the Health Section with regard to the protection of the health of evacuees, the aim being to supply the responsible authorities with information, technical advice and, if necessary, material assistance.

Continuation of Peace-time Activities.

The Committee was of opinion that its former work should be carried on to the fullest extent so far as this can be done without placing too heavy a burden on the resources of the Health Organisation. It has received assurances that Health Administrations are anxious for this work to continue ; at the same time, it has sought to limit its usual peace-time activities to essentials.

In the first place, the permanent services built up by persistent efforts will not be interrupted, since their reconstruction would be exceedingly difficult. This applies to the *Epidemiological Intelligence Service*, the *Singapore Bureau* and *Biological Standardisation*.

On the same grounds, it was also thought desirable to continue certain studies on which a considerable amount of work has already been expended — work which would have been done in vain if it were discontinued at this stage. This applies to : the *enquiry into the radiological treatment of cancer of the cervix uteri*, the preparation of the *unification of the various national pharmacopœiæ*, the studies undertaken by the Malaria Commission on *malaria immunity and the biology of certain strains of plasmodium*, the co-ordination of *investigations into nutrition in the East* entrusted to the Coonoor Laboratories (India), and the analysis of the *annual statistics of rabies*. In this last connection, the Committee wishes the Health Section to extend the scope of its enquiry to include the anti-rabic vaccination of dogs.

Secondly, the Committee urged that national committees and national institutes should continue their work on *nutrition*, *physical fitness* and *housing*. The Health Section will ensure the necessary liaison and co-ordination.

Thirdly, the Committee considered that certain comparatively new studies should be relegated to the background for the time being. These are : the training of visiting health nurses, museums of hygiene, the preparation of international lists of diseases, etc. There can be no question of abandoning these

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[1] In this connection, the Committee emphasised the importance of immunisation against diphtheria and scarlet fever, and it was understood that the Copenhagen Serum Institute should consider the possibility of standardising diphtheria vaccine.

studies altogether ; for the moment, however, work will have to be limited to the collection of documentary material in co-operation with the international institutions and voluntary organisations concerned. As regards a study recently proposed by the Argentine Government — that of the *campaign against cancer* from the angle of social medicine — it was decided that an expert should be asked to present a general report by way of preparation for the work of a commission to be set up when conditions permit.

Lastly, the Health Committee was given to understand that, in the opinion of the United Kingdom Government, the impending *Pan-African Health Conference* must be adjourned until the end of the war. Whilst agreeing with this view, the Committee remained ready to give this Conference its fullest support when the time comes. The other conferences contemplated the Anti-malarial Drug Conference and the Rabies Conference) have been similarly adjourned.

This plan of work can be carried out with limited budgetary resources, while still leaving a margin for practical intervention on the spot in any emergency. The members of the Committee were unanimously agreed as to the need for the action contemplated. The session showed that most of the public health administrations are ready to give it their support.

BLOOD-TRANSFUSIONS AND BLOOD-GROUPS

The Health Committee was concerned to note that, at a time when the war has given a special stimulus to the organisation of blood-transfusions, the existence of an international nomenclature of blood-groups, drawn up in 1928, appears to have been overlooked, and it is to be feared that dangerous confusions may result.

The Committee strongly urges, therefore, that the attention of blood-transfusion services should be drawn to the nomenclature which was proposed by von Dungern and Hirszfeld and approved by the Health Committee for international use in 1928, after consulting experts in the main countries. This nomenclature is as follows :

O A B AB

To facilitate the change from the nomenclatures hitherto employed, the following was suggested :

Jansky . .	O (I)	A (II)	B (III)	AB (IV)
Moss . . .	O (IV)	A (II)	B (III)	AB (I)

The Health Committee further recommended the adoption of the following method of designating test-sera :

Test-serum A (anti-B)
Test-serum B (anti-A)

and suggested that test-serum A (anti-B) should be placed in containers of white glass, test-serum B (anti-A) in containers of brown glass.

THE TUBERCULIN TESTS

In May 1939 (see *Chronicle* of June 1st, 1939, page 43), Dr. W. Chodzko drew attention to the fact that epidemiological tuberculosis surveys lost much of their value through not being comparable from country to country ; he therefore proposed that the Health Organisation should endeavour to standardise the methods of enquiry.

The Health Committee has taken the view that this is a matter of greater importance at the present time, when authorities are carrying evacuation schemes into effect and must therefore be able to assess the risk of fresh tuberculosis infections. Without prejudice to the research work on tuberculin standardisation which is now proceeding — and to which we shall revert in a later issue of the *Chronicle* — it has been decided, as a first move, to collect information on the use of the various skin tests in different countries. Parallel investigations, designed to establish the degree of tuberculisation of populations are to be carried out, with identical techniques, by the Institutes of Ankara, Bucharest, Budapest, Copenhagen, Jassy and Washington. They will be conducted, for purposes of comparison, with Koch's old tuberculin on the one hand and purified tuberculin (P.P.D.) on the other.

PUBLICATIONS

No. 4-5, Volume VIII, of the *Bulletin of the Health Organisation* is now out. It consists chiefly of reports prepared for the European Conference on Rural Life.

The first one is a study of *Tuberculosis in Rural Areas* prepared by Dr. G. Ichok, Professor at the Institut de Statistique of Paris University. After making every reservation as to the quality and interpretation of the available statistical material, the author deals in the first place with total tuberculosis mortality

and mortality by age-groups and sex. He then goes on to describe the difficulties encountered by investigators in comparing urban and rural mortality rates : the urban and rural incidence of the infection, the degree of tuberculisation and the mortality in town and country areas respectively react upon each other. On the whole, however, tuberculosis appears to be less widespread in rural areas, where, as the author observes, the mortality figures have also begun to fall. Nevertheless, this decline took place at an earlier date and is more marked in the towns. Dr. Ichok next deals with the influence of the rural exodus on tuberculosis, and devotes a special chapter to human tuberculosis due to the bovine bacillus. This bacillus appears to play a more important part in rural areas than in the towns, especially among children, owing no doubt to the larger consumption of raw milk.

One point which is brought out clearly in this study is the fragmentary and usually inadequate nature of the available documentation on rural tuberculosis. Systematic and co-ordinated investigations would seem to be necessary, and, in his final chapter, Dr. Ichok refers to the programme of studies drawn up in 1937 by the meeting of Directors of European Schools and Institutes of Hygiene. Regional surveys are necessary, because anti-tuberculosis action, both curative and preventive, must be adapted to local conditions. The programme in question accordingly stresses the need for determining the incidence of mortality, morbidity and infection by the adoption, so far as possible, of a single method for tuberculin testing. The survey should, however, also cover all the social, medical and health factors which make up the background of the lives of rural populations.

The second article is entitled *The Organisation of Public Health in the Rural Areas of Belgium*, by Dr. René Sand, Secretary-General of the Belgian Ministry of Public Health. The author deals first with the definition of Belgian rural areas — a somewhat difficult matter, because as a rule, in areas which present a rural appearance, half the gainfully-occupied population consists of clerical and industrial workers who go to work every day in a neighbouring town or industrial region. Nevertheless, there is such a thing as a Belgian agriculture, occupying an average of 71 persons per square kilometre of arable land. Dr. René Sand then makes a general survey of the public administration and the organisation of public health services, and describes the duties which devolve upon the villages themselves.

In the second part, he takes up the main theme of his paper. He first deals with public health personnel and institutions in rural areas. After explaining the manner in which the treatment of the sick is organised in those areas, the author describes what

has been done to improve the hygiene of environment and nutrition, to control infectious disease and to organise preventive hygiene and social welfare.

In the last part — a general survey of health work in Belgium — he enumerates the inadequacies which still need to be remedied, especially in the sphere of medico-social protection.

Two annexes are appended to this study : one, by Dr. GRAFFAR, deals with the health organisation of the province of Luxemburg ; the other, drawn up by M. SELLESLAGS, a statistician, discusses an attempt to apply health indices to that province, which was selected on account of its rural character.

A third report is entitled *The Recent Trend of Medico-social Policy in Europe*, by Dr. R. H. HAZEMANN. In this report, the author has summarised the result of his enquiry into the action taken by the principal European countries on the recommendations of the European Rural Hygiene Conference of 1931. The report clearly shows that, in all countries, the public authorities are increasingly anxious to protect the health of the rural populations, and that the latter appreciate their efforts. A general policy and co-ordination of activities on a national scale are, however, needed. The peasant's education must also be provided for.

This number of the *Bulletin* also contains the report of the Housing Commission on its June 1939 meeting, an account of which has already been given in *Chronicle* No. 9, of August 1st. As the purpose of the meeting was to study *town and country hygiene*, the report could therefore be appropriately included in an issue of the *Bulletin* dealing with rural hygiene.

* * *

The League of Nations has just issued a booklet in Spanish, entitled *La Organización de Higiene y la Cuestión de la Alimentación*. This publication summarises the findings contained in the various reports of the Technical Commission on Nutrition.

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LEAGUE OF NATIONS

CHRONICLE
OF THE
HEALTH ORGANISATION

Vol. II, No. 1 January 1940

MEDICAL AND HEALTH QUESTIONS CONNECTED WITH EVACUATIONS

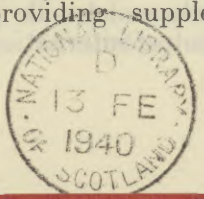
The last issue of this *Chronicle* gave an account of the arrangements which the Health Committee had had in view, at its session in November 1939, in order to assist public health administrations in the new conditions created by the war. The Committee referred, on that occasion, to the medical and health problems which arise in connection with the evacuations already effected or planned in the belligerent and neutral countries.

Logically, a plan of medical and health supervision should fall into three parts, dealing respectively with the measures to be taken before evacuation, during the actual move, and after arrival in the reception areas. It is obviously of outstanding importance that timely provision should have been made in the latter for the medical supervision and treatment of the evacuees, for proper accommodation, for the supply of drinking-water, milk and foodstuffs, and for the systematic detection and prevention of contagious disease.

Defined in these terms, the problem may appear simple. In practice, however, it is far from easy to solve. The difficulties encountered are those that are inherent in the practical aspects of the problem, including the special circumstances in which evacuation is to take place.

It is impossible here to go more fully into this subject but it should be emphasised that it affords a typical example of a national problem arising simultaneously for several public health services, which each is called upon to solve in accordance with its own conceptions and with its own methods and resources.

The Health Organisation can undoubtedly facilitate their work, not indeed by proposing solutions which would have to be limited to general theoretical considerations, lest they should conflict with local conditions, but by enabling those concerned to look beyond the necessarily narrow limits of their national circumstances and by providing supplementary means of action.



The officers responsible for determining the conditions of evacuation that will best provide for the health and social protection of the populations concerned will feel that their burden of work has been lightened if they are enabled to acquaint themselves with the views and difficulties of those who are engaged in like work in other countries, to exchange with them ideas, data and documentary material, and to procure information concerning the advantages and drawbacks of methods already tried elsewhere ; in a word, to work in liaison with other countries and, possibly, to fit their own national schemes into the wider setting of parallel action undertaken by a number of different administrations.

It is important to realise that methods are being recommended in some countries which are just being abandoned in others. Need any more be said to demonstrate the value of that " pooling of information and experience " to which Surgeon-General PARRAN recently referred ?

The Health Committee is ready to organise this co-operation in such measure, and under such conditions, as national administrations may wish. The consultations now proceeding have already produced results which can only encourage it to continue its action.

BIOLOGICAL STANDARDISATION

At the last session of the Health Committee, Dr. MADSEN reported that the number of institutes periodically receiving from the Copenhagen Institute samples of the various international standard sera is increasing and has now reached seventy-five. The Institute is also receiving an ever-growing number of requests for toxins and cultures, which it endeavours to meet, especially in the case of laboratories that are taking up some particular production as a new departure.

The Commission on Biological Standardisation has always taken the view that the method of assay to be adopted should be left entirely to the choice of each institute. In certain cases, nevertheless, the Institute supplies particulars of the techniques it uses, being careful, however, to specify that they must not be regarded as necessarily the best. Serologists from the Argentine, Belgium, Egypt, Italy, Norway and Thailand visited the Institute last year to acquaint themselves with the methods of assay applied at Copenhagen for purposes of serum standardisation.

DELIVERY OF TWO NEW HORMONE STANDARDS FOR INTERNATIONAL USE

The first two Conferences on the Standardisation of Hormones (1932 and 1935), which were devoted exclusively to the study of the male and female principles of sexual origin, led to the establishment of international standards for œstrone,

œstradiol, androsterone and progesterone. The third Conference (1938), on the other hand, dealt with the standardisation of hormones of the anterior lobe of the pituitary gland and similar principles contained during gestation in urine and blood serum.

This Conference decided immediately to leave on one side the corticotrophic, gonadotrophic and the growth-promoting hormones which are extracted from the anterior lobe of the pituitary gland, considering that the specificity of these principles had not yet been clearly established and that, for the moment, they were hence not suitable for standardisation. On the other hand, it decided to establish standard preparations for the gonadotrophic substance contained in the human urine of pregnancy, for the thyrotrophic and lactogenic principles contained in the anterior lobe of the pituitary gland, and for the gonadotrophic substance extracted from the serum of pregnant mares.

