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LEAGUE OF NATIONS

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III. HEALTH

1929

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Geneva, January 21st, 1929.

LEAGUE OF NATIONS

HEALTH COMMITTEE

MINUTES OF THE THIRTEENTH SESSION

Held in Geneva from October 25th to 31st, 1928

LIST OF MEMBERS.

The following members were present at the session :

Dr. Th. MADSEN, President, Director of the State Serum Institute, Copenhagen.
M. O. VELGHE, Vice-President (*ex officio*) ; President of the Comité permanent de l'Office international d'Hygiène publique, Paris ; Secretary-General of the Ministry of the Interior and of Health, Brussels.

Dr. H. CARRIÈRE, Vice-President, Director of the Swiss Federal Public Health Service, Berne.

Professor Léon BERNARD, Professor of Clinical Tuberculosis at the Faculty of Medicine of Paris and Technical Health Adviser at the Ministry of Health.

Sir George BUCHANAN, Senior Medical Officer, Ministry of Health, London.

Professor J. CANTACUZÈNE, Professor of Bacteriology and Director of the Institute of Experimental Medicine, Bucharest.

Dr. Witold CHODZKO, former Polish Minister of Health ; Director of the State School of Hygiene, Warsaw.

Colonel J. D. GRAHAM, Public Health Commissioner with the Government of India, Delhi.

Dr. C. HAMEL, President of the Reichsgesundheitsamt, Berlin.

Dr. Alice HAMILTON, Professor of Industrial Hygiene at Harvard University, Boston, Mass.

Dr. N. M. J. JITTA, President of the Public Health Council of the Netherlands, The Hague (attended the meetings from October 28th).

Professor Ricardo JORGE, Director-General of Public Health, Lisbon.

Dr. A. LUTRARIO, former Director-General of Public Health, Ministry of the Interior, Rome.

Professor B. NOCHT, Director of the Institute of Tropical Diseases, Hamburg.

Professor D. OTTOLENGHI, Professor of Hygiene at the Royal University of Bologna.

Dr. L. RAYNAUD, Inspector-General of the Health Services, Algiers.

Dr. L. RAJCHMAN, Medical Director, Secretary of the Committee.

* * *

Dr. C. L. PARK, Chief Medical Officer, Australia House, London (representing Dr. CUMPTON), attended the session.

Mr. S. KUSAMA, of the Japanese Office for the League of Nations attached to the Japanese Embassy, Paris (representing Dr. M. TSURUMI), attended the session.

The following members were absent :

Professor G. ARAOZ ALFARO, former President of the National Health Department, Buenos Aires.

Professor Carlos CHAGAS, Director of the Oswaldo Cruz Institute, Rio de Janeiro.

Surgeon-General H. S. CUMMING, Chief of the Public Health Service of the United States of America, Washington, D.C.

Professor NAGAYO, Director, Government Institute for Infectious Diseases, Tokio.

Professor G. PITTALUGA, Professor of Parasitology, Faculty of Medicine, Madrid University.

Dr. C. E. A. WINSLOW, Professor of Public Health, Yale School of Medicine ; member of Public Health Council, State of Connecticut.

The following also attended the session of the Committee :

Dr. ABT, Director of the Office international d'Hygiène publique, Paris.

Dr. CAROZZI, Chief of the Health Service, International Labour Office.

Professor Mack EASTMAN, Head of Section in the Research Division, International Labour Office.

M. MARIGNAC, Deputy-Director of the Office international d'Hygiène publique, Paris.

M. A. TIXIER, Chief of the Social Insurance Service, International Labour Office.

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 - VII. Report of the Chairman of the Cancer Commission on the Meetings of the Sub-Commission of Experts, namely, the Sub-Commission for the Study of Occupational Cancer and the Sub-Commission for the Study of the Radiotherapy of Cancer.
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FIRST MEETING.

Held on Thursday, October 25th, 1928, at 3 p.m.

President: Dr. Th. MADSEN.

386. Opening of the Session.

The PRESIDENT, welcoming his colleagues, regretted the absence of certain members of the Committee. Among these were Surgeon-General Cumming, Dr. Winslow, Dr. Alfaro, Dr. Chagas, Dr. Tsurumi (replaced by Mr. Kusama) and Dr. Cumpston (replaced by Dr. Park).

Professor Léon Bernard would be in Geneva on the morrow and Dr. Jitta and Professor Pittaluga on the day after.

The President then paid a tribute to the memory of Dr. Pottevin, Director of the Office international d'Hygiène publique, who had been the first to bring to the Health Committee the valuable co-operation of that institution. Dr. Pottevin had often participated in the sessions of the Committee. Everyone had appreciated his friendliness and loyalty, as well as his competence and discretion.

He desired to address to the Office international the deep regrets of the Health Committee.

At the International Health Conference held in Paris in 1926, as Chairman of the first section, he had personally had numerous opportunities of appreciating the distinguished qualities of Dr. Pottevin, particularly as general Rapporteur. It might be said that Dr. Pottevin had chiefly contributed to the success of that very difficult Conference. He had, immediately on learning of Dr. Pottevin's death, expressed to the Office international the regrets of the Health Committee. He now desired to renew those regrets on behalf of all its members.

The President then congratulated Professor Cantacuzène, on behalf of the Committee, on his fortunate recovery from his serious accident. They were all happy to see Professor Cantacuzène so well restored to health. His well-being was not a surprise to the members of the Health Committee, who had known of the admirable and extensive work which he had nevertheless contrived to continue and to direct during his enforced inactivity.

The President also welcomed Dr. Hamilton.

M. VELGHE, as representative of the Office international d'Hygiène publique on the Health Committee, thanked the President for his moving words. The Office international, as the President had said, had based high hopes for the future upon the work of Dr. Pottevin, and his death deprived the Office of a very real element of strength. He was sure that the Health Section would also regret that it could no longer count on the services of Dr. Pottevin.

Professor CANTACUZÈNE thanked the President for his kind words. During his long illness he had been touched by the kindness of his colleagues on the Health Committee, and he would never forget how some of them, especially the Medical Director, had come to see him in hospital at Brigue.

387. Agenda.

The PRESIDENT submitted the provisional agenda for approval (document C.H.742 (1)).

Sir George BUCHANAN said he presumed that the discussion of the resolutions of the Assembly and decisions of the Council which would take place on Friday morning would be mainly devoted to a debate on the question of alcoholism. The discussion of this question would probably be brief, as the subject was not sufficiently ripe for a thorough examination. He observed that on the same morning it was proposed to examine the report of the Medical Director and he hoped that the discussion of the question of alcoholism would leave sufficient time for this report to be adequately considered. The report was extremely interesting, more particularly the part which dealt with the proposed interchanges, and the Committee might have a very useful exchange of views concerning them. He observed that it was proposed on Saturday morning to discuss the report of the Smallpox and Vaccination Commission. He would remind the Committee that Dr. Jitta was interested in this question and would naturally wish to be present.

The report to be presented by the Cancer Commission would probably not go beyond the report which had already been circulated in outline and that report might be presented at any time. If, however, it was proposed that there should be any considerable discussion in the Committee, it would be of advantage if the Cancer Commission were called together before its report was considered. The Cancer Commission, without a further meeting, could hardly go beyond the report which it had already made.

The PRESIDENT said that the Bureau of the Committee would endeavour to meet the wishes of Sir George Buchanan.

M. VELGHE thought that Sir George Buchanan was in a better position than his other colleagues on the Cancer Commission to decide whether that Commission should meet before submitting its report to the Committee.

Sir George BUCHANAN replied that he had merely wished to place himself at the disposal of his colleagues, and he was quite ready to assume full responsibility in the matter.

The MEDICAL DIRECTOR said that, after the agenda had been communicated to the members of the Committee, he had received a letter from Professor Léon Bernard, asking, on behalf of his Government, that the problem of nutrition should be placed on the agenda. He had replied that, as the agenda had been distributed, Article 4 of the Rules of Procedure applied, in accordance with which a request for a subject to be placed on the agenda must be approved by a majority of two-thirds of the members present. On the following day, Professor Léon Bernard would submit and explain his request to the Committee.

The provisional agenda was adopted.

388. Election of Two Vice-Presidents for 1929.

The PRESIDENT, in conformity with precedent, invited Dr. Carrière, the only one of the two Vice-Presidents in attendance, to submit proposals for the election of two Vice-Presidents for 1929.

Dr. CARRIÈRE proposed Professor Ricardo JORGE and Dr. CHODZKO. It was customary every year to appoint a European and a non-European. He thought that Professor Ricardo Jorge was qualified to replace the Latin-American members of the Committee who were absent.

Professor Ricardo JORGE and Dr. CHODZKO thanked Dr. Carrière.

The proposal of Dr. Carrière was adopted.

389. Report of the Malaria Commission.

Dr. LUTRARIO, Chairman of the Malaria Commission, reminded the Committee in what circumstances the Commission had been convened in June last.

The Second Report of this Commission, which had been called a General Report, contained ideas which were perhaps too novel and seemed to attack certain accepted principles of anti-malaria research. Particular surprise had been expressed at one of the fundamental principles maintained by the Commission, namely, the carrying into effect of only one or two methods of conducting the campaign against malaria, which was opposed to the principle of the general use of all the methods known at the present day. Similarly, the Commission had been reproached with having ascribed too much importance to small works of bonification and with not having sufficiently emphasised bonification on a large scale. It was further criticised for having been perhaps too pessimistic in regard to the prospects of achieving complete victory and for having recommended small doses of quinine as opposed to heavy doses.

These criticisms, put forward in various publications, had affected the views even of some of the members of the Commission, and a division of opinion in the Commission had been feared. For that reason, it had seemed useful to convene the Malaria Commission and to call together, not only its members, but several malariologists in the principal public health services, representatives of the Rockefeller Foundation, directors of the great schools of malariology, engineers, etc. Thirty-seven persons were invited and thirty-four actually attended.