The international standard of gonadotrophic hormone, extracted from the human urine of pregnancy, established last year by the Standards Department of the Institute for Medical Research of Hampstead (London), has already been distributed by that Department for international use ; we will therefore not revert to it. On the other hand, two new standards are now ready for delivery : the lactogenic hormone of the anterior lobe of the pituitary gland and the gonadotrophic hormone extracted from the urine of pregnant mares.

On the one hand, a certain quantity of these principles had to be procured in a form sufficiently pure, active and stable to serve as a basis for the assays ; on the other hand, it had to be determined to what weight of the substance thus chosen as a standard a unit of activity should correspond.

Twelve commercial laboratories in five different countries (Canada, Denmark, Great Britain, France and the Netherlands) and two scientific institutes have generously helped to form a stock of the two principles in question. Each of the contributions thus offered was the subject of comparative tests in which fifteen laboratories took part in the case of the lactogenic hormone and twenty-three laboratories (in seven different countries) in the case of the gonadotrophic hormone. All the contributions were considered worthy of incorporation in the final standard preparation, these preliminary tests having shown them to be sufficiently active.

The methods of assay were very varied : in order to estimate the gonadotrophic action, some investigators took as their criterion the increase in weight of the ovaries in the immature female rat, others *corpus luteum* formation or vaginal keratinisation, others again the increase in weight of the seminal vesicles in the rat or the production of ovulation in the female rabbit. The activity of the lactogenic substance was, in general, estimated by the stimulating effect of subcutaneous

or intramuscular injections of this substance on the growth of the crop gland in the pigeon or dove.

The assays thus carried out showed that the two standard preparations might be regarded as adequate, and the choice of the unit of activity to be adopted for each of them offered no further difficulties.

Issue No. 6 of Volume VIII of the *Bulletin of the Health Organisation*, which is about to appear, gives fuller details of the establishment of these two new international biological standards, which will be distributed for the Health Organisation by the National Institute for Medical Research, Hampstead.

ANTI-RABIC VACCINATION

It will be remembered that, since the Rabies Conference held in Paris in 1927, the Health Section has been regularly publishing an analytical review of statistics supplied by the various Pasteur institutes on the results of anti-rabic vaccination. Up to date, these reviews have covered a total number of 1,602,707 persons to whom preventive treatment has been given. The object is to enable the respective advantages of the various vaccination methods, whether by living or killed vaccine, to be assessed in the light of reliable statistical evidence. The eighth of these reviews was published in the February 1938 issue of the *Bulletin of the Health Organisation* (Volume VII, No. 1), and the ninth will be appearing in the beginning of 1940.

At its last session, the Health Committee recorded its concurrence in the view advanced by Dr. B. JOHAN (Hungary) that it would be useful to obtain information as to the results of the vaccination of dogs. This measure has been compulsory in Hungary since 1935. Professor BALTEANU (Roumania) stated that, in his country, this was held to be too expensive; the authorities preferred to develop their system of veterinary police and, especially, to reduce the number of dogs to a minimum.

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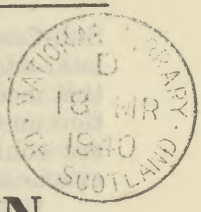
LEAGUE OF NATIONS



CHRONICLE
OF THE
HEALTH ORGANISATION

Vol. II, No. 2 **February 1940**

EARTHQUAKE IN ANATOLIA

The earthquake which devastated Anatolia in December 1939 caused the loss of thousands of lives and almost completely destroyed many towns and villages. Arrangements had therefore to be made for the evacuation of thousands of individuals, many of whom had been injured. Moreover, this disaster had brought them to a state of almost complete destitution. Under these circumstances, the possibility of extensive outbreaks of disease suddenly threw a new and heavy responsibility upon the Ministry of Health and Social Welfare of the Turkish Republic.

The Ministry therefore, on January 17th, 1940, informed the Health Organisation that a supply of anti-streptococcus serum and gas-gangrene antitoxin would be of great value.

On the next day acting on this request, the Jean Cantacuzène Institute at Bucharest placed free of charge at the disposal of the Turkish Legation in Roumania 1,000 doses of anti-streptococcus serum and 500 doses of gas-gangrene antitoxin. On the same day, the Sofia Institute of Hygiene despatched, also without charge, 500 doses of anti-streptococcus serum. Two days later, the Zagreb Institute of Hygiene sent 2,000 doses of anti-streptococcus serum, also free of charge.

Moreover, these institutes offered to send further supplies should the quantities furnished prove to be insufficient.

The Health Organisation very deeply appreciates the prompt and generous action of these three institutes.

EVACUATIONS

The last number of this *Chronicle* referred to the medical and health problems connected with evacuations and mentioned the part which the Health Organisation might play in facilitating their study through international co-operation.

On the initiative of Dr. René Sand, Secretary-General of the Belgian Ministry of Public Health and member of the Health Committee, a meeting will be held at Geneva on March 4th next. This will be attended by the members of the special

Sub-Committee set up by the Health Committee in November last, and by experts from different countries. The purpose of this meeting is an exchange of views and of technical information on the various problems with which health administrations are confronted in respect of health and medical care among evacuees and refugees.

Reference to the results of this meeting will be made in the next number of this *Chronicle*.

RURAL HOUSING IN FRANCE

The French Government has recently issued an important publication on the results of an *Enquiry into Rural Housing in France*,[1] which was carried out as a part of the activities of the Health Organisation.

In the introduction to this work, Professor Jacques PARISOT explains that it was as a result of the European Conference on Rural Hygiene held in 1931 that the question of housing as a factor in rural health policy came to the front. It will be remembered that the Housing Commission was set up by the Health Committee in 1935, and worked through National Housing Committees formed at its suggestion. It was the French National Housing Committee, thus created and presided over by Professor PARISOT, that carried out this enquiry into rural housing in France, in accordance with the recommendations of the Health Committee.

The first volume contains " general considerations regarding the position of housing in rural life and rural planning ". After a preliminary note in which Professor PARISOT deals with the aims pursued and the methods employed in the enquiry, there is a paper by M. Maurice VIGNEROT, Chief Inspector of Rural Engineering, on the planning of rural life in France from the point of view of housing. In this study, M. VIGNEROT discusses the problem of housing in relation to economic and occupational factors which in country districts have an influence on the individual, the family and the village, and consequently on rural housing. The author then refers to the type of land and the agricultural population, farming machinery and implements, co-operative institutions, etc., and finally gives a summary of legislation to demonstrate the successive measures taken to raise the standard of living and to retain the workers on the land.

Other reports are : a bibliographical note on the geography of rural housing in France, by M. Pierre DEFFONTAINES, Agrégé in History and Geography ; a statistical study by M. Marcel MOINE, of the National Anti-Tuberculosis Committee, on rural demography, mortality and morbidity ; a monograph on the

[1] Two quarto volumes, in French only, the first of 235 pages and the second of 436 pages, illustrated with plans and photographs. Editions Dannaud, 20, rue de la Victoire, Paris. Price : 250 French francs.

rural health equipment of France, by Dr. X. LECLAINCHE, Technical Inspector-General in the Ministry of Public Health, and Dr. M. J. GODARD, Medical Inspector of the Public Office of Social Hygiene of the Seine ; and a paper on the penetration of the principles of social hygiene into rural areas, by M. Lucien VIBOREL, Director of Propaganda of the National Anti-Tuberculosis Committee.

These reports are accompanied by a number of photographs, sketches and plans illustrating the present state of housing and rural planning in the different French provinces.

The second volume of this publication consists of the local reports of the various French Departments, drawn up in reply to the enquiry.

The enquiry was planned and directed by M. VIGNEROT, who devoted more than two years of work to it.

As it did not include a critical examination of the various documents collected, the publication is to be regarded solely as a picture of economic, social and health conditions in the French rural districts, seen from the point of view of housing. It exemplifies, however, the essential features of the different districts and of the health policy pursued, and consequently contributes the results of French experience and effort to the cuase of international co-operation.

Through the kindness of the French Government, this publication (which is very artistically presented) has been circulated to each of the members of the International Housing Commission, as well as to the principal collaborators of the Health Organisation.

PUBLICATIONS

No. 6, Volume VIII, of the *Bulletin of the Health Organisation* is entirely devoted to *biological standardisation*. It begins with four memoranda regarding the assay of *gas-gangrene antitoxin (perfringens)*. This was a question which required re-examination, owing to the criticisms levelled by Professor M. WEINBERG, of the Pasteur Institute of Paris, against the method adopted for the standardisation of these sera. His argument was based on the fact that considerable divergences were to be observed in the titres assigned to perfringens antitoxins when different toxins were used for assays on mice. His conclusion was that it was necessary to employ a standard test toxin in addition to the standard serum.

This argument cast doubt upon the fundamental principle on which the standardisation of antitoxic sera had hitherto been based, and it became necessary to seek the causes of the divergences observed by Professor WEINBERG. An enquiry undertaken at the Buenos Aires, Copenhagen and Hampstead institutes showed that, if assays were made with different toxins by means of the intracutaneous method in guinea-pigs

or the intravenous method in mice, the activities found for the antitoxins agreed within a range of 10%. The hæmolytic method has, however, made it possible to confirm the presence in the perfringens toxins of several antigenic factors possessing different biological properties.

A detailed study of the different antigenic factors contained in the toxins was therefore necessary. This has been carried out at the Copenhagen Serum Institute, and showed that the toxins used contained three antigenic factors exercising in various degrees a lethal, hæmolytic and necrotic action. In order to obtain comparable results in the assays with the different toxins, care will have to be taken to choose in future toxins in which one antigen predominates.

The second question dealt with in this number is that of the standardisation of *gas-gangrene antitoxin (Sordelli)*. Although the infections due to the agent of gas-gangrene represented by the Sordelli bacillus are very rare in Europe, they are fairly frequently observed on the American continent, and this justified the elaboration of an international standard preparation and of an international unit for the corresponding serum.

The work done at the institutes of Buenos Aires, Copenhagen, Marburg and Washington showed that the assay of the Sordelli antitoxin could be carried out with a very satisfactory degree of precision, and that the result was independent of the toxins employed. The dried preparation obtained by the National Institute of Health at Washington has been adopted as an international standard, the unit of activity being defined as the equivalent of a given weight of this preparation. The Sordelli antitoxin may thus be regarded as standardised.

The rest of the number deals with the standardisation of three hormones — namely, the gonadotrophic substance found in the urine of pregnant women and in the serum of mares in foal, and the lactogenic substance found in the anterior pituitary gland. For further details regarding the standardisation of these hormones, reference should be made to the previous number of this *Chronicle*.

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LEAGUE OF NATIONS

CHRONICLE OF THE HEALTH ORGANISATION

Vol. II, No. 4 April 1940

UNIFICATION OF PHARMACOPŒIÆ

As already stated, a Technical Commission of the Health Organisation has been instructed to prepare the way for a possible unification of pharmacopœiæ (see *Chronicle* of July 1st, 1939). The members of this Commission had prepared, in draft form, descriptive monographs dealing with some hundred drugs and, at its meeting in May 1939, the Commission came to an agreement on the general principles to be observed and decided to recast the monographs, in order to secure the needful uniformity.

Certain public health administrations, which are contemplating the revision of their national pharmacopœiæ, have expressed the desire that some of these monographs should be communicated to them without waiting until they have been drafted in final form. It is, unfortunately, not possible to accede to such a wish. The Chairman of the Commission has pointed out that action on these lines might well mislead public health administrations and control institutes, since the drafts may yet undergo modification. In addition to this, it should be borne in mind that the technical work of the Commission is being carried out on behalf of the Permanent International Pharmacopœiæ Secretariat at Brussels, set up by the Belgian Government under the International Agreement of 1925, and that that Secretariat alone is empowered to communicate the monographs officially to Governments.

REORGANISATION OF THE SECRETARIAT OF THE LEAGUE OF NATIONS

About a year ago, various measures of administrative reorganisation were carried out, in order to make possible a more effective co-ordination and centralisation of work and, at the same time, a saving of staff. This reorganisation has now been completed, and the former sections of the Secretariat have been grouped in three departments. The first of these is in charge of general affairs; the second deals with

economic and financial questions ; whilst the third now combines with the Health Section the sections concerned with social questions, opium and intellectual co-operation.[1] It is under the direction of M. R. B. Skylstad.

This reorganisation, which is purely administrative, in no way affects the technical work of the former Health Section. Its members are carrying out the same duties as heretofore, in accordance with the general directions given by the Health Committee and by its Commissions. In this connection, we are glad to announce that a new medical officer was appointed about a fortnight ago, in the person of Dr. Marcel Wiser, Medical Inspector, Belgian Ministry of Public Health.

The staff of the Singapore Bureau will shortly be strengthened by the appointment of a Deputy Director.

The reorganisation just referred to has, moreover, opened the way for the constitution of an international documentation centre for health matters. As is well known, the Service of Epidemiological Intelligence and Public Health Statistics has, in the past, frequently had to reply to requests for documentary material received in the most varied forms from the public authorities of various countries, and relating usually to the health conditions of some particular region, to the course of prevailing epidemics or to recent demographic data.

For some time past, such requests for information have shown a tendency to increase, and even overstep the limits of the Health Organisation's work. During the first six weeks of 1940, twenty-one requests of this kind were answered. They came from Governments, public health departments, specialists and professors of faculties of medicine, and from various bodies. The following list will show the variety of these requests :

I. *Epidemiology and Medical Statistics.*

Rate of maternal mortality.
Trachoma in Palestine.
Health conditions in Finland.
Health conditions in Iran.
Vaccination against typhus.
Distribution of bacillary dysentery in the world.