The Health Section had prepared a fairly detailed programme, which facilitated the task of the Commission. This programme dealt with general questions and then with three categories of special questions. It was decided that the general questions should be dealt with in plenary meetings and that the three special questions should be referred to three Sub-Committees presided over by Dr. Balfour, Professor Boyd and Professor Ascoli respectively.

GENERAL QUESTIONS.

The first question on which discussion took place concerned point I of the Second General Report (pages 12 and 13) :

“ In Europe, having regard to the present state of knowledge, the correct anti-malaria practice is an endeavour to reduce the incidence and severity of the disease. Measures designed to accomplish more than that (particularly measures aiming at “ eradication ”) are not a wise proposition and can be justified only in very exceptional circumstances.”

This was a point of capital importance and in reality the kernel of the dispute. Criticisms of two kinds had been raised :

(a) *Criticisms on experimental grounds* : Cases were quoted where a reduction of the disease had been hastened by the application of appropriate new measures. This reduction gave reason to anticipate the disappearance of the disease at an early date.

(b) *Criticisms on sentimental grounds* : It was felt that to lose all hope of complete victory might dishearten sanitary administrations.

Dr. Lutrario replied to the first criticisms that the reduction of the disease was not the same thing as its disappearance, just as the diminution of general mortality owing to health measures did not mean the disappearance of mortality. In proportion as mortality rates were

lowered, the effort to reduce them still further increased, until an equilibrium was reached between the antagonistic forces and no further reduction could be hoped for. The same was true, within reasonable proportions, of malaria morbidity.

As far as the sentimental argument was concerned, Dr. Lutrario thought that the discouragement of the health administrations would be all the greater if, after having counted upon a complete abolition of malaria, they saw their hopes destroyed after considerable sacrifices had been made.

He would not deny the possibility of the practical disappearance of the illness in certain limited areas. The Commission itself had seen two striking examples in Sicily, at Mondello and La Rotondella.

But if particular localities were left out of the question, in order to examine whole countries or vast expanses of the Mediterranean area, or tropical or subtropical zones, not one single case of complete and lasting eradication of malaria could be put forward.

The example of Italy was classic; she had fought tooth and nail against the disease. If the mortality from malaria were compared to the incidence and gravity of the disease, it would be found to have been reduced during the last forty years by 80 to 90 per cent. But if malaria-infected areas were taken into consideration, it would be found that forty years of struggle had only brought about very small results when compared to the enormous amount of energy expended. Italy still reckons 8 ½ million hectares of malaria-infected country, with 2,616 municipalities.

It was not Dr. Lutrario's intention to minimise the high value of present measures and particularly of complete bonification, on which the highest hopes were based, but, so far as eradication was concerned, it was necessary to face the bare facts.

On the other hand, the adherence of the Commission to the other principles — which, after all, were interdependent — had been practically unanimous.

SPECIAL QUESTIONS.

It was in this domain that the Commission's activity had reached its maximum.

Complete agreement had been attained, save for certain modifications and slight differences of opinion on the various suggestions put forward. The feeling of the June meeting coincided in fact with that which characterised the General Report.

FIRST SUB-COMMITTEE.

Anti-Malaria Methods.

Dr. Lutrario made a brief survey of the points considered.

Point 1 : Creation of a Central Research Organisation. — The Drafting Committee had considered that in each country infected with malaria such a body should be created, with the following characteristics: it should be central, permanent, strictly scientific, managed by specialised technical experts, autonomous or connected with a State department; finally, it should be set free from administrative duties and have for its sole objects the scientific study of the problem and the filling of the rôle of scientific adviser to the authorities.

The Sub-Committee, after having studied the conditions prevailing in various countries which have such an organisation, came to the conclusion that the problem was still very obscure and that it was necessary to acquire a more complete knowledge of the disease, the parasite and the mosquito. Hence the absolute necessity of having research centres for that purpose.

Point 2 : Number of Methods to be employed. — The Drafting Committee had been criticised on the grounds that it wanted to limit the campaign to the application of one or two methods. Such was not the case. The Committee had merely wanted to warn administrations against the simultaneous enforcement in one region of all anti-malaria measures, without applying any one in its entirety. From this it appeared that the best procedure was to employ one or two methods only, but to ensure that these were given their maximum of efficiency.

Point 3 : Selection of the Methods. — It was advisable to leave the choice of the methods largely to the discretion of the authorities. In this domain there is no best method; it is necessary to take into consideration the local malaria conditions, which vary from one locality to another.

Points 4, 5 and 6 were interdependent and referred to :

- The Curative Treatment of the Sick ;*
- Their Intensive Prophylactic Treatment ;*
- The Results that could be obtained from the Treatment applied.*

The Sub-Committee, in consultation with the Third Sub-Committee, unanimously agreed :

- (a) That it was indispensable before all else to treat the sick ;
- (b) That it was necessary to provide for their intensive treatment with quinine, and that enquiries should be conducted in the various countries in order to find out the practical importance of this intensive treatment from the prophylactic point of view ;
- (c) That the treatment resulted, first, in a diminishing gravity and, second, in a diminishing prevalence of the disease.

Point 7 : Minimum Effective Degree of Efficacy. — The Commission often insisted on the fact that the execution of the methods used must reach a sufficiently high degree of efficiency (which is known as “ minimum effective degree of perfection ”) before their effects on malaria incidence become appreciable.

The General Report stated that, logically, it would seem that some benefit would inevitably be derived from the destruction of some mosquitoes, the adoption of certain mechanical protection, the distribution of some quinine. Such was not the case ; practical results did not confirm this view, but showed, on the contrary, that no result was achieved.

Point 8 : Extensive Bonification. — The Sub-Committee agreed that the practical efficiency of this measure depended upon two conditions :

- (a) That it be strictly “ integral ” ;
- (b) That it should afford to workers and not only to landowners an improvement of their living conditions.

This was essentially the same point of view as had been expressed in Points 15 and 16 of the General Report, but it was now more clearly laid down.

In addition, small works of bonification, which had been more or less overlooked, were given a more important place in the sanitary improvement of malaria-infected areas.

Dr. Lutrario stated that this view coincided with the spirit of Italian legislation, and commented in this connection on a memorandum on bonification in Italy distributed to the Committee, which mainly dealt with the recent law on “ Integral Bonification ”. For the enforcement of this law, a credit had been provided amounting to 7½ billion lire, spread over seven years.

Point 9 : This item was not on the programme of the Commission’s debates. It gave rise, however, to much discussion.

The resolution deals with two successive aspects of anti-malaria measures, the “ constant ” and the variable.

The first deals with the treatment of patients (medical assistance and distribution of quinine) ; this aspect of anti-malaria action is to be found everywhere, no matter what the local conditions are.

The other aspect varies with local conditions ; the question is to select the scheme of action the most efficacious, the least expensive and the best adapted to local conditions.

The system selected must consist in the adoption of final measures (great bonification) or temporary measures (anti-larval measures). At the time when these measures are being applied, mechanical protection against mosquitoes must be used, and attack made on adult insects (this latter is considered as a primary measure by the Commission).

This is the logical and co-ordinated plan for anti-malaria action.

Doubtless it constitutes the most important of all the items in the debates of our Commission, since it covers two kinds of measures : (a) the constant measures (quinine treatment, attack against the adult insects and mechanical protection) ; and (b) the variable measures (final or temporary), which must adapt themselves to different local conditions and therefore must be preceded by a serious study of these conditions.

This plan is of fundamental importance for the sanitary administrations which have to deal with the problem of malaria.

SECOND SUB-COMMITTEE.

This Sub-Committee was entrusted with the study of certain epidemiological aspects of malaria. Among the points studied were the following :

1. The use of historical data and mortality statistics ; criteria of the reliability of these data.

Some members stated that, in their opinion, these sources of investigation had no value. They based their judgment on the fact, which is undoubtedly true to a certain extent, that, until the discovery of the agent of malaria in 1882 and even after, certain febrile diseases accompanied by intermittent or remittent fever were included under the heading of malaria.

Still, clinical examination and differentiation between these diseases and clinical diagnosis is not valueless.

Dr. Lutrario stated that he had found strikingly good descriptions of the various forms of malaria in treatises of pathology published fifty or sixty years ago, or even earlier ; besides, an Italian physician unable to make a differential diagnosis between malaria and typhoid fever would have been disqualified.

There is no doubt that malaria mortality statistics must be interpreted with much caution owing to the many errors contained therein, but that is true of all statistics, and no one could agree to disregard this most important means of studying life.

Dr. Lutrario is therefore unable to share the view on this question held by some highly qualified members of the Sub-Committee.

2. The Sub-Committee also studied the criteria justifying the declaration of a zone as “ malarious ”. The Sub-Committee and later the Commission were unanimous on this point and adopted the text suggested in the General Report without amendments.

THIRD SUB-COMMITTEE.

This Sub-Committee was concerned with the questions relating to the treatment of malaria. After a comprehensive discussion, the Committee adopted the following conclusions :

1. Small doses of quinine are preferable to large massive doses.
2. When determining the dose of quinine to be given, one must consider :
 - (a) The type of parasite (a greater quantity is needed for *P. falciparum*) ;
 - (b) The severity of the disease ;
 - (c) The character of the epidemic ; when the rhythm of the epidemic quickens, which occurs at cyclic intervals, it is also necessary to increase the dose slightly.
3. In order to effect a complete cure, it is necessary not to stop treatment immediately after the febrile attack ; it must be continued for three to five weeks after clinical cure.
4. It is desirable to stop treatment for a few days when treatment is prolonged (three or four days in a week).
5. The Sub-Committee called attention to the danger of intravenous injections, which must be reserved for exceptional cases (Ascoli).
6. The Sub-Committee did not arrive at a definite conclusion concerning the mechanism of quinine action. Certain members (Nocht) considered quinine as a stimulant for the natural defences of the body.
7. Concerning the alkaloids of cinchona bark other than quinine, the Sub-Committee expressed the opinion that the experiments on the quinetums derived from barks of various quinine content be continued, as well as those on the other secondary alkaloids.
8. The Sub-Committee considers it desirable to continue the study of quinio-stovarsol and plasmochine.