II. *Work of the Health Organisation.*

Tuberculosis control and BCG ; nutrition ; syphilis ; mosquitoes and flies ; anopheles and malaria ; maternal and infant welfare ; bilharziasis.

III. *Other Subjects.*

Organisation of the anti-cancer campaign and propaganda ; legislation on mineral water ; legislation on the determination of the alcoholic content of the blood of

[1] Entitled : " Department of Health, Drug Control and of Social and Cultural Questions ".

persons responsible for accidents ; sanitary measures applied at the frontiers to persons or articles coming in from typhus-infested countries.

The result, as can well be realised, has been an increase of work ; but it is of undoubted utility. The decision has accordingly been taken gradually to build up a documentation centre, the organisation and control of which have been entrusted to Dr. Biraud. In present circumstances, obviously, all that can be done is to prepare for the future, by making arrangements for the classification and utilisation of the documentary material in the hands of the Health Organisation. The Centre, as at present constituted, has neither the staff nor the resources which will be needed to respond to all the requests sent in ; it will be able to answer these only in so far as it possesses the necessary information, and may have to concentrate exclusively on meeting the requirements of those applicants who have the greatest claim to its assistance. The service is thus one which is still in embryonic form, but should normally be capable of development when circumstances permit.

CO-OPERATION WITH THE CHINESE GOVERNMENT

It will be recollected[1] that the League Epidemic Commission met in Chungking, China, early in 1939, to establish a plan of collaboration between the Chinese Government and the League of Nations medical experts in China.

At this meeting, while it was agreed to continue the anti-epidemic work against cholera, malaria, plague and typhus begun in 1938, it was decided to make a number of administrative changes in the method of work. Chinese medical units had been gradually created by the Government to replace the League units, which were consequently dissolved, and the European experts, provided by the League with a small staff and transport, were put at the Chinese Government's disposal in a purely advisory capacity. At the same time, the Commission laid down a programme for purchases of medical supplies in the light of the requirements expressed by the Wei-Shen-Shu.[2]

The epidemic outbreaks with which the Chinese Health Administration and the League experts had to cope in 1939 consisted principally of malaria, cholera, typhus fever, relapsing fever and smallpox. Moreover, preventive measures were required during the year against the introduction of plague into Yunnan. The question of endemic goitre was also studied in Yunnan, as well as a number of local problems, such as areas of schistosomiasis infection, etc.

In addition to their work in these fields, the League experts were also utilised by the Chinese Government in connection with

[1] *Chronicle of the Health Organisation*, July 1939.
[2] Department of Health of the Ministry of the Interior.

questions of rural hygiene, refugees, child nutrition, and the reorganisation of such scientific institutes as the National Epidemic Prevention Bureau.

The stores sent by the League during 1939 included quinine (nearly 2½ tons — *i.e.*, over 7 million tablets of 5 grains each), powdered quinine, plasmoquine (100,000 tablets), atebrin (1,000 tablets), emetine (700,000 ampoules), bleaching powder (11 tons), and large quantities of other drugs.

The laboratory material included the equipment of thirty complete mobile laboratories for the use of the health stations of the Wei-Shen-Shu, including in each case a microscope suitable for all ordinary bacteriological examinations, the requisite glassware, apparatus and instruments for bacteriological, serological and chemical examinations and a full supply of chemical products, reagents and stains.

The remaining material sent by the League during 1939 included 5,400 syringes for anti-cholera vaccination, together with 18,000 needles and the necessary material for saline injections, supplies of heavy oil, Paris green (and sprays), liquid insecticide (and sprays), together with large supplies of anti-mosquito netting.

In addition to the stores sent from Europe, the League also purchased a considerable amount of medical material in China itself, including 3 million doses of cholera vaccine, 240,000 doses of smallpox vaccine, and 76,000 c.c. of anti-dysentery and anti-meningococcus.

The appreciation by the Chinese Government of the work of the League experts in 1939 is evidenced by the Government's request to the League Assembly that the work of technical co-operation should not only be continued but intensified in 1940.

PUBLICATIONS

The *Annual Report of the Singapore Bureau* for 1939[1] has just been received. As in previous years, the report, which is published in Singapore in English only, gives a general account, illustrated by maps and diagrams, of the incidence of the principal infectious diseases in the Bureau's sphere of action. The report will be reviewed in the next number of the *Chronicle*.

[1] Document C.H.1450, 50 pages.

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LEAGUE OF NATIONS

CHRONICLE
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HEALTH ORGANISATION

Vol. II, No. 3 March 1940

MOVEMENTS OF CIVIL POPULATIONS

Readers of the *Chronicle* will find, inset in this issue, a report on " Medico-social Questions arising out of the Movements of Civil Populations ".

This report has been drawn up by the Sub-Committee, which, as already announced, was to meet on March 4th, 1940.

It will be remembered[1] that, at its session in November 1939, the Health Committee felt that it would be desirable that it should be able to assist health administrations in protecting the health of populations exposed to the effects of war. For this purpose, it set up an " Emergency Sub-Committee " with power to take action, if required, and to call in expert assistance.

Furthermore, in its report, the Committee emphasised the fact that certain movements of populations are at present taking place, which consist more especially in the evacuation of war areas.

Since these large-scale transfers give rise to serious medico-social questions, the Committee took the view that the Health Organisation would assist responsible authorities by supplying them with documentary material and technical advice in this connection.

Following on preliminary studies carried out by the Secretariat and consultations with the health administrations of the principal countries concerned, one member of the Health Committee, Dr. René SAND, Secretary-General of the Belgian Ministry of Public Health, asked that the Emergency Sub-Committee should be called together to study these problems with the assistance of experts.

The meeting took place from March 4th to 10th, 1940. The members of the Sub-Committee and the panel of experts were :

[1] See *Chronicle* of December 1st, 1939.

Sub-Committee :

Professor J. PARISOT, Professor of Hygiene and Social Medicine at the University of Nancy (*Chairman*) ;

Professor J. BALTEANU, Professor of Hygiene and of Clinical Medicine (Infectious Diseases) at the Iasy Faculty of Medicine ;

Dr. N. M. GOODMAN, Medical Officer at the Ministry of Health, London ;

Dr. Bela JOHAN, Secretary of State at the Royal Hungarian Ministry of the Interior ;

Dr. René SAND, Secretary-General of the Belgian Ministry of Public Health.

Experts :

Dr. C. BANNING, Chief Inspector of Public Health, The Hague ;

Professor BARDY, " Maria " Hospital, Helsinki ;

Dr. Ch. FAUCONNET, Director of the Swiss Federal Public Health Service ;

Dr. Victor GAUSTAD, Acting Secretary of the Norwegian National Health Department ;

Dr. X. LECLAINCHE, Technical Inspector-General at the French Ministry of Public Health ;

M. Joseph LEMAIRE, Chief Administrative Officer of the Belgian Red Cross.

In addition, the French Minister of Public Health delegated to the meeting his technical *Chef de Cabinet*, Dr. CAVAILLON, Inspector-General at the Ministry.

The meeting was thus attended by twelve persons representing nine countries. The choice of countries, which was obviously limited by the available credits, had been effected in such a way as to secure the representation of those which had already put evacuation schemes into operation and of others which might possibly have to do so in the future. One such country, Sweden, was unable to send an expert to the meeting. Finland, however, which had not originally been included, asked to be represented.

As will be seen from the introduction to the report, the Sub-Committee sought to state the principles and enumerate the measures which should be applied to control epidemic disease and to protect the health of civil populations compelled, through hostilities or otherwise, to move from one area to another. These principles and measures apply both to partial and complete evacuations carried out within one and the same country and to the movements of refugees across frontiers.

C.H. 1448 (1).

Geneva, March 12th, 1940.

LEAGUE OF NATIONS

Health Organisation

MEDICO-SOCIAL QUESTIONS ARISING OUT OF THE MOVEMENTS OF CIVIL POPULATIONS

Report of the Emergency Sub-Committee of the Health Committee (Geneva, March 4th-7th, 1940)

In the present report, an attempt is made to state the principles and enumerate the measures which should be applied to control epidemic diseases and to protect the health of civil populations compelled, through hostilities or otherwise, to move from one area to another.

Displacement of a population may be compulsory or voluntary and, in addition, may concern only the native inhabitants of a given country or may include newcomers. The term therefore covers partial or complete evacuation of an indigenous population as well as the influx of refugees into a country from outside.

The measures for the protection of the health of these populations before, during and after the move are governed by such factors as : the numbers involved, the composition of the population groups to be transferred (proportion of children, expectant mothers, old people, sick, etc.), the time available, existing conditions, local customs and habits, material and financial resources, existing administrative machinery, general conditions of health and social level of the population transferred and the hygienic, social and economic level attained in the reception area.

The following scheme is designed for a transfer of population under the most favourable conditions. Where speed is essential,

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however, whatever less elaborate action may be possible in the circumstances will obviously have to be accepted as sufficient.

The transfer of a population also raises a series of problems which are either purely social or have a bearing on economic policy or labour organisation. These are only referred to in passing in view of their close connection with the subject-matter of the present report; they include, *inter alia*, questions of education, of public finance, of social relief and insurance, of existing or potential opportunities for work, of the recuperation of labour power, of vocational guidance, of the work of social centres and of the utilisation of leisure. These problems, however, fall within the purview of other organisations.

I. Measures preceding the Transfer

The health authorities of the evacuated area and those of the reception area should make preliminary arrangements to facilitate co-ordination. Liaison should, in particular, be established between the various medico-social services, especially those responsible for the reception, the isolation and the medical supervision of open cases of tuberculosis, other infectious cases and persons in need of special care.

The medical profession and the nurses and social workers should be familiarised beforehand with the work to be allocated to them. The social workers, for instance, will be responsible for explaining to the heads of families what rations, kit and other necessaries are required and how these can best be carried.

In this connection, stress should be laid on the importance of the visiting nurses and social workers previously in charge of families of a locality population group remaining with that group both during the move and after arrival in the assigned reception area.

If it is necessary to spread the evacuated population over considerable areas, every effort should be made to regroup the families or even larger social units in order thus to reconstitute the transferred community as an entity with its administrative services.

Provision should be made for an order of priority in the execution of the plan, which should be determined by the existing circumstances, and should apply in particular to children and expectant mothers.

It is of importance that every person transferred should be provided with an identity document — *i.e.*, identity discs (particularly for infants and children), individual or family evacuation booklets. Such a system is essential, not only in the interests of the individual, but also to apply all necessary supervision.

Preliminary propaganda and instructions should be undertaken among the population to be transferred as well as in the reception areas. This should include the education of women for the duties which will fall upon them. In this work, the co-operation of women's organisations may be extremely valuable. Teaching staffs can similarly play an important part — *e.g.*, in preparing children for adaptation to life in a rural environment.

Propaganda in favour of voluntary evacuation may usefully be undertaken before compulsory evacuation becomes necessary.

* * *

The requisite measures are considered in relation to the areas in which they must be applied, viz. :

A. In the areas to be evacuated.

B. In the transit areas.

C. In the reception areas.

A. *In the Areas to be evacuated.*

Strict enforcement of existing or supplementary measures for the prevention of infectious disease and the protection of public health generally.

Propaganda by all available means (pamphlets, wireless, Press, etc.) to promote vaccination against smallpox, diphtheria and the enteric fevers.

Registration, prophylactic medical examination and, when necessary, compulsory vaccination of persons to be evacuated.

Census of patients being treated in their homes.

Census of expectant mothers ; classification according to the stage of pregnancy.

Ascertainment of open cases of tuberculosis, cases of venereal and other communicable diseases, " carriers ", cripples, mental cases, abnormal persons, etc.

B. *In the Transit Areas.*

Provision of general and special means of transport (hospital trains, motor rail-cars and motor coaches fitted for stretcher cases, ambulances, etc.).

Provision of medical and nursing staff during the journey.

C. *In the Reception Areas.*

1. *Choice of a reception area in relation to :*

(*a*) *Climatic conditions, local customs and the type of work of the transferred population.*

(*b*) *The health survey of the area.*

Qualitative and quantitative survey of the water supply. Application of emergency methods of water purification.

General sanitation with particular reference to sewage and refuse disposal (as above). Completion of any constructional work in hand and inauguration of essential supplementary schemes.

(*c*) *The survey of available living accommodation.*

Newcomers to a reception area may be billeted on the local inhabitants or housed in collective accommodation provided by existing buildings, reconditioned where necessary, or by hutments or camps. Due consideration should be given to the relative advantages and costs of each of these systems.

In the case of camps, important factors are the lay-out, internal equipment and the time required for erection.

In the accommodation survey, special provision for certain categories must not be overlooked — *e.g.*, infants, children of school age, expectant and nursing mothers, old people, sick, cripples, mental cases and abnormal persons.

2. *Organisation of reception.*

Provision of :

Local services in charge of billeting ;

Reception committees and headquarters ;

Co-ordinating agencies between the various services.

Social centres and homes.

Arrangements should be made with a view to maintaining family and community life.

3. *Provision of medical and health services, including equipment.*

(*a*) Arrangements for the maintenance in the reception area of the existing public health personnel and social workers and of an adequate number of doctors and nurses.

(*b*) Provision of adequate means of transport (where possible, cars) for doctors, nurses and midwives.