* * *

Dr. Lutrario commented on the method of " human bonification " as first applied by Professor Gosio in Calabria and in Lombardy. This method was considered by Professor Golgi as of exceptional value.

Dr. Lutrario also mentioned the studies which the Commission considered as presenting an international interest ; these studies deal with :

- (a) The relationship between dwellings and malaria ;
- (b) The systematic biological study in Europe and the United States of *A. maculipennis* and *A. quadrimaculatus* in relation to the transmission and prevention of malaria ;
- (c) A plan of study on the practical importance of intensive clinical treatment in the prophylaxis of malaria.

The said plan is given in an annex to document C.H./Malaria/121 (Report on the Work of the Malaria Commission, Geneva, June 1928).

CONCLUSION.

Estimating the results of the meeting of June last, it might be affirmed that the Health Committee had every reason to be satisfied. In the first place, a division of opinion had been avoided, not only within the Malaria Commission, but also among malariologists. It would have been a very serious thing if malariologists had dissociated themselves from the views of the Commission, and such an event would have had a deplorable effect on health administration. Apart from this negative result, a positive result might be recorded. There was now a single doctrine to be applied in the campaign against malaria. The work of the full June session of 1928 had resulted in a position which would enable the best results to be achieved, and justified the hope that the struggle would be carried continually further for the welfare of humanity.

The PRESIDENT noted that the June session of the Malaria Commission had been the most important of its meetings. On behalf of the whole Committee, he would congratulate the members of the Malaria Commission, and in particular its Chairman, whom he would especially thank for his able report.

The MEDICAL DIRECTOR added that, during the June session, which had been a session of some difficulty, the Health Section had realised, not only the authority of the Chairman of the Malaria Commission, but also his diplomatic ability and discretion.

He would venture to call the attention of the Committee to certain proposals submitted by the June meeting. In the document C.H./Malaria/121, which was the report on the work

of the Malaria Commission of June 1928, certain proposals of the Second Sub-Committee were reproduced on page 12. It was said in particular that :

“ The Sub-Commission approved a proposal to enumerate a list of subjects the study of which was considered desirable by its members, and to submit the same for the approval of the Commission at a plenary meeting. It was decided that a selection should be made from the subjects proposed, two or three being chosen as suitable for international study on parallel lines in various countries with the co-operation of the Health Organisation of the League. It was agreed that the other subjects should be brought to the attention of the malariologists of the world for their individual consideration.”

The same document contained a list of all the subjects of study (pages 13 to 15) and a list of the subjects selected for research to be undertaken under the auspices of the Health Committee, with the technical means at its disposal (pages 18 and 19). The Bureau of the Health Committee would have to deal with the application of these technical means. Doubtless the Committee would wish to approve generally the programme of research subject to a detailed examination of the budgetary estimates for 1929. He did not think that all these enquiries would necessitate subsidies, but funds would certainly be necessary to several of them.

Colonel GRAHAM congratulated Dr. Lutrario upon his report. He greatly regretted that it had not been possible for him to be present at the recent meeting in June and his regrets were shared by Colonel Christophers, who had also been prevented from attending. Dr. Lutrario had referred to the work of the Indian Bureau. That Bureau had been established for some time and its success had been mainly due to the work of Colonel Christophers. The conclusions outlined by Dr. Lutrario had already been forced upon many of those who were dealing with the subject of malaria. Malariologists had generally decided that there was no single royal road which could be taken in dealing with the problem of malaria in the tropics. The conclusions of Dr. Lutrario were similar to those which had been reached by the Far Eastern Association of Tropical Medicine in last December. There were many ways of dealing with the problem and all these must be used, having due regard to local circumstances. Before any steps to deal with malaria were taken in India, a preliminary survey was always made. The Malaria Department of the Public Health Department of the province was consulted and an engineer was asked to make a report. The steps taken were always based on local circumstances, which might be very different in the different districts. It would interest Dr. Lutrario to be reminded that in 1913 the Indian Government had sent its most highly qualified irrigation-engineers to study the works of bonification which were being carried on at that time in Italy.

He had little to say with regard to the grouping of the problems which had been selected for special study. He would point out, however, that many of these problems had already been subject to investigation and research by the Indian Bureau and that similar investigations had probably been pursued by other institutions. Interesting experiments, for example, had been made at Kasauli in the treatment of human subjects with quinine. Soldiers who contracted malaria in the plains were treated in the hill station, where they could not be re-infected, and a good deal of evidence on the subject of quininisation had thus been made available. The results had been published and could be placed at the disposal of the Malaria Commission.

The MEDICAL DIRECTOR added that the problems selected for special study had been chosen with particular attention to the fact that they were already known to be under investigation by the malariologists concerned.

The PRESIDENT said that, though he could not speak as a malariologist, he had been much impressed during his visit to India by the work being done by Colonel Christophers. The Malaria Commission was proposing to visit India in September. He hoped that it would be possible for the members of the Commission to discuss with Colonel Graham and Colonel Christophers, before they left for India, the preliminary programme of the tour.

Dr. LUTRARIO thanked the Chairman for his flattering references to himself, which in justice should go to the Malaria Commission. He desired to inform the Committee that recently the general Assembly of the Medical Corps of Beirut had paid a tribute to the memory of the victims of the accident of May 21st, 1925, and that the portraits of the three victims had been hung in the main hall of the medical institute. The Medical Director had informed the members of the Malaria Commission of that fact, and perhaps all the members of the Health Committee were aware of it. He would propose that the Committee, through its Chairman, should send a letter of thanks to the head of the Medical Corps at Beirut.

The proposal was adopted.

390. Collaboration with Latin America.

The MEDICAL DIRECTOR said he would briefly complete the report which he had distributed to the members of the Committee (document C.H. 747a). He would remind the Committee that, after the question of collaboration with Latin America had been discussed on two or three occasions, on one of which Professor Chagas was present, a formal detailed programme of proposals for an international study of leprosy had been drafted. When the report of the Committee had come before the Council in December 1927, the Latin-American

members of the Council had expressed the wish that the activities of the Health Organisation in Latin America should be extended ; and the Committee, as the result of discussions during its last session, had asked the Health Section to examine the question and to submit concrete proposals. These proposals were indicated in the report to which he had referred.

1. *Infant Mortality.*

It must be remembered that the activities of the Health Organisation in Latin America were already fairly extensive. After the tour of the President of the Committee and the Medical Director in Latin America, an enquiry into infant mortality had been undertaken in four countries, namely, the Argentine, Chile, Brazil and Uruguay. That enquiry would be completed in the course of 1929, and its results would doubtless be sufficiently advanced towards June or July to enable the directors of the enquiry to meet at a town, which had yet to be chosen, in order to estimate the results achieved. There was reason to hope that the final result of the European enquiry would be published at that time. Perhaps, at the further meeting to be held in Latin America, the question of the extension of the enquiry would be raised. It was as yet too soon to express an opinion on the subject. The conclusions of those conducting the enquiry in Latin America were not yet known and the possibilities of extending the enquiry to other countries had not been ascertained. At the Conference of Montevideo, representatives of Bolivia and Paraguay had been present, and they had promised to make a preliminary enquiry concerning these possibilities. The results of the preliminary enquiry were not yet known. Perhaps the direct and personal contact to be shortly established between the Health Section and Latin America would enable the point to be cleared up.

The details of the enquiry in Latin America would be found in the schedule annexed to the report of the Medical Director. The enquiry was proceeding under very satisfactory conditions. It would even be possible in certain districts, notably in Brazil, to obtain information which was not available for the European enquiry and in particular very important information with regard to autopsies.

2. *Leprosy.*

The Committee had at its last session decided to lay down the general lines of a study of leprosy and it had set up a Commission on Leprosy under the Chairmanship of Professor Chagas. Professor Chagas had promised to send a detailed programme of the work of the Commission, and its members had decided that, on returning home, they would stimulate the investigations which had hitherto been pursued by scientific institutions or sub-committees. Professor Chagas had already constituted a National Brazilian Committee, presided over by Mr. Guinle, a great philanthropist, who was contributing 10,000 dollars annually to these investigations. The Brazilian Committee also included Dr. Clementino Fraga, Director-General of the Federal Health Service ; Dr. Rabello, Professor of Dermatology and Syphilology at the School of Medicine of Rio de Janeiro ; and Professor Chagas. The Secretary-General was Dr. Souza Araujo. The National Committee had already undertaken a whole series of enquiries. The Health Committee, on the other hand, had promised to place at the disposal of such organisations, for the international studies they would undertake, the technical experience and knowledge of a great expert who would devote himself for two years to a study of leprosy. The first negotiations into which the President of the Committee and the Medical Director had entered had not led to any result, but there was reason to hope that correspondence which had been proceeding since the last session would be successful. He could not give any very precise details, but he was able to inform the Committee that the work had been made easier by Mr. Guinle and Dr. Fraga, who had decided that a portion of the 10,000 dollars would cover the material costs of the proposed collaboration.

Owing to the undertaking which had been given to put the Commission on Leprosy in a position to begin its work at once, that Commission had met for a preliminary exchange of views. The members of the Committee had probably seen from the Minutes of that meeting that it had been decided to assemble a complete compilation of scientific documents on leprosy by getting into touch with all the centres of study in the world, and, further, to study special aspects of the problem, as, for example, early diagnosis and the instruction of doctors in the diagnosis of leprosy, etc.

The Commission, whose work was very technical and difficult, could not begin its work without having secured the assistance of an expert of recognised authority. He was happy to inform the Committee that the services of Dr. Etienne Burnet, who was present at the session, had been obtained. It would be of great advantage if Dr. Burnet could, within the next few months, visit the countries of Latin America which had requested the collaboration of the League of Nations in health matters. During the Assembly, the Health Section had therefore got into touch with the delegates of those countries and the possibility was being considered of an extensive tour of Dr. Burnet in South America. This tour would doubtless last for four or five months, and its primary object would be to clear up the situation as to the investigations and as to the possibility of a collaboration between these countries and, through the Commission on Leprosy, of a collaboration with the other countries which had centres of research, particularly in the Far East.

Finally, this tour would make it possible to examine the possibilities of a more intimate and direct collaboration with the health administrations of those countries with a view to solving the problems with which they were faced, and concerning which they might desire an international collaboration.

3. Syphilis.

It appeared in fact that the experience acquired by the Committee in other fields during the last seven years would enable it to offer its assistance to the health administrations. The Medical Director agreed with the President that such assistance might be offered in dealing with the problem of syphilis, particularly in regard to the sero-diagnosis of syphilis and the treatment of the disease.

The question of sero-diagnosis would be dealt with during that session. Dr. Scaltritti, director of a remarkable laboratory at Montevideo, had participated in the work of the International Conference at Copenhagen in May last, and it would doubtless be possible to extend the results achieved at least to the countries of Latin America adjacent to Uruguay. Doubtless it would be possible, after the tour of Dr. Burnet, to consider the extension of enquiries to other countries.

In regard to the treatment of syphilis, the Committee would have to examine the proposals made by the meeting of experts which had taken place three weeks ago. In that direction he thought it would be effectively possible to collaborate, with results which would be extremely interesting, not for Latin America alone, but more particularly for Latin America. In the first place, not only Uruguay and Brazil, but many other countries of Latin America, were particularly interested in the campaign against venereal diseases and particularly syphilis. They had set up a whole system of dispensaries. There even existed in Uruguay a special tax for the campaign against venereal diseases. There was therefore not only the will to succeed, but the first steps had been taken to achieve success, and in certain countries, particularly in Uruguay and Brazil, the measures taken were impressive. The meeting which had taken place some weeks ago had been the result of the tour of the President of the Health Committee and of the Medical Director in Latin America. They had discussed with the heads of the health services the question whether it would not be possible to make an attempt to estimate the value of the results obtained in the various dispensaries in the treatment of syphilis and to collate these results. The President, on his return to Europe, had discussed the question with distinguished experts in syphilis and had discovered a similar difficulty in Europe, in that, since the war, no estimate of the results achieved had been made in this particular field. If the Committee approved the proposals of the experts for conducting an enquiry, the results of this enquiry would be known in 1929. It appeared in fact that definite results might be counted upon before the end of the year. At that moment the countries of Latin America might be invited to collaborate in the work of the experts.

4. Social Insurance.

He had already informed the Committee of a very interesting collaboration with Uruguay, especially in regard to social insurance and in particular with regard to sickness insurance. The Committee, after the tour in Latin America, had been informed that the Health Administration and the Government of Uruguay had examined with particular attention the preliminary work of the Joint Committee on Health Insurance which had been set up in collaboration with the International Labour Office. The Uruguayan Government was so greatly struck by the possibilities of extending social insurance in Uruguay, and particularly of establishing a connection between medical relief services and health insurance, that it had decided to send to Europe Professor Scoseria, President of the Supreme Health Council, in order to study the problem in detail. Professor Scoseria had followed the work of the last session of the Health Committee and of the Permanent Committee of the Office international d'Hygiène publique. He had also devoted several weeks at Geneva to a close study of the documents placed at his disposal. He had prepared a preliminary draft report to his Government, in which legislation on sickness assurance and invalidity insurance was regarded as a fundamental law of public health. Moreover, the old conception of insurance, which was limited to compensation for risk, was to be supplemented not only by curative measures but by the prevention of risk. This was a new idea, which had been recommended by the International Labour Conference in 1927. Dr. Scoseria would, within two or three weeks, submit the result of his personal enquiries to his Government, and, if he obtained their consent, the Uruguayan Government would request the collaboration of the Joint Committee in the framing of the legislation of Uruguay in that field.

5. System of Liaison (Interchanges and Individual Fellowships).

Frequent use had been made of the existing system of liaison (interchanges and individual fellowships) in order to place at the disposal of the public health services of Latin America all the advantages offered by the Health Organisation to the other health administrations. He thought the moment had come to establish this service of liaison on a more systematic basis, and the tour of Dr. Burnet would lend itself very well to that undertaking. It would be interesting to study, with the health administrations of each of the countries concerned, a programme over a series of years, and to ask them whether, with a view to the accomplishment of a definite plan, they needed either to train a particular health official, or to examine a special point, or to participate in the study of a definite problem. It was only after the study of a programme thus defined that it would be possible to reserve, in the existing system of liaison, a special place for that administration and to guarantee that administration, within the limits available, a participation over a series of years. There would, moreover, be in this way a feeling that a contribution was being made to a more durable and concrete work, thus being consolidated by collaboration with the Health Committee.

To sum up, he did not for the moment propose any new activity. He desired only to examine possibilities, to study how the present activities of the Health Committee and the experience acquired by the Health Organisation might be placed at the disposal of the health services of the South American countries, and particularly to ask the Committee to extend the study of leprosy in the general direction indicated at the last session.

The PRESIDENT said he was glad that the Health Organisation had been able to secure the assistance of Dr. Burnet, who, on his return, would doubtless be able to submit very interesting proposals to the Committee for collaboration with Latin America. He hoped that the Committee would approve the suggestions of the Medical Director.

Professor NOCHT asked the Medical Director to call the attention of the Commission on Leprosy to a method of treatment invented by an Estonian professor. He had studied that treatment and was greatly impressed with the results obtained. By using carbonic acid, it had not only been possible to cause the disappearance of rash, but also to remove other symptoms of leprosy. It appeared that this treatment set free forces of immunisation. The efficacy of the treatment, however, was exhausted after some time, and it was then necessary to pursue another method by means of solanium. Perhaps this investigator might be asked to visit Latin America. Possibly climatic conditions might have a different influence in a northern or tropical country. He was sure he was speaking in this matter on behalf of Dr. Hamel, for in Germany collaboration with Latin America was warmly desired.

The MEDICAL DIRECTOR said that the expert to whom reference had just been made had come last year to Geneva at the beginning of the Assembly and had explained to the Health Section the results of his treatment. The Section had documents on the subject and had thought it desirable for Dr. Burnet to go to Dorpat in order to examine on the spot the results of the treatment before any further steps were taken. He believed that it would perhaps be possible to undertake a more definite study of leprosy in certain European countries. Certain enquiries were at that moment proceeding, on which perhaps Dr. Mackenzie would address the Committee on Monday or Tuesday. More detailed proposals on leprosy would be submitted to the Committee at its subsequent sessions. The work of the Health Organisation was at that moment sufficiently well known, and the fact that a Commission on Leprosy had been set up had received a certain publicity. The Health Section had received certain proposals, particularly from a young Austrian investigator, who had been to the Dutch East Indies and had invented a method of early diagnosis. All these questions were under examination and enquiries would be taken further before definite proposals were made to the Committee.

Dr. LUTRARIO reminded the Committee that, at its last session, he had emphasised the great interest attached by Italy to the collaboration with Latin America, for reasons not only of sentiment but of national interest. Of the ten million Italians who went abroad, five or six millions went to Latin America. In regard to the special question of leprosy, it should be observed that there existed in Italy small endemic centres, and that there was also an importation of the disease from Latin America owing to migration between that continent and Italy. He would be grateful to the Medical Director if he would indicate the steps which had been taken as a result of the representations which the Medical Director had made at his request to the Director-General of Health of Italy.

The MEDICAL DIRECTOR said that, in reply to the letter which he had written to Dr. Messea, he had received a request for further information from the Ministry for Foreign Affairs. The Italian Government desired to know in great detail the programme of work of the Commission on Leprosy. He had replied that, although the programme did not yet exist, he could place at the disposal of the Italian Government the Minutes of the first session of the Commission and indicate the enquiries which were proposed, reserving the communication of a final programme. He had not yet received an official reply to that communication; but he knew, as a result of informal conversations, that the Italian Government was very generously disposed and desired to collaborate in the work of the Commission as far as possible.

The Health Section had received replies from other countries. It had, as was stated in his report, addressed a circular letter to all the health administrations, asking them to what extent they were interested in the problem. Promises of assistance had come from the Argentine, Brazil, Costa Rica, France, Mexico, the Netherlands, Norway and Paraguay, without counting Italy.

Sir George BUCHANAN asked for information in regard to three points:

- (1) Was he right in assuming that no decision would be taken in regard to the question of the proposed centre for child welfare to be set up in Buenos Aires under the auspices of the League before the Health Committee had again been consulted?
- (2) Would the expenses of Dr. Burnet's tour come under the special credit for liaison with Latin America or would they come under the budget of the Health Committee?
- (3) What would be the nature of the contributions to be made by the various Governments to which reference was made in paragraph 7 of the report?

The MEDICAL DIRECTOR said that no definite suggestion would be made to the Health Committee, which would not even be asked to discuss the question of the proposed health centre in Buenos Aires until Dr. Aroaz Alfaro had discussed the matter with the Committee.