(*c*) Reinforcement of the hospitals and other institutions (maternity homes, hostels, crèches, milk dispensaries, etc.) either by enlargement of existing buildings or by the creation of new institutions in accordance with a general scheme of co-ordinated development.

Such a plan includes, in addition to general hospitals,[1] sick bays for mild cases (infectious or non-infectious) and minor injuries, together with accommodation for unbilletable children. Adequate provision is required of beds, drugs, dressings, sera and vaccines (including convalescent sera) as well as facilities for carrying out biological and bacteriological analyses.

The necessary preparations also include the provision of Health Centres, specialised dispensaries, infant welfare centres, bathing establishments, disinfection and disinfestation ovens, and their distribution according to a predetermined plan.

4. *Survey of the available supply of food and milk and calculation of probable requirements.*

5. *Survey of available transport and estimated requirements.*

II. Medico-social Work during the Transfer

A. Assistance should be provided under medical supervision by nurses accompanying the population and by supplementary first-aid personnel.

B. Emergency hospital accommodation, canteens and milk kitchens, together with adequate sanitary conveniences (washing facilities and water-closets should be provided at suitable points en route.

III. Medico-social Work in the Reception Areas

A. *Medico-social Supervision of Evacuees.*

1. *Personnel:*

Public health officers, medical practitioners, dental personnel, sanitary inspectors, midwives, nurses, health visitors, social workers, personnel of the Red Cross and first-aid organisations.

It is of fundamental importance that, as far as at all possible, the personnel should be that previously in charge of the

[1] In estimating the number of beds required, allowance should be made for the fact that many patients normally treated at home will have to be accommodated in hospital.

transferred population. It is essential, for instance, that a social worker attached to a population group should accompany it during transit and remain with it in the reception area. It should, however, be supplemented, so far as may be necessary, by personnel recruited locally or requisitioned from another district.

Apart from its contribution to the general and social supervision of the population, the medical staff can in particular undertake prophylactic examinations (where these could not be carried out prior to departure), the detection and isolation of infectious cases, vaccinations, etc.

In every case, care should be taken to use, as far as possible, medical and social personnel who understand the language and habits of the transferred populations.

2. *Health centres and specialised dispensaries.*

3. *Admission to hospital.*

Adjustment of rules and financial conditions for admission.

4. *Mobile medical units.*

General or specialised units (obstetrics, pediatrics, venereal disease, tuberculosis, dental care, laboratory examinations, etc.).

B. *Hygiene of the Reception Area.*

Inspection by qualified personnel of the living accommodation provided (air space, ventilation, heating, lavatories, etc.).

Improvement of the prevailing sanitary standards of the billeting areas.

Periodic examination of drinking-water and supervision of sewage and household waste disposal, including fly, mosquito and rat control.

Maintenance of an adequate diet (collective feeding, school canteens, etc.).

Control of the purity of foodstuffs.

C. *Special Problems.*

Enuresis and its prevention by education.

Pediculosis and scabies.

Psychological problems, including measures to counteract the ill-effects of the sudden change of environment.

D. *Importance of General Education in Hygiene amongst the Transferred Population.*

* * *

The measure of success achieved in the medico-social protection of the transferred populations will be to a great extent determined by the standard of public health organisation already existing in the reception area.

In these circumstances, the raising of public health standards, and the strengthening of the medico-social machinery and equipment would appear to be the most logical and efficient method of preparing for the possible evacuation of populations and for their reception in other areas.

In this connection, general indications for guidance have been given by the Health Organisation in the studies carried out in 1933 on the best methods of safeguarding the public health in times of emergency. Among these methods, one was particularly stressed — namely, the necessity for the thorough co-ordination of all the services and agencies, central and local, concerned. In view of the intricacy of the problems connected with extensive population movements, this recommendation is of particular importance. It is essential, therefore, that an endeavour should be made to secure agreement and unity of direction among the various Ministries concerned and at the same time to enlist the active support of all public and private organisations (Red Cross societies, women's organisations, boy scouts, first-aid societies, etc.). Such co-ordination alone will yield the maximum of results with the minimum of expenditure.

The report is divided into three main parts : the first deals with measures to be applied before the transfer ; the second with the action to be taken during the move ; the third with the working of the welfare and medico-social assistance services in the reception areas. This is obviously a very rough and ready division, since the preliminary measures to be taken in the reception areas and the subsequent operation of the health protection services, for instance, are closely interdependent.

The Sub-Committee emphasised the fact that it had sought to deal only with questions relating to the protection of health, but that transfers of civilian populations gave rise to many other problems connected with social welfare, economic policy and labour organisation.

WORK OF THE HEALTH ORGANISATION

The meeting gave the Emergency Sub-Committee an opportunity of considering — this time, without the assistance of the experts — the progress made in the work of the Health Organisation.

It generally confirmed the indications given by the Health Committee to the effect that a careful watch should be kept upon the development of the epidemic situation in the world, and especially in Europe. Dr. JOHAN having drawn attention to the increase of cases of *cerebro-spinal meningitis* in several European countries, the Sub-Committee was informed that a note would be published in the *Weekly Epidemiological Report* of March 7th, 1940.

This note shows that, in recent years, the curve of incidence of cerebro-spinal meningitis in Europe and in the United States of America has displayed annual variations which themselves fluctuate in cycles of from eight to twelve years. The last peak was reached in 1928/29.

The increase observed in the majority of countries since about 1936 is appreciably greater than in 1928/29. During the first two months of 1940, the seasonal increase in England, Switzerland, Germany, Austria, Hungary, Bulgaria and Yugoslavia was greatly in excess of that normally recorded in those countries. Everywhere, it is characterised by the very wide dispersion of sporadic cases, the absence of epidemic foci and a decline of the fatality rate. On the other hand, neither in Belgium, nor in the Netherlands, nor in the Scandinavian and Baltic countries was there any substantial increase of incidence during 1939.

The Sub-Committee also considered the question of *typhus fever*. It observed that, in the absence of official information concerning the endemic regions of Poland and the U.S.S.R.,

the Epidemiological Intelligence Service had found evidence only of the usual seasonal outbreaks in the rest of Europe. The Sub-Committee also discussed recent developments in anti-typhus immunisation, and took the view that, for the moment, the reconsideration of this question by a meeting of experts similar to the one organised at the beginning of 1937 was not called for.

The Sub-Committee learned with satisfaction that the recommendation made by the Health Committee in favour of the adoption by the various countries of the *International Blood-group Nomenclature* had been acted upon.

Dr. René SAND announced the setting-up of a National *Housing* Commission in Belgium.

It will be remembered that, after the Conference of Far-Eastern Countries on Rural Hygiene (Bandoeng, 1937), the Coonoor Laboratory (India) agreed to co-ordinate, on behalf of the Health Organisation, the work on *nutrition* undertaken in the various Far-Eastern countries on the basis of the programme drawn up by the Conference. The Sub-Committee found that, in this connection, documentary material was already available which would shortly be published in the *Bulletin of the Health Organisation*. It accordingly expressed the view that it would be desirable to call a meeting of nutrition experts of Far-Eastern countries to consider the results obtained and draw up an agreed plan of further investigation. The *Chronicle* will revert to this matter in due course.

Finally, the Sub-Committee proposed that the seat left vacant on the *Pharmacopœia* Commission by the death of the late Professor Edgar ZUNZ should be assigned to Professor N. WATTIEZ, professor at the School of Pharmacy, University of Brussels.

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[1] *Note by the Editor.* — Those who may wish to reproduce this *Chronicle* or publish extracts, more especially in the medical Press, are at full liberty to do so.

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LEAGUE OF NATIONS

CHRONICLE
OF THE
HEALTH ORGANISATION

Special Number * October 1943

The publication of the *Chronicle of the Health Organisation*, begun in January 1939 for the purpose of keeping health administrations and health experts informed about the work of the Health Organisation of the League of Nations, had to be suspended in May 1940.

Adapting itself to war conditions, however, the Health Organisation has remained in being and has continued its activities as far as was feasible, though faced by the practical impossibility of convening international committees and by other difficulties arising out of the war.

The fact that publication of the *Weekly Epidemiological Record* and of the *Bulletin of the Health Organisation* has been maintained is proof of the vitality of the Organisation.

The work of the Health Organisation has, as in past years, been summarised in the *Annual Report of the Acting Secretary-General of the League of Nations*. As this report, which is sent to Governments, does not, in most cases, reach the health services, it has been deemed advisable to reproduce that part of it for 1942-1943 which deals with health, in the form of the present special number of the *Chronicle of the Health Organisation*.

The facts set out for the year covered by this report give an idea of the work done during the preceding two years under practically identical conditions.

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* The last number published of the *Chronicle of the Health Organisation* is No. 4 of Volume II, issued in April 1940.

HEALTH QUESTIONS

In this fourth year of the war, the Health Section has concentrated its activities on the two major problems facing health administrations—viz., the present food scarcity, with malnutrition in Europe, and the danger of epidemic outbreaks in Europe.

Food Scarcity, Nutrition and Health.

Although past studies and the reports of the League of Nations' technical and mixed committees on nutrition showed that malnutrition was by no means restricted to the so-called poorer countries or poorer classes, there is no doubt that under-feeding, with its consequent effects on health, has increased considerably during the last three years, both in extent and in severity. This is particularly so in European countries under foreign occupation, but it is also the case in occupied countries of the Far East and among millions of refugees in China.

The attention of the Health Section has been more especially directed to the first group—*i.e.* the European population—since, owing to the strategic situation it occupies in the heart of Europe, it has been able to obtain information not only on official food rations but also on actual consumption in many countries, on the prevalence of deficiency diseases and on mortality rates, which reflect, with some lag, the effect of malnutrition when its severity exceeds certain limits.

As international technical committees could not be convened in a continent where frontiers are almost impossible to cross, it fell to the Health Section's small staff to carry on the work.

Studies on Malnutrition and Its Effects on Health in Europe. — There are several means by which the food consumption of the population may be gauged. In peace-time, the most

obvious is the analysis of national statistics of food production, imports and exports. In time of war, such statistics are, of course, not available, nor would they be reliable even if they could be produced, as in belligerent countries—and to a greater extent in occupied countries—agricultural producers do not report the whole of their crops. Generally speaking, the amount of food indicated on the ration cards does not correspond to the amount of food actually available and consumed by the inhabitants. On the one hand, certain foodstuffs are not rationed and, on the other hand, only too often consumers simply cannot obtain what they are entitled to. Official rations are therefore not to be taken at their face value, although their fluctuations from month to month or year to year provide an indication of the trend of comparative abundance or scarcity of certain elements in the national dietary. Consequently, only rough estimates can be made of actual food intake in the various countries and amongst the various categories of the population, there being considerable differences between rations allowed for the various age-groups, and even more between food obtainable by the different social classes, as the " black " market is naturally more accessible to the well-to-do. The greatest difference lies probably between the lot of the urban dwellers taken as a whole and that of the rural dwellers, who, being themselves producers or in close contact with producers, are as a rule able to provide for themselves instead of relying on official agencies and rations.

Though it is at present difficult to determine with accuracy the actual *food* intake, it is nevertheless possible, from a careful perusal of the medical Press, to gather many indications of value as to the state of *nutrition* amongst the populations of various countries. There are found to be reports on the reduction of infants' weight at birth, on the slowing-up of growth in school-children, on the loss of weight of male and female workers in factories, on the frequency of various types of food deficiency symptoms, discovered through special surveys, and, finally, on the increasing prevalence of famine œdema, first among the inmates of prisons, internment camps and asylums, and later in the general population itself. Improper or insufficient feeding reacts eventually on the mortality

curves, on infantile mortality, on tuberculosis mortality and even, when conditions become very serious, on the general mortality itself, through a general weakening, which influences the various causes of death, and through starvation itself.

The Health Section has taken advantage of the opportunity offered by the fact that it receives medical journals and statistical returns from most countries of Europe to study the trend of morbidity and mortality in their relation to food shortage. A first study was prepared early in 1942; a more comprehensive one is shortly to appear in the *Bulletin of the Health Organisation.*

Food Relief Requirements. — The above-mentioned studies were undertaken because it was felt that, to help them to settle conflicting priority claims, it would be essential for the authorities controlling post-war food relief to have accurate, impartial and objective data on the real needs of the various parts of the European population, as demonstrated by actual symptoms of malnutrition.

Alive to the necessity of knowing not only the aggregate amount of food that would be needed by the populations of the various European countries when liberated, but also which of the food elements were most acutely lacking in their present dietary, British authorities requested the Health Organisation to determine the latter as far as was practicable, so that foods prepared by the Allied Food Relief Organisation should, in the form of adequate *complement* rations, compensate present deficiencies and cure their ill-effects.

This entailed, in the first place, a statistical comparison between, on the one hand, normal consumption of the various food elements during pre-war years in the different countries of Europe and, on the other hand, war-time consumption as computed from war dietaries, as far as these could be ascertained. Secondly, a study of the prevalence of deficiency diseases had to be undertaken.

Expert advice was sought and given regarding the optimum composition of " supplementary " relief rations that might be distributed as soon as this became possible. These supplementary relief rations were designed to provide in highly con-

centrated form those elements the lack, or at least the insufficiency, of which is most harmful in present dietaries: calcium and phosphorus, high-class proteins, fats and vitamins—*i.e.*, protective foods—besides some carbohydrates for fuel value.