The expenses of Dr. Burnet would be charged to the special item of the budget for liaison with South America.

The contributions to be made by the various Governments referred to in paragraph 7 would probably vary and the reference in the report to these contributions had been left deliberately vague. Brazil, for example, desired to contribute both directly and indirectly and had offered to place all technical and other facilities at the disposal of the enquiry. Mexico has offered facilities for experts who might desire to work in that country. A European Government interested in the question had offered to make a direct contribution to the enquiry, though he was not yet sure exactly how this offer would materialise.

The suggestions of the Medical Director were approved.

391. Report of the Conference on Infant Mortality. (See Report to the Council on the Thirteenth Session of the Health Committee, document C.555.M.175.1928.III., page 9.)

The MEDICAL DIRECTOR reminded the members of the Committee that they had received several weeks ago the report on the Conference which had taken place in London at the beginning of July, at which all the experts except Professor Gini had been present. There had been an exchange of views on the results obtained by the investigators in the various European districts, and, in particular, a form of general report for each country had been drafted. He would insist only on the procedure adopted in the preparation of that report. It had been understood that the reports of each country would be communicated to the Health Section. All these reports would be compared with one another and an analytical report would be drafted by Dr. Olsen and forwarded to all the experts. A meeting would doubtless be held in February or March in order to determine the final form of the report, which would be accompanied by the national reports. All these documents would constitute a fairly large volume, which would doubtless be published as early as possible in 1929. He understood that the experts intended to publish a national report in each of their respective countries. Professor Debré had taken an interesting initiative. He intended to publish his national report in three parts, including: (1) a schedule of the results obtained in the twenty-nine European districts with a view to comparing them with the results obtained in the French districts; (2) a report summarising the conclusions for France, with numerous photographs; (3) as an introduction, a chapter written by a distinguished contemporary author. A report issued in that form would have a widespread circulation. It would be well to examine to what extent this example could be followed in other countries.

Other questions had been examined in London. First, there was the question of the special studies which might result from the enquiry. Certain possibilities had been indicated, which the members of the Committee would find in the report of the London Conference (document C.H.737, page 2, § C). All these enquiries would be discussed in detail in March, and detailed proposals would be submitted to the Health Committee at a later stage.

He did not know which of the proposed enquiries the experts would retain. That also was true of the proposed enquiry into rickets (Appendix 2, page 6, of the report), which had been added to the report merely as an indication. The Health Committee would receive for examination a well-considered scheme before being asked to examine the question. The Health Section thought that an enquiry into rickets would exceed the competence of the Committee of Experts. Any initiative coming from the experts obviously deserved sympathetic consideration, but such a proposal would have to be very closely studied and the Committee, if it decided to undertake such an enquiry, would doubtless desire to consult other authorities.

Finally, after the meeting in Vienna, the Committee had approved a suggestion to the effect that the experts should make a preliminary study and submit a report on the results obtained in certain countries of Europe and in America in the application of methods of specific immunisation against scarlet fever and diphtheria. Professor Debré would undertake the report on scarlet fever, Dr. Gorter the report on diphtheria. The experts at their next meeting would discuss the first indications furnished by the two investigators and these would probably be submitted to the Health Committee at its next session. These were not proposals such as would need to be considered in detail by the Health Committee.

The Committee noted the explanations of the Medical Director.

SECOND MEETING.

Held on Friday, October 26th, 1928, at 10 a.m.

President: Dr. Th. MADSEN.

The PRESIDENT welcomed M. Marignac, and said that his presence justified the hope that the collaboration between the Health Committee and the Office international d'Hygiène publique would be even closer in the future than it had been in the past.

392. Resolutions of the Assembly and Decisions of the Council.

The MEDICAL DIRECTOR drew attention: (1) to the note which he had circulated concerning the resolutions of the Assembly and the decisions of the Council (document C.H.742a); (2) to the reports which had been submitted to the Assembly on the work of the Health

Organisation (documents A.6 and A.6a); (3) to the report of the Second Committee of the Assembly on the work of the Health Organisation (document A.57 (1). 1928.III); and (4) to the documents concerning the question of alcoholism (documents A.72.1928, C.507.1928 and C.H.748a).

He read to the Committee the section of his report dealing with the resolutions of the Assembly and the decisions of the Council (document C.H.747).

The Council still awaited the advice of the Health Committee in regard to benzoylmorphine and esters of morphine. On the advice, however, of the Advisory Committee on Opium and other Dangerous Drugs, it had forwarded a recommendation to the Governments, thereby anticipating the advice to be given by the Health Committee, but nevertheless reserving its final decision until the Health Committee had submitted a report on the subject. He proposed that the Committee should take up this question when the report of Dr. Carrière came to be considered.

The Committee agreed.

The MEDICAL DIRECTOR recalled that the Assembly of 1928 had for the first time approved the budget of the Health Organisation without comment or discussion. The interests of the Health Committee had been represented during the discussion on the work of the Health Organisation in the Second Committee of the Assembly by Sir George Buchanan and Dr. Chodzko.

It would be noted that the Health Committee, by a special resolution unanimously adopted by the Assembly, was asked to consider a proposal dealing with the question of alcoholism. This resolution represented a compromise between the views of the Governments which had submitted the question to the Assembly and the Governments which considered that the question of alcoholism was not within the competence of the League. The Assembly was asking the Economic Committee to examine the question of contraband in alcoholic liquors and was asking the Health Committee to study and collect statistical information concerning alcoholism considered as a consequence of the abuse of alcohol, giving prominence to the deleterious effects of the bad quality of the alcohols consumed.

The Chairman of the Second Committee of the Assembly had asked the Directors of the Economic and Health Sections whether this enquiry would involve any supplementary expenditure in 1929. He had answered this question in the negative. A request for credits to cover expenditure in 1929 would have prejudged the action which the Health Committee might decide to take in the matter. He had felt it necessary to reserve entirely the right of the Health Committee to decide on the steps to be taken.

He would, finally, draw attention to a letter addressed to the President of the Committee by the Secretary-General, referring to a decision of the Assembly to the effect that in future the Minutes of the technical Committees of the League should not be published unless the Secretary-General was able to present to the Council special reasons for making an exception in any particular case. If the Health Committee should decide not to press for the publication of its Minutes, or if the Council should refuse to sanction such publication, it would be necessary for the report of the Committee to the Council to be drafted in greater detail and for the necessary annexes to be appended. If the Minutes of the Committee were not published, they would be distributed in roneoed form, first as provisional Minutes, and afterwards as a final record. A complete copy of the final record would be sent to each member of the Committee.

The PRESIDENT said he was glad that the work of the Health Organisation had received the cordial approval of the Assembly, and that the budget of the Organisation had been adopted that year without comment or discussion. He would like to express his gratitude to the representative of Japan on the Second Committee, who had so ably defended its interests.

There were two questions for immediate discussion: (1) the question of alcoholism; and (2) the question of the publication of the Minutes of the Committee.

Sir George BUCHANAN said that, as a member of the Committee who was present at the Assembly as a technical adviser on the British delegation, he would like to assure the Committee of the very general approbation which had been given to the work of the Health Organisation during the discussions which has taken place in the Second Committee. The results of that discussion had been ably summarised by Mr. O'Sullivan, the delegate of the Irish Free State, in his report to the Assembly. He would particularly emphasise the approval given to the work of the Health Organisation by countries distant from Europe. The view had been expressed that those countries derived greater advantages from the work of the Health Organisation than from the other and more general activities of the League. The budget of the Organisation had passed without discussion owing to the fact that it had become stabilised at a definite annual total, which it was not proposed to exceed in the present estimates.

M. KUSAMA said he would like to endorse the observations of Sir George Buchanan in regard to the general approval which the work of the Health Organisation had received during the Assembly's discussions. He thanked the Chairman for his kind reference to the work of the Japanese delegate to the Council and the Assembly.

Dr. CHODZKO also endorsed the observations of Sir George Buchanan. He noted in particular that the work of the Health Organisation in the field of rural hygiene had been especially appreciated by the Rapporteur to the Assembly.

393. Question of Alcoholism.

M. VELGHE said that, in view of the resolution of the Assembly and the report of the German representative on the Council, it was impossible for the Health Committee to decline the task which it had been invited to undertake. Some doubts, however, might exist as to the best method of fulfilling that task and the scope of the enquiry which had been suggested. The terms of the resolution of the Assembly and of the report of the representative of Germany to the Council (document C.507) did not appear to be quite in accord. He would suggest that a special Commission should be appointed to examine the question in detail and present a report to the Committee.

M. Léon BERNARD asked M. Velghe to define his views more precisely. Was he proposing to appoint a permanent Commission on Alcoholism, or to set up a provisional Commission *ad hoc*, in order to make a preliminary report on the subject? He intended at a later meeting to submit to the Health Committee the question of alimentation. That question might perhaps be dealt with in the same way.

Sir George BUCHANAN said that he had some doubt as to the procedure suggested. A somewhat similar procedure on this subject during the Assembly had not proved very satisfactory. The question had there been discussed, outside the Second Committee, by those delegates who were particularly interested and a compromise had been reached. Other delegates on the Second Committee, however, had not participated in the compromise and had not been aware of the turn which the discussions had taken in the course of the conversations on which it was based. The resolution had been submitted to the Committee as an agreed text, which both parties declared it would be dangerous to alter in the least particular. The resolution had been unanimously adopted, but without any really satisfactory examination of the subject.

All the members of the Health Committee were interested in the question which had been submitted to them by the Council, and, in his view, the subject might suitably be discussed by the full Committee. If the Committee decided to undertake the task with which it was entrusted, it would be necessary to study the subject carefully and realise the limits within which the Committee was called upon to work. A general discussion appeared to him to be desirable before the matter was referred to a special Commission. If a special Commission were to deal with the subject, the same position might arise in the Health Committee as had arisen in the Second Committee of the Assembly, and the full Committee be confronted with recommendations which it would be reluctant to criticise or amend.

Dr. CARRIÈRE said he had been present during the discussions of the Second Committee of the Assembly. The resolution had been adopted as a compromise between two different views. It was therefore somewhat vague in its terms. In view of the complexity of the subject, and the difficulty of the task with which the Health Committee was entrusted, he desired to support the proposal of M. Velghe. He did not think the plenary Committee could usefully discuss a question in regard to which it was not yet prepared to take up a definite attitude. A preliminary examination of the subject by a special Commission would render a more fruitful discussion of the matter possible at a later stage in the plenary Committee.

M. VELGHE said he had not intended to propose that a permanent Commission on Alcoholism should be set up.

He welcomed the reference of Professor Léon Bernard on the subject of alimentation and would be interested to hear his proposals in detail.

The special Commission which he had proposed to set up might include the Medical Director and the members of the Committee who had been present at the discussions of the Assembly and were accordingly in a position to know what the Assembly was inviting the Committee to undertake. The resolution of the Assembly represented a compromise, and the report of the German representative on the Council did not seem to be entirely in agreement with that resolution.

It would be inferred from the resolution that the Assembly desired: (1) full statistical information concerning alcoholism considered as a consequence of the abuse of alcohol; (2) an enquiry into the deleterious effects of bad alcohol; and (3) measures for the prevention of the smuggling of alcohol. Lastly, wine, beer and cider were excepted from the enquiry and only distilled liquors were accordingly to be covered.

The Health Committee was concerned with questions (1) and (2). The Committee was competent to outline a scheme of statistical enquiry as to the quantities of alcohol consumed, the consequences to health of the abuse of alcohol and of the consumption of bad alcohol. The question of quality was certainly a point which the Health Committee might examine. Some alcohols were injurious in themselves, whereas others were only injurious according to the quantity consumed. Enquiry had been undertaken in Belgium into the quality of alcohol available and the service of inspection of foodstuffs was constantly dealing with this matter. No deleterious effects could, in Belgium, be ascribed to the bad quality of the alcohols which were consumed.

Were there any other points which the Health Committee was being invited to consider?

The MEDICAL DIRECTOR, on the point of procedure, observed that a very clear distinction must be drawn between the enquiry into alcoholism, which was to be undertaken at the request of the Assembly, and the question of alimentation, which was to be submitted to the Committee by Professor Léon Bernard on behalf of his Government. The two subjects were on a different footing.

Professor LÉON BERNARD agreed.

The MEDICAL DIRECTOR, continuing, said that the question of alcoholism was not a new one. In 1927, the Assembly had been asked to consider it by the delegations of Belgium, Czechoslovakia, Denmark, Finland, Poland and Sweden. The matter had again been brought up in the Assembly of 1928, but on this occasion the proposal was submitted on behalf of only three of the original Governments, namely, Finland, Poland and Sweden. It would be interesting to know what were the views of the public health departments of the countries which had signed the proposal. These three Governments had presumably consulted their technical advisers and those advisers were probably aware of the difficulties of the enquiry. He would suggest that, as a preliminary measure, he might be authorised to address an enquiry to the public health departments of Finland, Poland and Sweden, asking what precisely were their difficulties and how exactly the Health Committee might assist them in finding a solution. Perhaps the public health departments of the three additional signatories of the proposal of 1927 might also be consulted.

The PRESIDENT said that, personally, he was prepared to agree to the inclusion of the public health services of the signatories of the proposal of 1927.

Sir George BUCHANAN said the present discussion was proceeding on the lines of the general debate which he had hoped would take place before the subject was referred to a special Commission. The observations of M. Velghe were of particular interest.

He had as yet had no opportunity of acquainting himself with the views or the attitude of the various public departments concerned with this question in his own country. The Health Committee was being asked to undertake a statistical enquiry into alcoholism considered solely as a consequence of the abuse of alcohol taken in the form of distilled liquors. The difficulty of the task was made greater by the qualification that wine, beer and cider were not to be considered. That was a very difficult task. If wine is to be excluded as a cause of alcoholism, for the purpose of the study authorised by the resolution, whisky and soda should logically be excluded also. In Great Britain and in many British countries, including those in the tropics, distilled spirits were habitually consumed in a diluted form and the liquor drunk was itself no stronger in alcohol than wine or even beer and cider.

Abuse of alcohol, for the purpose of this resolution, could not therefore be measured merely by the total consumption of distilled liquors, on the one hand, and the amount of alcoholism on the other. It must be related to the concentration of the alcohol and to the manner of its consumption. The question of specially poisonous spirits was an old problem and many countries, particularly those with recent prohibition laws, could probably contribute data. There had been numerous official enquiries in Great Britain as to the existence of specially poisonous spirits; it had been fully dealt with in 1909 by a Royal Commission, of which he had been a member, to define what spirit should be entitled to the description of whisky. These enquiries showed that occasionally harm might result from specially poisonous or dangerous spirits, but such harm was negligible when contrasted with the abuse of spirits which themselves were of ordinary quality, but had been used harmfully.

He would suggest that the resolution should be sent not only to the public health services of those Governments which had submitted it to the Assembly, but to all the Governments which were likely to be interested in the matter, or which might be able or willing to assist in obtaining the data desired by the Assembly. The attention of these Governments might be drawn to the two points to which M. Velghe had referred, and the Governments might be asked what kind of information they would be able to place at the disposal of the Health Committee. The British Government in that event might be able to present a certain amount of information summarising the investigations to which he had referred.

Dr. CHODZKO said that the Polish Government, when it had started its campaign against alcoholism, had begun with a rather different idea of the subject from that embodied in the resolution of the Assembly of 1928. The Polish Government had been disappointed by that resolution and, personally, he was of opinion that its attitude would not be very favourable to the enquiry as suggested. This resolution was an unsatisfactory compromise. He agreed that it might be useful to consult the Governments before embarking upon an investigation. The enquiry suggested was of a rather limited character and there were certain questions which the resolution appeared already to have settled in advance. He could not approve of an invitation addressed to a body of experts to undertake an enquiry which had to some extent, in its scientific aspect, already been prejudged by a diplomatic and political Assembly. Wine, beer and cider, for example, were excluded from the enquiry, which meant that the Assembly had expressed in advance a technical opinion that it was not competent to form. He regretted that there had been no discussion of this point in the Second Committee. He would add that, for the moment, he saw no necessity for the appointment of a special Commission. The Health Committee could not do anything until replies had been received from the Governments, and there was no necessity to proceed hastily in the matter.

Dr. Alice HAMILTON said that, as the sole representative of a country which had tried the experiment of absolute prohibition over a period of ten years, it should be possible for her to produce statistical indications in regard to the disappearance of diseases owing to alcoholism. That unfortunately, however, was not the case. The change which had taken place in the United States was not a change from a drinking nation to an abstaining nation.

but a change in the drinking habits of the people. Generally speaking, there was less chronic alcoholism, but there was, on the other hand, an increase of acute alcoholism. Alcohol was now bought as contraband and immediately consumed. The United States authorities could not offer hospital statistics which would be really illuminating.

On the other hand, valuable information might be given in regard to the second point of the enquiry, namely, the deleterious effects of the bad quality of the alcohols consumed. Many cases of acute alcoholism, often resulting in death, had been carefully studied, and it had been found that certain assumptions which had formerly prevailed did not survive scientific enquiry. For many years it had been the practice of boot-leggers to sell redistilled industrial alcohol containing from 2 to 5 per cent of methyl alcohol or wood spirit. Clinical observation and post-mortem investigations showed that, in cases of acute alcoholism, the wood alcohol was not the cause of death, but that a small percentage of wood alcohol actually mitigated the toxic effects of the liquor consumed. The deaths were due to massive doses of ethyl alcohol, and experiments upon animals had shown that the addition of a small percentage of wood spirits diminished the toxicity of the beverages.

She would earnestly warn the Committee that, in taking up this subject, it would be entering upon a field which was extremely difficult and complex. It was a subject which it seemed impossible to approach with an unprejudiced mind. Economic, social, religious and racial factors were involved. The Assembly had itself showed how impossible it was to avoid prejudice in the matter by arbitrarily excluding from the enquiry wine, beer and cider.

M. VELGHE explained his previous observations. He thought that the Committee had been entrusted with a definite task by the League of Nations. As the resolution of the Assembly had been referred to the Committee for advice and for a report on a new scheme of enquiry, it appeared to him that the Committee was bound to draw up this plan. On the question of procedure, he could only accept the authoritative suggestions of the Medical Director, who thought that, before taking a decision as to the plan, the countries which had signed the proposal put to the Assembly should be asked to explain their intentions. The President had suggested that it would also be interesting to consult the countries which had signed a proposal to the Assembly in 1927 but which had not signed the proposal in 1928. In this connection, he would state that the Belgian Health Administration had not been consulted when M. Vandervelde, the Minister, adhered to the draft resolution submitted to him. If the Belgian Health Administration had been consulted, he imagined that it would have expressed some doubt as to the usefulness of the enquiry. There certainly were interesting problems to be elucidated and Dr. Hamilton had drawn attention to some of them. The Committee, however, was being asked for an opinion on the consequences of the abuse of alcohol. That question from the scientific point of view had been in practice settled, although in several respects it was still under discussion. To take an example, it was virtually impossible to decide what exact part should be attributed to alcoholism in the case of an alcoholic subject dying of tuberculosis. Statistics of such questions were too often drawn up, not in a scientific spirit, but in a sentimental and tendencious spirit. It was not less true that everyone probably agreed that the abuse of alcohol was injurious to health and might lead to all kinds of diseases. The problem put before the Committee would therefore amount to pushing against an open door, or it was idle to obtain statistics, which would not prove anything at all, and it would be a loss of time to collect over a period of years all kinds of information on this point.