A representative of the Secretary-General who had drawn up the scheme and participated in the preliminary surveys of the nutritional situation in Europe was given the opportunity of sharing his knowledge with the Technical and Advisory Committee on Medical Supplies and Services and the sub-committees of the Allied Post-War Requirements Organisation in London, at the end of 1942, and during the first months of 1943. In April 1943, he was invited by the State Department of the United States to act in an advisory capacity to the Office of Foreign Relief and Rehabilitation Operations and its Health Committee in Washington. He also took part in the work of technical sub-committees on tropical diseases, nutrition, child welfare and sanitary engineering, set up to study the help that will have to be given to the authorities, as soon as reorganised, of the liberated countries to enable them, by means of adequate staff and supplies, to improve the health of the people in those territories where it has deteriorated as a result of foreign occupation. He was later invited to act as adviser on food and drug relief to the Lend-lease Organisation. It will be recalled that a very appreciable part of the supplies issued by that Organisation to various countries consists of foodstuffs and medical stores.

With reference to the above mentioned work, it must be borne in mind that during the last twenty-two years, the Health Organisation has pursued its humanitarian work for the benefit, and with the collaboration, of all countries, irrespective of their political complexion or of their status as Members or non-members of the League.

The Epidemic Danger.

It was quite natural for public, and even medical opinion, impressed by the traditional memories of war epidemics and by the staggering losses inflicted on the populations of Eastern Europe through epidemics of all kinds during the last world

war and more particularly during its aftermath, and also by the coincident pandemic of influenza, to expect fresh epidemics to occur as a result of the present conflict. The Epidemiological Intelligence Service of the Health Section was fortunately in a position to keep in touch with the evolution of communicable diseases in the various countries, as most national health administrations, feeling the need for information as to the trend of these diseases abroad, kept up their collaboration with this Service. Its staff, having the benefit of long-standing archives and of twenty years experience in gauging the significance of epidemic events, kept constant watch on the epidemic situation.

The Singapore Bureau. — The Eastern Bureau of this Service functioned for Eastern countries until less than a week before the occupation of Singapore by the Japanese in January 1942. After that date (in spite of the hospitality and facilities offered to the Director of the Eastern Bureau by the Australian Government), the suppression of all trade between the areas controlled by the Allies on the one hand and by the Japanese on the other, and the restriction of movements within these areas to military traffic, with the consequent necessity for secrecy, made the pursuance of the Bureau's activities temporarily impossible. They were accordingly suspended until the return of more promising conditions in the Orient.

The slowing-up of postal communications between the African and American continents and the seat of the Epidemiological Intelligence Service in Geneva made it difficult for the latter to cover these two continents efficiently as heretofore; notwithstanding the regular telegraphic contact maintained with the Pan-American Sanitary Bureau, the Service therefore concentrated its attention on Europe, which is particularly exposed to epidemics as a result of the war.

The information collected on the health situation in Europe was summarised in a series of notes relating to the prevalence, trend and probable course of the main communicable diseases occurring in that continent: typhus fever, cerebro-spinal meningitis, enteric fever, scarlet fever, smallpox, poliomyelitis, etc.

These notes were published in the *Weekly Epidemiological Record.* In view of the interest attaching to typhus fever owing to its extension as a result of the first world war, it was made the subject of a particular study published in the *Bulletin of the Health Organisation* in January 1943. This monograph contained, not only up-to-date information on the prevalence of the disease in Europe and surrounding countries, but also technical information on recent methods of prevention applicable in the different countries, special reference being made to vaccination.

This information on epidemic disease was sent regularly, as soon as issued, to all health administrations—by air-mail to some overseas administrations. A comprehensive survey of the present situation with regard to the vitality of the European populations, the increased incidence of diseases favoured by malnutrition and the present prevalence of epidemics and their possible extension has been prepared and is to be issued in a forthcoming number of the *Bulletin of the Health Organisation.*

It is felt that the facts published will serve both to allay exaggerated fears, based on erroneous premises, and to help national health administrations and international organisations dealing with medical relief to concentrate their means to combat those diseases which constitute the most real and most immediate menace to public health.

The International Red Cross has availed itself of the epidemiological information and experience of the Health Section, in order to determine what drugs are needed for epidemic relief.

Similar information and advice was likewise furnished to the Allied Technical Advisory Committee on Medical Supplies and Services in London and to its technical sub-committees, the object being to determine what drugs, staff and sanitary supplies would be necessary to improve public health in the European countries when they are liberated. Particular attention was directed not only to the possibility of outbreaks of typhus, enteric fever, dysentery, diphtheria, etc., but also to the increased prevalence of tuberculosis and malaria and to the protection of the most vulnerable elements in the population—viz., pregnant and nursing women and infants.

Other Activities of the Health Organisation.

Apart from its work in connection with the above-mentioned subjects which, owing to the war, have acquired particular importance, the Health Organisation has maintained its activities in other spheres, so far as staff and circumstances (which precluded the possibility of meetings of experts) permitted.

Health Information Service.

The maintenance at Geneva of international health archives, library and staff, incited many sanitary administrations, research institutions, private health and welfare organisations, etc., now deprived of technical information about other countries to apply to the Health Section for particulars regarding recent developments concerning not only epidemic diseases but also other health questions.

As many as 89 requests for technical documentation or information were received and met by the Health Section, from February 1942 to the end of June 1943. Of these requests, 14 came from international organisations, including the International Red Cross Committee and the League of Red Cross Societies, 27 from national health administrations, ministries of health, public welfare, colonies, etc., 3 from regional health services, 21 from scientific institutions, universities and research laboratories, 9 from national Red Cross Societies and other welfare organisations, and 15 from other sources.

The subject which aroused most interest and led to the largest number of requests was the effect of the war on communicable diseases. The questions included: the health situation as a whole, anti-epidemic action generally, or in regard to particular diseases and modern methods of combating them. Typhus, bacillary dysentery, diphtheria and smallpox received most attention.

Nutrition, feeding and dietary came second.

Other questions related to the various branches of hygiene: public health administration, housing, eugenics, mental, individual, international, maternal, rural, or tropical hygiene. In

all, 32 requests were concerned with hygiene in its different aspects as against 57 relating to epidemic diseases and sanitary statistics.

International Nomenclature of Diseases and Causes of Death.

A number of requests for information and advice regarding medical nomenclature came to the Health Section as the result of the important part it had played in the preparation of the last two decennial revisions of the International Lists of Diseases and Causes of Death. Advice was sought as to the methods of compiling hospital records, surgical procedures, the classification of causes of death, and the nomenclature of communicable diseases.

A study, made at the request of the International Red Cross, on the significance of names of communicable diseases in various languages was amplified and extended so as to form the basis of a comprehensive glossary in twenty-four languages of the communicable diseases. This glossary, with its index of some 5,000 terms, is to be published as a special number of the *Bulletin of the Health Organisation.*

Biological Standardisation.

Notwithstanding the war, the Department of Standards of the National Institute for Medical Research at Hampstead and the State Serum Institute at Copenhagen have continued, on behalf of the Health Organisation of the League of Nations, to prepare biological standards and distribute them regularly to the national institutes and laboratories entrusted with the control of drugs and sera. The standards selected, after years of patient study by the Permanent Commission on Biological Standardisation, now include 15 curative or protective sera, 9 hormones, 5 vitamins and 5 other drugs, which require animal tests for their titration.

In addition, the National Institute for Medical Research took the initiative in 1942 of setting up a standard preparation and international unit for heparin, a substance which prevents the coagulation of blood and which is more and more used in both ordinary and war surgery. This standard and

international unit will have to be formally approved and adopted after the war, when the Permanent Commission on Biological Standardisation meets. Meanwhile, the initiative taken will prevent the introduction into the practice of the various laboratories of units based on different biological criteria and therefore difficult of comparison among themselves.

Notwithstanding the war, research has continued on several subjects on the agenda of the Permanent Commission. Among these subjects are the nature of the toxins produced by the tetanus germ and by *Bacillus perfringens*, one of the agents of gas gangrene. These studies are described in a series of articles that are to appear in a special standardisation number of the *Bulletin of the Health Organisation* now in the press, together with a general survey of the recent progress in biological standards.

It may be mentioned that a stock of the various standards prepared by the Hampstead Institute has been constituted in Geneva.

Unification of Pharmacopœiæ.

It will be recalled that, before the war, the Health Committee of the League undertook the task of collecting the elements for an international pharmacopœia. It was intended to unify and standardise the main pharmaceutical preparations throughout the world and to make their manufacture by the chemical industry simpler and more economical.

A last revision of the eighty-five monographs completed to date on the most important drugs was considered necessary. This revision has been continued in 1942 and 1943 in both London and Philadelphia, while a study of the melting points which permit identification of some of these drugs is now being carried out at Zurich.

It is hoped that this may pave the way for a more rapid resumption of progress after the war, when the re-opening of communications will make it possible to convene the Committee.

Malaria.

Circumstances have so far prevented the Malaria Commission from meeting. The reduction in anti-malaria work, the lowered nutritional level of populations, migrations and the scarcity of quinine and other cinchona derivatives since the occupation of the main producing country—Java—by the Japanese, have already resulted in an increased incidence of malaria in a number of countries. The accentuation of these factors might, at the close of the war, be responsible for actual epidemics breaking out, as they did at the end of the first world war.

Without waiting for the time when the Malaria Commission could meet, a number of its members have been asked for their advice regarding the possibilities of mass treatment with the synthetic drugs capable of replacing quinine, and particularly atebrin. This enquiry was carried out at the instance of an American Government relief agency.

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LEAGUE OF NATIONS

CHRONICLE
OF THE
HEALTH ORGANISATION

Special Number * Geneva, April 1945

The special number of the *Chronicle of the Health Organisation* published in October 1943 in continuation of the series of this periodical, the purpose of which is solely to provide information and which had been interrupted in May 1940, aroused, among health administrators and specialists who received it, sufficient interest to warrant the issue of the present number.

This number gives a report on the work of the Health Organisation of the League of Nations during the period 1943-1944.

In the annex will be found a brief description of the recent publications of the Health Section and of those in the press or being prepared for issue in 1945.

* The two previous numbers of the *Chronicle of the Health Organisation* are No. 4 of Volume II, April 1940, and the special number issued in October 1943.

4599 — S.d.N. 1200 (F.) 1300 (A.) 4/45. Imp. du Journal de Genève

ACTIVITIES OF THE HEALTH ORGANISATION OF THE LEAGUE OF NATIONS IN 1943-1944

In normal times, the activity of the Health Organisation centred chiefly round the work of its Health Committee, its technical Commissions and Sub-Commissions, and the large number of experts who were members of those bodies and who, in the scientific institutes of all continents, carried out, each for his part, the research entailed by the requests for technical advice received from Governments. The members of the Health Section, who acted as the secretaries of these Commissions and Sub-Commissions, were concerned mainly with preparing and facilitating their work and with co-ordinating the results achieved. The functioning of certain permanent services—the receipt and transmission of epidemiological information conducted in Geneva and at Singapore, the preparation and regular distribution of standards of biological products carried out at Copenhagen and in London—represented only a small part of the work performed by the Health Organisation, a part, moreover, which attracted little attention and little comment because of its continuity and relative uniformity.

The fact that frontiers have been more or less hermetically closed as a result of the war has profoundly modified this situation. It became difficult—and, later, practically impossible —to arrange meetings of international committees.

In consequence, the work of the permanent services became the very core of the activity of the Health Organisation.

It should be recalled, however, that though, formerly, the members of the Health Section devoted themselves chiefly to facilitating the research work of the Commissions of which they were the secretaries, they nevertheless gave a considerable

part of their time to the duty of replying to the requests for technical information which reached them from all quarters.

This part of the work assumed such large proportions that, early in 1940, a decision was taken to set up a documentation service for the purpose of helping the members of the Section in this task and supplementing their resources in regard to questions that did not come within the field in which they were specialists.

The requests for documentary material, information and technical advice received by the Health Section have increased in number during recent years and the furnishing of such advice has become one of the major functions of the Section during the war.

(a) *Biological Standardisation.*

There is general recognition of the importance attaching to the exact measurement of the effects of medicaments, sera, glandular extracts, vitamins, etc., whose activity is not in direct relation to their weight and can be determined only by tests on animals.

Over a period of twenty-two years, the Permanent Commission on Biological Standardisation and its Sub-Commissions have worked out, for more than 30 therapeutic substances, the most accurate methods for assaying their activity in animals. They have also established standards for these substances and have devised methods by which the scientific institutes, whose duty it is to test medicaments in the various countries, are enabled to ensure their uniformity and constancy of action by comparison with the standards. These standards are not merely theoretical values, but definite substances, prepared and measured with extreme precision by the specialised services of the two great institutes which, in this matter, act as central laboratories for the Health Organisation—viz., the Danish State Serological Institute (Statens Serum Institut), at Copenhagen, for therapeutic sera, and the National Institute for Medical Research, Hampstead, London, for vitamins, hormones and other medicaments. The standards are distributed every six months by these central laboratories to the national institutes. This distribution has

been maintained during the war and the Health Section in Geneva served as a relay station and deposit when direct postal transmission became impossible as a result of the hostilities. The way in which the belligerents have respected these consignments of humanitarian and scientific value deserves mention.

The scientific staff of the Biological Standardisation Service of the National Institute for Medical Research at Hampstead found it necessary, during the war, to renew the standard substances—stocks of which were approaching exhaustion—in respect of a whole series of international standards.

In the replacement of each substance, every care was taken and all practicable tests and examinations were carried out at the Hampstead Institute—whenever possible in collaboration with experts in other countries—to ensure that these replacement international standards should conform fully to the requirements of the original standards as defined and recommended for adoption by the Permanent Commission on Biological Standardisation.

A description of the work entailed was published, at the end of 1943, in a special number of the *Bulletin of the Health Organisation* (Vol. X, No. 2). This number also contains a description of a new international preparation of the anterior lobe of the pituitary gland of the ox, made up in accordance with the recommendations passed by the Third International Conference on the Standardisation of Hormones (1938). The material is now available for distribution by the Hampstead Institute in order to facilitate the comparative assay of certain active principles contained in the anterior lobe of the gland, for which the establishment of separate standards was not considered practicable.

The same number of the *Bulletin* contains also observations concerning tetanus toxins and antitoxins, and a description of the provisional international standard for heparin (an anticoagulant substance employed in surgery). It describes also the measures taken by the Hampstead Institute to ensure the continuance of regular supplies of serum standards to countries which can no longer be reached from Copenhagen, where the State Serum Institute has so far acted as world distributing centre for these standards.

The Copenhagen Institute, which in June 1944 was still in a position to distribute serum standards to 49 of the 75 institutions it formerly supplied regularly, had also to replenish the stock of standard preparations for gas-gangrene antitoxins of two different types. For this purpose, suitable sera were selected and desiccated and their potency was determined as accurately as possible in terms of the international standards previously adopted. Thus, notwithstanding the war, the regular distribution of the 35 international biological standards so far adopted by the Commission proceeds throughout the world without interruption.

At the request of the British member of the Health Committee, the secretary of the Permanent Commission on Biological Standardisation carried out a preliminary investigation of the potency of existing yellow-fever vaccines and the duration of the protection they confer.

Consultation of the institutions concerned with the preparation of such vaccines in the United States showed that the protection given by these vaccines could be expected to last for four years when the vaccines possess a specified toxicity for laboratory animals.

This opinion was conveyed to, and accepted by, the Committee of experts set up in London by the United Nations Relief and Rehabilitation Administration (U.N.R.R.A.) to consider various quarantine questions bearing on the repatriation of persons who have had to leave their country as a result of the war.

This is of very definite practical value, as it will enable the present two years' validity of the vaccination certificate required for travellers passing through yellow-fever-infected areas to be extended to four years.

The standardisation of typhus-fever vaccines—the importance of which cannot be over-estimated in present circumstances—is also under consideration by the Permanent Commission on Biological Standardisation.

Most people are aware of the great progress in the treatment of infections made possible by the discovery of *penicillin*, a product of extraordinary anti-microbic potency extracted from certain moulds. Following this discovery, a great deal of research work was undertaken with a view to finding means

of producing appreciable quantities of penicillin and similar substances. It therefore became urgent to adopt uniform criteria of the efficacy of these various substances and to standardise penicillin. A Conference of experts from Great Britain, the United States, Canada, Australia, France, South Africa and India was accordingly organised by the Permanent Commission on Biological Standardisation and was held in London in October 1944, under the chairmanship of Sir Henry H. Dale, President of the Royal Society. The Conference had the advantage of the participation of Sir Alexander Fleming, the discoverer of the drug. It was able to reach agreement and define a provisional international unit of penicillin.

(b) *Epidemiological Intelligence.*

It is not necessary to refer again to the way in which the Epidemiological Intelligence Service has been adapted to the new and changing conditions created by the war. It will suffice, on the present occasion, to mention merely the modifications in the functioning of this Service which have been introduced in 1943/44. During that year, the policy followed by the Soviet, British and American censorship authorities, in practice, restricted its field of information to Europe and certain countries in Africa and the Near East, data relating to America being represented mainly by the cabled information received from the Pan-American Sanitary Bureau concerning pestilential diseases in the Western Hemisphere.

Though the geographical field of the effective activity of the Service has been confined to Europe, the interest attaching to the health situation of that continent has been greater than ever. The Service has accordingly concentrated all its efforts on that area.

In addition to recent episodic information concerning pestilential diseases—typhus fever and smallpox—tables have been introduced into the *Weekly Epidemiological Record* relating to each of the contagious diseases of importance in Europe : *e.g.*, diphtheria, scarlet fever, typhoid, dysentery, poliomyelitis, cerebro-spinal meningitis, etc. These tables give, for each country, not only the most recent figures, but also those recorded

during each month of the previous six years, together with comparative data extending over the eleven years preceding the war. A special typographical arrangement brings out clearly those figures which exceed the computed " normal " for each month of that period. By this means, it is possible for readers to gain an idea of the situation even if they are unacquainted with the usual range of variation of contagious diseases in the different countries.

Notes have been published embodying comments on these tables. Other notes have dealt with epidemic diseases which are temporarily of special interest—*e.g.*, influenza (which prevailed in an epidemic though mild form in North America and in Western Europe from November 1943 to February 1944), epidemic hepatitis (the recent wide extension of which was a subject of concern to health authorities), dysentery, relapsing fever, etc.

Concurrently, studies were conducted on the recent trend, in the countries and large towns of Europe, of general mortality, infant mortality and mortality from tuberculosis, the rates for which make it possible to measure the harmful effects produced on health by war and, in particular, by the food shortage which prevailed in the greater part of occupied Europe. Preliminary tables on general mortality and infant mortality were published in the *Weekly Epidemiological Record*. More detailed data accompanied by comments and diagrams are, moreover, given in the *Bulletin of the Health Organisation*, Vol. X, No. 4, under the title " Health in Europe—a Survey of the Epidemic and Nutritional Situation ".

The last-named monograph will be followed by two others on the state of health and mortality of children and of adults respectively in relation to the nutritional situation in the various countries.

The epidemic situation and the nutritional condition of Europe are naturally at present receiving the attention not only of national health authorities but also of the international relief organisations, whose action in the matter of medical, pharmaceutical and nutritional relief must be based on the most accurate information obtainable, so that unnecessary preparatory work may be avoided and efforts may be concentrated on real needs.

In Geneva, the Epidemiological Intelligence Service has been able to furnish information and technical advice to the various organs of the International Red Cross which have applied to it for that purpose.

The Head of the Service has also placed the information and experience acquired by the Service at the disposal of several groups of medical officers and social workers who are being specially trained for post-war anti-epidemic action by the Swiss Red Cross, the Polish Red Cross and various other private relief organisations. With this object, series of lectures were given on the health situation and health problems of the war and post-war periods.

First in the United Kingdom and, later, in the United States, another member of the Section furnished to official international relief organs and to medical men and public health specialists, at conferences of medical associations and in special meetings, the observations and statistics assembled by the Section on these questions.

The services of this official were lent, in the first place, for several months to the American Relief Organisation and then to the United Nations Relief and Rehabilitation Administration (U.N.R.R.A.).

As this liaison of a personal character proved to be insufficient, the Health Section opened a liaison unit at Washington in May 1944. The staff of that unit, which includes, amongst others, the former chief statisticians of the League of Nations Epidemiological Intelligence Service at Geneva and Singapore respectively, is particularly adapted for interpreting the information transmitted each week from Geneva by cable and airmail concerning developments in the health situation.

The same information is sent also, in the same way, to the medical service of the European regional centre of U.N.R.R.A. in London.

The Washington unit of the Health Section is preparing an edition of a monograph on the health situation in Europe which will be, for American readers, a companion study to the one issued in Geneva. Similarly, it has, since the end of May 1944, published a *Weekly Digest of Epidemiological Information*, corresponding to the Geneva *Weekly Epidemiological Record*, of which it precedes the arrival in America.

One of the tasks to be undertaken by the Washington unit is that of assisting the medical services of U.N.R.R.A. in the preparation of manuals on the health organisation and health situation of the various countries of Europe. For the compilation of these handbooks, which are intended for the use of the staff that will be sent to Europe by U.N.R.R.A. for its relief and reconstruction work, the Washington office of the Health Section has at its disposal a comprehensive collection of documentary material sent from Geneva.

In regard to manuals for the use of the staff of the relief organisations, mention should be made of the *Polyglot Glossary of Communicable Diseases* compiled by the staff of the Epidemiological Intelligence Service at the request of the Joint Relief Committee of the International Red Cross. The 350 pages of this *Glossary* contain the names of the various infectious diseases in twenty-five European languages. The index, of more than 70 pages, gives for some 6,000 names of diseases the number corresponding to each in the 1938 issue of the *International List of Diseases and Causes of Death.* This number makes it easy to find, in any one of the twenty-five languages of the *Glossary*, the equivalents of the terms the translation of which is desired.

(c) *Health Information and Documentation.*

The part played by the publications of the Health Section, and by the staff of that Section, in providing information for health authorities and relief organisations on questions relating to epidemics will be clear from what has already been said above. In point of fact, the information furnished is not confined to this one aspect of the health situation but has covered also other health problems and, in particular, that of nutrition. The collection, analysis and study of statistical and clinical data concerning nutrition in Europe and the communication of the results of those studies to the administrations concerned have constituted one of the fundamental tasks discharged by the Health Section, both in Geneva and at Washington. These studies on the influence of under-nutrition on health form a supplement and a corollary to the studies carried out by the

League of Nations Economic Intelligence Service both in Geneva and at Princeton regarding rationing and consumption [1].

The work of the Section as an information centre has not been confined to questions concerning contagious diseases and nutrition. During the year, it has replied to requests for documentary material, information and advice on some thirty subjects relating to public health. Of the 77 requests that were met, coming from fourteen different countries, 22 were received from international relief organisations, 13 from national authorities (Governments or their representatives, Ministries of Health, etc.), 18 from institutions for scientific research, 15 from national Red Cross organisations or other national relief organs, and 9 from other sources.

In order to facilitate the use by health administrations and research workers of the documentary material assembled during the past twenty-three years by the Health Organisation and its experts, a technical bibliography of that material has been prepared and will constitute a special number of the *Bulletin of the Health Organisation*—viz., Vol. XI, No. 1. This compilation comprises no less than 3,000 titles of studies and reports covering the various branches of public health.

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[1] *Food Rationing and Supply, 1943/44*, Ser. L.o.N. P. 1944.II.A.3, 101 pages.

"Rationing of Foodstuffs in Certain Countries of Europe, 1939-1944", *League of Nations Monthly Bulletin of Statistics*, Vol. XXV, No. 6, 1944, pages 155-177.

Selected Health Organisation Publications

BULLETIN OF THE HEALTH ORGANISATION

Table of Contents of Recent Numbers.

Volume X, No. 1, 1942-1943 :

1. *The Present Menace of Typhus Fever in Europe and the Means of combating it,* by Y. Biraud
2. *Contribution to the Study of Metabolism of Vitamin C and its Elimination in the Urine.* by F.-M. Messerli.

Volume X, No. 2, 1942-1943 :

Biological Standardisation VI :

1. Memoranda by the Department of Biological Standards, the National Institute for Medical Research, Hampstead, London, on
   — some recent changes relating to the International Standards for certain of the Sex Hormones and for Pituitary (posterior lobe) ;
   — replacement of the Substances constituting the First Standard Preparations of Oestrone, Androsterone, Progesterone, Pituitary (posterior lobe) ;
   — the International Preparation of Desiccated Ox Anterior Pituitary Gland ;
   — the Standard for Prolactin.
2. Standard Preparations for the Assay of the three Gas-Gangrene Antitoxins, *Cl. perfringens, Vibrion septique* and *Cl. œdematiens,* by P. Hartley and D. G. Evans.
3. Note on the Complexity of Tetanus Toxin, by M. Llewellyn Smith.
4. Observations on the Variable Interaction of Tetanus Toxins and Antitoxins. by G. F. Petrie.
5. Heparin :
   5*a*. The Biological Standardisation of Heparin, by F. C. MacIntosh.
   5*b*. Memorandum on a Provisional International Standard for Heparin (1942), prepared by the Department of Biological Standards, the National Institute for Medical Research, Hampstead, London.

Volume X, No. 3, 1943-1944 :

Polyglot Glossary of Communicable Diseases, by Y. Biraud.

Volume X, No. 4, 1943-1944 :

1. *Health in Europe. A Survey of the Epidemic and Nutritional Situation,* by Y. Biraud.
2. *Giroud's Intradermic Test in Typhus Fever Infection,* by G. Clavero and F. Perez Gallardo.
3. *Famine Disease and its Treatment in Internment Camps,* by J. Weill.

To be issued shortly :

Volume XI, No. 1 : *Bibliography of the Technical Work of the Health Organisation of the League of Nations, 1920-1945.*

No. 2 : *Biological Standardisation of Penicillin.*

No. 3 : *The State of Health of Children in Europe, 1944.*
Treatment of Drug Addiction.

No. 4 : *The State of Nutrition of Adults in Europe.*

(*Note :* The prices of numbers of the *Bulletin of the Health Organisation* vary from 2/– to 6/– ; $0.65 to $1.20.)

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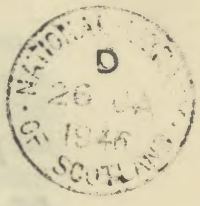
LEAGUE OF NATIONS



CHRONICLE
OF THE
HEALTH ORGANISATION

Special Number Geneva, December 1945

The regular publication of this *Chronicle* was suspended in May 1940. Since then, two special numbers have, however, appeared, wherein is summarised the work accomplished by the Health Organisation from 1942 to 1944.