If, however, it was decided to undertake this work, it would perhaps be well not to consider the task entrusted to the Committee as being too limited in character, to quote the expression of Dr. Chodzko. He would draw attention to various interesting subjects of enquiry. To what extent did a population drink bad alcohol when wholesome products were not placed at its disposal, or when excessive taxation rendered the price of good alcohol too high? To what extent had prohibition affected the tendency of people to look for other forms of indulgence, not only by the drinking of bad alcohol but by the taking of narcotics, which were the worst scourge of the world? It would be extremely valuable if America could give some information on this last point.

Professor Léon BERNARD did not quite understand the uncompromising attitude adopted by Dr. Chodzko in regard to the interpretation of the resolution of the Assembly. The resolution did not say that there was no alcohol in wine, beer and cider. Such a statement would be absurd. It merely said that the Committee should only deal with dangerous drinks, and the Assembly here was quite within its rights. Underlying this decision, there were economic, moral and political considerations which lay entirely within its competence and of which it must take account. It could not therefore be maintained, as Dr. Chodzko had urged, that the members of the Committee should feel that their dignity as an expert body was being slighted owing to the fact that their task had been limited.

In regard to statistics, he agreed with M. Velghe. There was one point on which they might be of use, as his colleague had explained. The new experiments made in the United States would be of statistical value. Dr. Hamilton had said that it would be impossible for the time being truly to ascertain the facts, and he himself had noted this during his journey in America.

In his opinion, the Committee must not decline its responsibility in respect of the resolution of the Assembly, but should confine itself to carrying it out within the strictest limits. If certain aspects of the question had escaped the members of the Assembly, it was for the Committee to draw attention to them.

He was not opposed to the suggestion that the views of the health administrations should be sought. Probably they had not been consulted concerning the resolution of the Assembly. He did not think the consultation should be extended to all the countries of the world, but only to those which had shown a special interest in the question by taking part in the Assembly discussion.

Dr. CARRIÈRE said that in Switzerland the regulation of alcohol was, at that moment, the subject of warm discussion. The question was before Parliament and his Department had been called upon to deal with it.

The first question which had arisen in the Department was the collecting of statistical documents. That process had yielded extremely disappointing results. He thought it was impossible to furnish statistics concerning the influence of alcohol on which any valuable conclusions could be based. Moreover, as M. Velghe had said, those conclusions had, for a long time, been common knowledge. On that point, therefore, the task entrusted to the Committee by the Assembly would be rapidly carried out. M. Velghe, however, had raised other questions of considerable general and social interest. Although those questions did not come strictly within the task of the Committee, it was not perhaps impossible to bring them within the domain of pure statistics.

Dr. Hamilton had just given details which entirely upset previous beliefs, particularly in regard to the presence of fusel-oil in alcohol and the effects of wood spirit. From the scientific point of view, that would be a very interesting question to elucidate.

On the other hand, the Committee had received precise instructions. He did not think that it could set those instructions aside, but it would be useful to conciliate them, if possible, with the observations which had been made. As the Medical Director had suggested, the States might be asked why they had signed, or why they had abstained from signing, the resolution. A special Commission might subsequently be appointed, if necessary, which, in the light of this information, might draw up a programme of work which would be carried forward in the ordinary way.

Professor OTTOLENGHI associated himself with the observations of the two previous speakers. He agreed that there was no reason for refusing to accept the instructions of the Assembly. The Committee might, indeed, take advantage of the Assembly resolution in order to undertake enquiries of a very great interest. In reference to the observations of M. Velghe, he would point out that, if statistics were consulted, whether official statistics or compiled by specialists, it would be noted that they never were so definite as is generally believed. For reasons which were familiar, it was very difficult to establish statistics concerning the consequences of alcoholism. More exact statistics were those dealing with the consumption of alcohol in groups of population and did not come from health administrations. The Health Organisation would, from a general point of view, find it of advantage to take up the question and, if possible, endeavour to obtain precise and trustworthy statistics upon alcoholism particularly with a view to elucidating the problem of the effects of certain steps taken to combat alcoholism, more especially in the United States. That work would only be possible if fairly complete statistics were available showing the variations of alcoholism over a period of time and as determined by varying conditions. This, he must repeat, was not the case with most statistics. He would allude, concerning this point, to the researches which had been made on the relation between alcoholism and tuberculosis. In one country, on the basis of official data, it was believed that a close relation had been noted between the two phenomena. Subsequently, other experts who had studied the same data more thoroughly have denied that this relation existed. The discrepancies were numerous and resulted in providing weapons of controversy for the champions of this or that particular thesis or its contrary. It was impossible to draw any clear conclusions.

There were many other methods of combating alcoholism than the method of prohibition. The consumption of alcohol might be rendered more difficult; its sale might be very strictly regulated, and indirect methods might be adopted, such as the encouragement of sport. It would be of great importance and would come well within the limits of the task entrusted to the Committee to obtain, if possible, fairly trustworthy statistical data which might give information as to the effects of certain indirect methods of combating alcoholism. That was one of the reasons why the Committee should accept the instructions of the Assembly.

In reference to the observations of Dr. Hamilton, he would ask whether they referred to chronic alcoholism or to acute alcoholism. It was possible that, in the case of acute alcoholism, the presence in certain alcohols of methyl alcohol had a somewhat different action from that which was customarily noted. However that might be, these remarks show that the part of the Assembly resolution referring to the effects of alcohols of bad quality might be the subject of useful enquiry.

Sir George BUCHANAN had understood Dr. Hamilton to be referring to acute alcoholic poisoning. In that case she was certainly right. The acute alcohol poisoning was nearly always due to the ethyl alcohol. If the spirit had objectionable by-products, they might be beneficial by preventing the inordinate drinker from having so much ethyl alcohol.

Two suggestions were before the Committee. First, there was the suggestion which he had himself put forward, and which was supported by Professor Léon Bernard, to the effect that the resolution of the Assembly should be communicated to the public health departments of all the Governments which were likely to be interested in the subject and which might be able to express an opinion or furnish information concerning the amount of alcoholism attributable to undiluted strong liquors and as to the toxic effects of what can be called "bad" spirits. The discussion in the Committee suggested that certain countries might be willing to consider the problem and would have useful data to communicate. Secondly,

there was the proposal of the Medical Director to consult only the public health departments of those countries which had requested the Assembly to take up the question of alcoholism. He would point out, in reference to this suggestion, that two sets of countries with conflicting views had been interested in the resolution and that the resolution in itself was a compromise. If the Committee decided to confine its enquiries for the present to the public health departments which had promoted the resolution, he felt that only those three countries should be consulted which had submitted the matter to the Assembly in 1928 and which would feel bound by the terms of the compromise which presumably they understood. The resolution submitted to the Assembly in 1927 had been rejected, and the Health Committee was not being asked to consider it. The countries which had signed the resolution of 1927 and withdrawn from the resolution of 1928 would probably tend to widen the enquiry and include aspects of the subject which had been explicitly ruled out by the Assembly of 1928.

Personally, he would prefer a general enquiry addressed to the public health departments of all countries interested in the subject. If, however, the enquiry must proceed by stages, he thought it should, in the first instance, be confined to the three signatories of the proposal submitted to the Assembly in 1928.

The PRESIDENT said he would not press his suggestion that the six countries to which he had referred should be consulted. Perhaps it would be more constitutional, as Sir George Buchanan suggested, to begin only with the three countries which had signed the proposal of 1928.

Dr. CHODZKO, replying to Professor Léon Bernard, drew the attention of his colleagues to the words contained in the second paragraph of the resolution. The Committee was asked to collect statistical information relating to alcoholism.

That paragraph raised the question of alcoholism in general, without stating what alcohols were to be included, or even whether distilled alcohol was intended. The resolution went on to limit the task of the Committee and, in his view, that was a limitation of the rights of the Committee, since it was clear that alcoholism was brought about by any form of alcohol. How was it possible to determine the precise part to be attributed to a given form of alcohol in the case of an individual who habitually drank brandy, wine, beer, etc. ?

He thought that some of his colleagues were too sceptical concerning statistics. He would remind them that there were very exact and scientific statistics in existence, namely, those covering the mental asylums. He had closely studied the question and had noted considerable differences according to countries and districts. The proportion of mental diseases due to alcoholism might vary from 10 to 42 per cent. Complete reliance might be placed on those statistics.

He would, in this connection, refer to the example of France, which had not hesitated to suppress by a stroke of the pen the manufacture of absinth when the Government had realised the danger of that product.

Dr. Alice HAMILTON said she would like to make it quite clear that, in referring to the diminished toxicity of alcohol owing to the addition of a small proportion of methyl alcohol, she was referring only to acute and not to chronic cases of alcoholism. The observations to which she had alluded had shown that in acute cases the methyl alcohol present was not an important factor and that the acute alcoholism was the result of massive doses of ethyl alcohol.

In emphasising the difficulties of the proposed enquiry, she had not intended in any way to discourage an examination of the subject. She was sure that Surgeon-General Cumming would gladly co-operate in the enquiry. Incidentally, she would suggest that the Health Committee might begin with a definition of the word "abuse".