In the present number, the entire war period is passed under review. It shows how the Health Organisation has carried out the new tasks imposed on it by circumstances, while at the same time striving to maintain some of its former activities, notwithstanding the reduction in its resources.

This page from the history of the Health Organisation has been taken from the Report which the Acting Secretary-General of the League of Nations will submit to the coming Assembly ; it has appeared desirable to print it separately in order to bring it to the attention of all those—and they are many—who are interested in international health work.

S.d.N. 1200 (F.) 1300 (A.) 12/45. Imp. de la Tribune de Genève.

ACTIVITIES OF THE HEALTH ORGANISATION OF THE LEAGUE OF NATIONS DURING THE WAR

To inform national health authorities on matters of fact, to document them on methods of solving their technical problems, and to afford them such direct assistance as they may require—such are the principles which have governed the work of the Health Organisation.

In the period of twenty-four years during which this complex work has been in progress, different phases can, however, be distinguished. In the first of these, the dominant need was for the organisation of the fight against the epidemics which broke out in consequence of the first world war ; effort had to be concentrated on meeting the danger that threatened most. This was the period of direct action by the Epidemics Commission on the Polish frontiers, of the establishment of epidemiological intelligence centres at Geneva and Singapore, of experiments in the deratisation of ships as a precaution against plague and of the unification of the assay of therapeutic sera as a guarantee of their activity.

Gradually, however, the post-war wave of epidemics subsided and the second phase that then began was characterised by action for the prevention of diseases. In particular, attention was devoted to perfecting methods of vaccination against smallpox, diphtheria and scarlet fever, to ensuring greater precision in the serodiagnosis of typhoid through unification of the technique employed, to improving tests for the detection of syphilis, to ascertaining the value of the various anti-rabies vaccines, to decreasing mortality among infants and mothers, to working out a programme of action for the combating of tuberculosis, and to systematising the prophylaxis of malaria. These few examples, out of many, showed that the aim in view was to ensure that public health work should, in general, be inspired by the principle of preventive medicine.

Health, however, is something more than absence of disease, and although curative and preventive medicine have not said their last word, they cannot endow the individual with that physical perfection which ensures joy of living. For this, the action of positive factors is required : a diet adequate both in quantity and in quality ; a healthy and pleasant home and the possibility of attaining the bodily well-being imparted by physical exercise. Nutrition, housing, and physical culture—such were the subjects of study which, with a rare vision and a remarkable grasp of realities, Dr. L. Rajchman, for seventeen years the Director and guiding spirit of the Health Section, laid before the Health Committee in 1934. By its decision to take up the study of these questions, the Committee showed that it was deliberately directing its action towards the promising field of social medicine.

The centre-piece of this threefold programme was nutrition and, of all the reports emanating from the Health Organisation, that dealing with the physiological bases of nutrition was certainly the one that attracted the most widespread attention ; this report, indeed, is of little less than historical importance in that it introduced the conception of protective foods and attributed to them their rightful place in a properly composed diet.

That the Health Committee was resolved to go still farther along the path of medico-social activities is proved by its studies on polyvalent health centres—a conception which is now more to the fore than ever—on the training of social workers and public health nurses, on health indices which enable the state of health of a particular community to be assessed from every aspect, on social assurance (in collaboration with the International Labour Office), and on rural hygiene, both in Europe and in the Far East.

The plan of work which the Health Committee had set itself for the years 1937 to 1939 reflected its desire to improve the lot of mankind by organising the fight against social diseases, slums and malnutrition and by bringing the most up-to-date methods of treatment and prophylaxis within reach of all classes of society. War broke out, however, before the completion of this three-year programme, which comprised, *inter alia*, a series of meetings that were to be held during the autumn of 1939, namely : the third Conference on the Standardisation of Vitamins, meetings of the Technical Commission on Nutrition, of a group of experts in the serodiagnosis of syphilis, the Commission on Physical Fitness and

the Technical Commission of Pharmacopœial Experts. Furthermore, at the instance of three British possessions in Africa, the Colonial Office had proposed the calling of a new Pan-African Health Conference at Nairobi (Kenya). Lastly, twenty-one Governments had expressed themselves in favour of a conference to lay down rules for the use of the new synthetic drugs which have taken their place alongside quinine in the prophylaxis and treatment of malaria.

However, the Health Organisation was obliged to postpone these meetings and to concentrate on the new tasks which the war was soon to thrust upon it. As early as September 14th, 1939, the Roumanian Minister of Public Health drew attention to the fact that the influx of refugees and the existence of a floating population along the frontiers gave rise to grave danger of epidemics in that country, particularly typhus fever. He asked the Health Organisation to take steps with a view to combined anti-epidemic measures on the part of the countries thus threatened. The Acting Director of the Health Section was thereupon sent to Bucharest, Budapest and Belgrade to examine the situation with the Governments concerned. He found that, for the moment, there was no epidemic focus of typhus fever and that the national authorities had the situation well in hand. As soon as the cold weather came, however, a recrudescence of typhus fever was to be feared. Accordingly, the idea of concerted anti-epidemic action undertaken under the auspices of the Health Organisation was favourably received and arrangements were made that the Health Section should be speedily informed of any epidemics which developed in order that it might take action without delay. From many sides, offers of assistance in the event of such action proving necessary flowed in. In point of fact, however, it was not until 1943, at a time when intervention by the Health Organisation was out of the question, that the spread of typhus fever in Roumania assumed alarming proportions.

It thus became necessary to adapt the work of the Health Organisation to the new conditions resulting from the hostilities, and this the Health Committee proceeded to do in November 1939.[1] In view of the effects which the war was bound to have on public health—whether through epidemics, nutritional deficiencies, widespread tuberculosis, or enterics due to the contamination of drinking-water—the Committee considered that its function was to hold

[1] Document C.364.M.277.1939.III.

itself in readiness to help national health services both by direct action and by supplying documentation and technical advice. Nevertheless, this new orientation of effort was not to involve the abandonment of work in fields where it would be of immediate utility—*e.g.*, epidemiological intelligence, malaria, nutrition, or biological standardisation—provided that such work did not make too heavy a call on the Health Section's already very much reduced resources.

As cases might arise in which immediate intervention would prove necessary, the Health Committee set up an emergency sub-committee, consisting of its Chairman and four of its members, which could act on the Committee's behalf and could co-opt other members of the Committee and experts, as circumstances might require.

This sub-committee met in March 1940, to consider the medico-social problems which the organised displacement of civil populations raised at that time. With the aid of Belgian, Finnish, French, Dutch, Norwegian and Swiss experts, a report was drawn up for the use of national health services. In this report are set out the principles to be applied in departure, transit and reception areas with regard to accommodation, medical and sanitary equipment, social welfare and the supply of foodstuffs, particularly milk.

Finally, at a time when blood-transfusion services were being organised to meet the needs both of operational and air-raid casualties, the Health Committee considered it necessary to draw attention, through the leading medical periodicals, to the international nomenclature for the various blood groups, which was drawn up under its auspices and had been in existence since 1927 ; its use made it possible to avoid the sometimes serious accidents which may ensue during transfusion when the groups to which the blood of the donor and the patient belong are incompatible the one with the other. At that time, however, several systems of nomenclature were being used to designate the blood groups, with the consequent risk of confusion.

By June 1940, owing to resignations and the departure of officers for their own national services, the Health Section comprised only two doctors—the Officer in charge of the Health Service and the Chief of the Epidemiological Intelligence Service—upon whom, up to the present time, has fallen the heavy task of preserving what could be preserved, of taking, with the assent of the Acting Secre-

tary-General, such action as was essential, and of replying to the requests for information which flowed in from all sides. In 1941, for instance, 65 questions from seventeen countries were referred to the Health Section, including seven from international institutions and 27 from national or regional health authorities. The subjects of these questions clearly reveal the problems about which, in those days, health authorities felt most concerned; questions relating to epidemiology were the most frequent, after which came questions concerning nutrition and the public health organisation of various countries.

For the purpose of framing its replies, the Health Section had in its files some 5,000 technical reports ; for current problems, Geneva was on the whole a good observation post from which it was possible to follow developments in the health conditions of a large part of Europe.

Soon, however, the war spread to most of the Far East. By November 1941, the requirements of military security had already considerably reduced the amount of epidemiological information communicated by telegram to the Singapore Bureau by the health administrations of Far-Eastern countries. The occupation of Indo-China, of the Chinese ports, of Siam and of the Philippines progressively restricted the Bureau's sphere of action. A week before the occupation of Singapore (February 1942), the Bureau was transferred to Canberra, at the invitation of the Australian Government. In the circumstances, however, it was unable to continue to function usefully, and, on November 1st, 1942, its activities were suspended.

In Geneva, the Health Section found itself increasingly compelled to rely on its own resources, as lack of communications prevented its obtaining advice from the majority of the members of the Health Committee and its technical commissions. Subsequently, the Chairman of the Committee, Professor Jacques Parisot, and one of its members, Dr. René Sand, were deported to Germany and were not released until after the occupation of that country by the Allied troops.

In February 1942, the Inter-Allied Bureau set up in London to study post-war requirements asked the Health Section to supply data regarding the food ration consumed before and during the war in the occupied countries, the foodstuffs most suitable for distribution in concentrated form to the populations of those countries

after their liberation, and the types of vitamin-deficiency disease that were most to be feared. Since it was impossible to consult the Technical Commission on Nutrition, the Health Section, in preparing its reply, secured the assistance of physiologists available in Switzerland.

Shortly after the submission of this report, the Officer in charge of the Health Service was sent to London to place at the disposal of the Inter-Allied services the experience acquired by the Health Organisation in connection with the combating of epidemics, the prophylaxis of contagious diseases and assistance for pregnant women and new-born infants. The object in view was to draw up a plan for the distribution of available resources in medical and auxiliary staff, sera and vaccines, and drugs and medical equipment as between the countries that were then occupied, in order to meet their most urgent needs during the six months following their liberation and to assist the health services when they came to be reconstituted. The technical sub-committees to which this task had been entrusted included representatives of each occupied country and the distribution proposals were adopted with the agreement of all concerned, subject to revision if last-moment deportations of doctors or the destruction of hospitals and sanitary equipment made this course necessary.

In the second quarter of 1943, on the initiative of the State Department of the United States, the Officer in charge of the Health Service proceeded to Washington for consultations with the Office of Foreign Relief and Rehabilitation. Here again, the object was to place at the disposal of this Office—which continued to function until U.N.R.R.A. was established—the experience gained by the Health Organisation in nutrition, malaria and sanitary engineering.

The first session of the Council of U.N.R.R.A. was held at Atlantic City in October 1943 and the Health Organisation was invited to be represented by an observer. The Officer in charge of the Health Service outlined before the Sub-Committee on Health and Medical Care the way in which collaboration between the League of Nations Health Organisation and the Health Division of U.N.R.R.A. might be established. In its report, this Sub-Committee emphasised that co-operation between these two bodies should be encouraged and developed.

In March 1944, when the Health Division of U.N.R.R.A. was in process of organisation, Governor H. Lehman, Director-General of

U.N.R.R.A., sent a telegram to the Acting Secretary-General asking if it would be possible to secure the co-operation of the Health Section in certain fields of work for the whole duration of U.N.R.R.A.'s activities, so as to make use of the Section's technical qualifications while at the same time avoiding overlapping.

Governor Lehman also made three suggestions : first, that the despatch to the Health Division of U.N.R.R.A. of the epidemiological information collected by the Health Section at Geneva should be accelerated and that the quantity of information should, if possible, be increased (steps were at once taken to comply with this wish) ; secondly, that a " research unit " should be created in Washington— with the possibility of its later being transferred to London or to the Continent of Europe— its task being, on the one hand, to interpret the epidemiological data received from Geneva or other sources and, on the other hand, to assist the Health Division of U.N.R.R.A. to prepare health surveys of occupied regions of Europe or Asia ; finally, to enable U.N.R.R.A. to profit by the Health Organisation's experience in the Far East, the opening should be envisaged— preferably in India—of a bureau on the lines of that formerly operating in Singapore, while a subsidiary bureau, with the Pacific zone as its field of activity, might be set up in Australia.

The Acting Secretary-General having approved these suggestions, the Health Section established a " research unit " in Washington and this began work on May 15th, 1944, with a staff which included the former head of the Health Section's Epidemiological Intelligence Service and the former statistician of the Singapore Bureau. Week by week, this " Unit " provided the Health Division of U.N.R.R.A. with a critical survey of the health situation in Europe and the parts of Africa and Asia of importance from the standpoint of air traffic. It also prepared a monograph on the health organisation of Indo-China, the public health facilities available, the diseases prevailing there, and the diet of the native inhabitants.

With regard to the opening of a new Eastern Bureau in India, with a branch office in Australia, the negotiations with the Governments concerned had not been concluded when Japan capitulated. As a result of this development, the situation has changed and the possibility that the Eastern Bureau may, in the early future, resume its work in Singapore can once more be contemplated.

In December 1944, the Director-General of U.N.R.R.A. informed the Acting Secretary-General that the international sanitary conven-

tions—which had been adapted to the conditions resulting from the state of war—would henceforth impose certain responsibilities upon U.N.R.R.A. in connection with the notification of pestilential diseases. To meet these responsibilities, it must have an Epidemiological Intelligence Service of its own and, in view of the excellent work done by the "Research Unit", Governor Lehman therefore expressed a wish that its staff should be placed at the disposal of the Health Division of U.N.R.R.A. in order to form the nucleus of such a service. With the assent of the Supervisory Commission, the transfer took place on January 1st, 1945.

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After this brief survey of the special tasks which the Health Section had to undertake as a result of the war, something more may be said of the long-term activities the continuation of which had been decided by the Health Committee in 1939.

Biological standardisation, universally recognised as a special feature of the work of the Health Organisation and a field in which it has done pioneer work, has proceeded, everything considered, very satisfactorily. The distribution of international standards to laboratories throughout the world, entrusted, in the case of sera, to the Danish State Serum Institute at Copenhagen and, in the case of vitamins, hormones and certain medicaments, to the National Institute for Medical Research at Hampstead, was at times slowed down through dislocation of postal services, but it has never been stopped.

After the invasion of Denmark in April 1940, the Copenhagen Institute was no longer able to communicate with certain countries. The Health Section therefore approached the Medical Research Council of Great Britain, which controls the Hampstead Institute, with a request that the latter might be authorised to supply the international standard sera to laboratories which could no longer obtain them from Copenhagen. Notwithstanding the additional work which this distribution entailed for the Institute—the stocks of some standard sera had to be reconstituted and the international units of activity redefined in terms of the new preparations—the Medical Research Council readily acceded to this request and the continuance of this international service was thus ensured.

The fact that the sometimes fatal accidents which during the first world war resulted from the administration of an insufficient dose of serum have been averted in the present struggle is largely due to biological standardisation. Thirty years ago, a doctor, relying on the number of units indicated on a phial, might inject a quantity of serum which he justifiably considered sufficient but which, in fact, was insufficient because the assay had been expressed in terms of a unit of lesser activity than that to which he was accustomed. This, however, cannot happen to-day. The universal adoption of the international units fixed by the Permanent Commission on Biological Standardisation, indeed, means that doctors are now equipped with weapons of well-defined calibre and range. It has also provided health authorities with the means of measuring the activity of biological remedies placed on the market ; and, in the last place, it has simplified the task of manufacturers who now need to express the strength of a product they wish to export in terms of one unit only—the international unit. In other words, biological standardisation has become a necessity.

In the course of the war years, our therapeutic armament has been reinforced by new medicaments which can be assayed only by biological methods. It was essential, therefore, that no time should be lost in fixing international standards and units for these substances, so as to avoid the use in laboratories of several units of activity, based on different criteria and therefore not easily comparable. Although circumstances made it impossible to arrange a meeting of the Permanent Commission on Biological Standardisation, some of its members have taken steps to set up provisional international standards for Vitamin E—the so-called fertility vitamin—and for heparin, an anticoagulant substance much used in war surgery. The decisions taken were subject to the reservation that they must be confirmed by the Commission when it is able to meet as a body.

At the beginning of 1944, the question arose of standardising that incomparable antibacterial agent, penicillin. Here, again, it was necessary to act at once and to secure, from the outset, the use of a common yardstick for measuring the action of a product, which preliminary assays carried out in England and in the United States of America had shown to be capable of standardisation. On the Health Section's initiative, therefore, an International Conference on the Standardisation of Penicillin was convened in

October 1944, in London, where the substance had been discovered. This Conference, which was presided over by Sir Henry Dale, included representatives of Australia, the United Kingdom, Canada, France and the United States of America, while a number of those who had helped to increase knowledge of penicillin were present as observers. An international unit was chosen and two preparations were adopted ; one, chemically pure, will serve as a basic standard ; the other, less pure, but assayed in terms of the first, will be distributed to laboratories for the purpose of their day-to-day assays. The representatives of the United States of America agreed to undertake the preparation of the substances to serve as standards.

The progress made in biological standardisation has been possible only through the collaboration of many well-known scientists who have most generously placed their knowledge, their time and the resources of their laboratories at the Commission's disposal. Furthermore, certain manufacturers of pharmaceutical products have facilitated the Commission's work by presenting it with pure substances—some of them extremely expensive—for use as international standards.

In a similar field, it has been possible, notwithstanding the war, to continue the work with a view to the *unification of the national pharmacopœias* by preparing monographs on the chief medicaments subsequently to be included in them. Forty-eight such monographs have been completed and will shortly be published. This is a first step towards the establishment of an international pharmacopœia.

In the combating of *malaria*, which has been one of the chief concerns of the medical services of the Allied armies, constantly increasing use has been made of synthetic drugs—atebrin and plasmoquin—as to the value of which parallel investigations had been conducted in 1935 in Algeria, Italy, Malaya, Roumania and the Soviet Union, on the initiative of the Malaria Commission. The question of the dosage of these drugs, with which the Commission dealt in its " Report on the Treatment of Malaria " (1937) has, however, been reopened and it would have been desirable for the Commission to give the matter further consideration. Unfortunately, an attempt to arrange a meeting for this purpose proved unsuccessful and all that could be done was to consult those of the Commission's members who had had recent experience of the use of atebrin as an agent of collective prophylaxis. The opinions obtained were communicated to the Health Division of U.N.R.R.A. and showed that the con-

clusions reached by the Malaria Commission eight years ago in regard to the curative use of atebrin still hold good. On the other hand, the problem of the prophylactic use of synthetic anti-malaria drugs is not yet solved and it was to have been taken up again by the conference which it was planned to hold in the autumn of 1939.

In 1937, a proposal was made to the Malaria Commission for the establishment of a uniform terminology in connection with the epidemiology of malaria. Appreciating the value of such a measure, the Commission set up a Sub-Committee of five members to carry the proposal into effect. Their report, published in 1940, consists of two parts : the first comprises a commentary on malaria parasites and the infections which they cause, while the second is a glossary in which each term is defined and its French equivalent given. In view of the Malaria Commission's high standing in scientific circles, this report naturally aroused keen interest, and it may be hoped that the terms which it proposes will be adopted by the different schools of malariology.

With regard to *rabies*, the Health Section has, since 1940, been obliged to suspend the collection, statistical presentation and annual publication of the results of vaccination in anti-rabies institutes throughout the world, a task entrusted to it by the International Conference on Rabies (Paris, 1927). Nevertheless, as the data at its disposal already cover more than a million bitten persons treated, it would seem that this figure is sufficiently large to warrant conclusions as to the value of the various methods of vaccination, which was the object of the investigation. These conclusions might be submitted to a new international rabies conference, the holding of which is regarded as necessary by many authorities on rabies.

In response to a desire expressed by the Health Committee, the question of the preventive vaccination of dogs formed the subject of a critical review by the Health Section which was published in 1940. [1] A study on the value of live and killed anti-rabies vaccines was published the same year.[2]

Before the war, investigations into the question of *nutrition* were carried on in close collaboration with the national commissions set up in a large number of countries in Europe and overseas. As contact with the majority of these was lost after 1939, the investigations had to be discontinued. The Health Section, however,

[1] *Bull. Health Org.*, 1940/41, 9, No. 3.
[2] *Ibid.*, No. 1.

could not abandon the question of nutrition at a time when it was beginning to give rise to serious uneasiness. Accordingly, it endeavoured to assemble all available information, on the one hand, concerning food restrictions and their effects on health, particularly of children and adolescents, in belligerent and occupied countries, and, on the other hand, concerning the deficiency diseases produced by under-nutrition. A comprehensive study on the first point was issued in 1944;[1] a study on the second will be published shortly.

A clinical description of " famine disease ", as observed among the internees in the camps in the south of France, was also published in 1944.[1]

Lastly, the rice problem, which had been raised in 1937 at the Inter-Governmental Conference of Far-Eastern Countries on Rural Hygiene, formed the subject of a series of publications.[2] To prevent the grain from being deprived, by excessive husking or by unsuitable cooking methods, of some of its nutritive and protective qualities, the latter deriving from the presence of vitamins, local customs would have to be changed. It is from this standpoint that the rice problem in India, Siam and the Netherlands East Indies is approached in the above-mentioned publications.

The studies on *housing* were likewise conducted through the agency of national commissions and these, too, have been interrupted. Mention should, however, be made of the magnificent illustrated volume " Enquête sur l'Habitation rurale en France ",[3] contributed by the French National Commission to the documentation of the European Conference on Rural Life.

In the event of a general war, bringing epidemics in its train, it is more than ever necessary to have rapid, regular and reliable information on the movement of infectious diseases throughout the world ; for when an epidemic zone is located in good time, defensive and preventive measures can be organised.

Before the outbreak of hostilities, the *Epidemiological Intelligence Service* fulfilled these conditions, since it received data regarding infectious diseases and demographic statistics from every country in the world, with the exception of the Soviet Union, and from most large towns. Its Singapore Bureau received weekly telegraphic

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[1] *Bull. Health Org.*, 1943/44, **10**, No. 4.
[2] *Bull. Health Org.*, 1940/41, **9**, No. 3.
[3] Document C.H./Com.Hab./100.

reports regarding the health situation in some 180 ports lying between the Suez and Panama canals. Twelve wireless stations broadcast once a week—and some of them daily—the epidemiological reports which Geneva and Singapore issued for the benefit of health authorities and ships at sea.

From 1940 onwards, however, the censorship and the slowing-down of postal communications hampered the working of the Service and restricted its field of activity, since no information was forthcoming from zones of military operations. The same thing happened in Asia in 1941. From 1942 onwards, the only information received from Africa and America had already become out of date in transit. As these continents were efficiently served by the Pan-American Sanitary Bureau and the British technical services, the League Epidemiological Service concentrated its attention on Europe and succeeded in ensuring the continued receipt of data respecting epidemics and mortality from belligerent, occupied and neutral countries ; the only regions from which it was unable to obtain statistics were the zone of the Eastern front and certain territories which were deprived of postal communications with the outside world, such as Albania, Serbia and, at some periods, Greece. The information published in Geneva in the *Weekly Epidemiological Record*—the issue of which was never suspended—was also transmitted to London and Washington by airmail or by telegram.

The official statistics, supplemented by information from other sources, made possible an objective study of the effects of the war on the health of the European peoples and of the spread of epidemics among them. Notes on these subjects were frequently included in the *Weekly Epidemiological Record* and a comprehensive study on health conditions in Europe was published at the end of 1944.[1] A knowledge of these data being essential to any rational relief work, the views of the Epidemiological Intelligence Service were sought by public health administrations, by national Red Cross Societies, and by the different organs of the International Red Cross which applied to the head of the Service as their technical consultant on questions of epidemics. When U.N.R.R.A. commenced work in this field, it requested that weekly telegrams should be sent to its centres in Washington and London concerning epidemic movements in Europe ; this request was complied with. Among the

[1] *Bull. Health Org.*, 1943/44, 10, No. 4.

requests for information regarding new methods of combating contagious diseases, those respecting typhus fever were the most numerous. This led the Service to prepare a monograph, which was published at the end of 1942,[1] on this disease and on the latest methods of vaccination against it.

In 1938, the staff of the Service, in collaboration with the International Institute of Statistics, carried out the preparatory work and supplied the technical secretariat for the Fifth International Conference for the Revision of the Nomenclature of Diseases. It was thus given responsibility for preparing the official volume entitled "Nomenclatures internationales des Causes de Décès, 1938" *(International Nomenclature of Causes of Death, 1938)* which the International Institute of Statistics had printed at The Hague in 1940, on the eve of the invasion. The war made it impossible to arrange meetings of the technical commissions that were to be set up to prepare international nomenclatures of diseases to meet the requirements of hospitals, army medical services and sickness-insurance organisations. The Service was, however, able to provide the Netherlands and Swiss Army Medical Services and a number of hospital and surgical associations with proposed nomenclatures of wounds and diseases.

At the request of the International Red Cross, it prepared a *Polyglot Glossary of Communicable Diseases* giving terms employed to designate them in twenty-four European languages.[2]

The *Annual Epidemiological Report* for 1938, which contains figures revised by the health and statistical services of countries throughout the world, was published at the end of 1941.[3]

In 1945, the head of the Service was invited to take part in the work of the International Commission organised by the Government of the United States of America to standardise the rules of classification of deaths resulting from several joint causes.

Since the liberation of Europe and the consequent restoration of postal communications, the Epidemiological Intelligence Service has gradually re-established contact with health and statistical authorities from which it had been cut off. It has also collaborated with the Inter-Allied military medical authorities (S.H.A.E.F.) in the distribution to the competent national services of information

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[1] *Bull. Health Org.*, 1943/44, 10, No. 1.
[2] *Ibid.*, No. 3.
[3] Document E.I.23.

concerning typhus fever in the occupied areas of Germany and among liberated prisoners.

In addition to its immediate practical utility to health authorities, the information assembled during recent months will enable the Epidemiological Intelligence Service to complete its various sets of statistical data, the value of which depends on their continuity, and to prepare a comprehensive publication on communicable diseases and mortality during the war.

In regard to reference material, mention should also be made of the *Technical Bibliography of the Work of the Health Organisation of the League of Nations, 1920–1945* [1] which is now in the press ; it covers several thousand reports of Committees and studies by experts and will be a valuable work of reference for specialists in public health and social medicine.

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[1] *Bull. Health Org.*, 1945, 11.

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