Dr. HAMEL said he had listened attentively to the arguments of Professor Ottolenghi in favour of the establishment of exact statistics. Certainly the existing statistics were largely manipulated either in one direction or in the other according to the views of the person establishing them, and it would be useful to obtain data founded on a scientific and exact basis. The relation between mental disease and alcoholism was a familiar fact, but the existing knowledge on the subject should not be exaggerated, since mental diseases varied greatly according to countries. The point where abuse of alcohol began was always difficult to determine exactly. Statistics had been drawn up of the crimes committed under the influence of alcohol, and evidently those cases pointed to abuse, but definite conclusions could not be drawn from them so far as the enquiries of the Committee were concerned. Even for the question of distilled liquors, it could be ascertained, in the case of Germany, that in Wurtemberg the population preferred wine, in Bavaria beer, while in the north-western districts distilled liquors were more frequently drunk. Nevertheless, in all these regions, wine and beer were consumed as well as distilled liquors. It would appear, therefore, extraordinarily difficult, in these circumstances, to determine accurately the results of the abuse of distilled liquors and to obtain useful statistics on the point.

He agreed that the countries specially interested should be asked what were the difficulties which they encountered and what were the problems which they desired to elucidate.

The PRESIDENT thought that his colleagues would agree to invite the Medical Director to consult the three countries in question and to adjourn the subject to the next session.

Dr. CHODZKO said that, if the Medical Director for other reasons was led to consult any other country, he would have the right to do so.

The proposal of the President was adopted.

394. Resolution of the Assembly regarding the Publication of Minutes.

Sir George BUCHANAN said that he had read the resolution of the Assembly concerning the Minutes of the Committee with some alarm. These Minutes were only published twice a year and consisted of no more than 60 pages of printed matter. The suppression of the Minutes would cause an enormous amount of individual trouble to members of the Committee and, he believed, would also create difficulties for the Secretariat. Other technical Committees of the League might be able to embody the results of their discussions in resolutions and reports and dispense with published Minutes of discussions. The resolutions of the Health Committee, however, were purposely of a general character and could only be thoroughly understood by reference to the discussions which had taken place. He would allude, for example, to the resolution which was usually passed approving the report of the Medical Director. That report contained masses of material which were discussed by the Committee before approval was given, and it was necessary that there should be a record of those discussions. The Minutes of the Committee were the document which he personally most frequently consulted. In his opinion, there were other publications of the Health Organisation which might more conveniently be spared.

M. KUSAMA enquired whether the Medical Director could inform him of the cost of the publication of the Minutes as compared with the total expenditure of the Health Organisation on printing. He agreed with Sir George Buchanan in regard to their extreme utility. The Japanese authorities, who, owing to the distance of Japan from Europe, were unable to keep in touch with the work of the Health Committee as closely as some other countries, could only appreciate that work from an examination of the Minutes. In his opinion, their publication was essential.

The MEDICAL DIRECTOR regretted to remind the members of the Committee that they were confronted with a formal decision of the Assembly. It was not for him, as an official of the Secretariat, to say what his personal views might be, but, if he might express a regret, it was to the effect that Sir George Buchanan and M. Kusama and other members of the Committee had not been warned by their delegations who had unanimously adopted that decision at the last Assembly. That decision did not come from the Secretariat, which had no authority in the matter, but from sovereign Governments. He would remind the Committee of the terms of the resolution of the Assembly and point out that, in order to meet the views of Sir George Buchanan, a formal request from the Committee would be necessary, which would have to be submitted by the Secretary-General to the Council and supported with a reasoned statement. He must insist on that last condition. It would be necessary to explain why one of the four technical Committees of the League was unable to follow the procedure which had been adopted by the Economic Committee, the Financial Committee and the Transit Committee.

He would observe, in reply to M. Kusama, that the printing of the Minutes cost about 11,000 francs a year. That, however, would not be a reason to which appeal could be made before the Council. The Assembly had taken its decision after having added up the costs of the Minutes of all the technical organisations.

M. VELGHE, in view of the remarks of the Medical Director, did not think it was useful to continue the discussion of the subject.

The MEDICAL DIRECTOR said it was understood that, if the Minutes were not published, a very complete report on the work of the Committee would have to be issued.

Sir George BUCHANAN thought that, if the Committee was generally of the opinion that the practice of publishing the Minutes should be maintained, a reasoned statement of that opinion should be submitted to the Council through the Secretary-General. If it would help the Committee, he would draft such a statement for consideration at a later meeting.

Professor Léon BERNARD supported the suggestion of M. Velghe. In his opinion, the Committee had no exceptional reason on which it could rely and its case was on the same footing as that of the other technical organisations.

Dr. CHODZKO insisted that Sir George Buchanan should be allowed to prepare the note to which he had referred. It would be for Sir George to discover whether the Committee had no exceptional reasons for pressing its request.

Sir George BUCHANAN said he did not desire to waste his own time or that of the Committee. If his colleagues would like to consider a draft note, he would prepare it.

The suggestion of Sir George Buchanan was approved.

THIRD MEETING.

Held on Saturday, October 27th, 1928, at 10 a.m.

President: Dr. Th. MADSEN.

395. Report of the Medical Director: Current Activities of the Health Section.

The PRESIDENT said that the Committee would begin the discussion on the report of the Medical Director (see Annex 1, page 57).

1. Chapter I. — Service of Epidemiological Intelligence and Public Health Statistics.

Paragraphs (a), (b), (c), (d), (e), (f) and (g) were read.

Dr. PARK noted that arrangements had been made for the weekly broadcast from Saigon to be communicated to the Pan-American Sanitary Bureau through Geneva. That was a very valuable procedure, as the ports on the western coast of America were in constant touch with the Far Eastern ports.

In view of that arrangement, he would ask the Medical Director whether a reciprocal arrangement existed by which intelligence messages from the Pan-American Sanitary Bureau were transmitted to Singapore. If that were not the case, would it be possible to consider the possibility of making such an arrangement, which would be of considerable value to the quarantine administration in Australia, and no doubt to many other sanitary administrations which adhered to the Singapore Bureau?

The MEDICAL DIRECTOR said that he had had correspondence with Surgeon-General Cumming on the matter, but that no reciprocal arrangements regarding the exchange of information between Singapore and the Pan-American Bureau had yet been made. The Singapore Bureau was in regular communication with the Panama Canal Zone, Honolulu and Manila. San Francisco was within the range of the Saigon wireless station, and Washington was able to pick up messages from Nauen. Those facts had been communicated to Surgeon-General Cumming.

Colonel GRAHAM noted a statement that the quarantine station on the Persian side of the Persian Gulf had been handed over to the Persian Government. He had since received further information from Dr. Gautier. The Singapore Bureau had communicated with Teheran, and had been assured that information would continue to [be] sent. At present, however, that information would have to be cabled in clear, as the agreement with the Anglo-Indian Company had lapsed and wireless communication was therefore not available. It might be difficult for further arrangements to be made with the Anglo-Indian Company, and, if that should be so, the expenses of the Bureau at Singapore would increase.

The MEDICAL DIRECTOR said he had raised the question with the technical adviser to the Persian Government, and he hoped suitable arrangements would be made.

Sir George BUCHANAN said that some weeks ago, on reading the present section of the Medical Director's report, he had intended to ask the Committee to consider a few matters. It seemed to him that the present system of collecting information about infectious diseases from every quarter of the globe, however excellent as providing material for epidemiological study, might nevertheless actually impede progress in the carrying out of the mutual agreements of the Governments under the new Sanitary Convention of 1926. Having in mind the experience of a service in London which was designed for strictly practical ends, he had noted various points, both in the operation of the agreement with Singapore to act as a regional bureau, and in the independent notices sent out from Geneva, which appeared to require some consideration lest they should have the result of delaying or diminishing the official communications under the Convention which had been established in 1926.

Fortunately, however, it was now unnecessary to go into this matter, as last week in Paris the whole question had, he understood, been examined in a most friendly spirit by the Medical Director and the new officers of the Office international d'Hygiène publique. It would obviously be better to allow those conversations to continue in the spirit in which they had begun. He would only say, therefore, that, if at any time the experience or opinion of the epidemiological intelligence service of his own Department could be of any use, it would always be available freely and frankly for the Geneva and the Paris Offices alike.

The MEDICAL DIRECTOR said he was grateful to Sir George Buchanan for his kind offer of collaboration. He had often had occasion during the last seven years to apply to the British Ministry of Health, which had never failed to give valuable assistance.

The Health Committee had last year appointed a Committee of Experts in epidemiological information, which had included Dr. Park, Colonel James and Colonel Clarke. Thanks to the work of that Committee, a new form of weekly bulletin had been adopted and a revised form of monthly bulletin. He would be grateful for all further help that might be given. There was no immediate need to go into any details, but he would like to confirm what

Sir George Buchanan had said in regard to the Paris negotiations. It was understood that all information from Singapore, either under the International Convention or otherwise, would be sent at once to Paris by the most appropriate means, and further that the Office in Paris would publish *communiqués*, and that weekly reports would be sent from Paris to Geneva.

Colonel GRAHAM, referring to paragraph (e) " Oral Vaccination ", said that the rate of mortality in dysentery had fallen so low that experiments in oral vaccination were not being proceeded with. If the mortality rate should rise, the experiments would be resumed.

Referring to the action taken on the resolutions of the Advisory Council, he said that the Council would be meeting again in January, and further information would then be available. Meanwhile, he had received encouraging reports from Dr. Gautier. In the matter of plague there had been everywhere an excellent response. Replies had been received from the Quarantine Board of Alexandria, from South Africa, Hong-Kong, Iraq, North Borneo, India, Tanganyika, Ceylon and Australia. Those countries had either notified their intention to participate in carrying out the programme, or had suggested action to be taken, or had intimated that they would be unable to do anything in the matter. Progress had also been made with the enquiries into the value of the quarantine stations.

Chapter II. — System of Liaison with Public Health Administrations.

Chapter II of the Report of the Medical Director was read.

Sir George BUCHANAN said that he did not think it was necessary to emphasise the advantages and the success of the system of interchanges, or to express his appreciation of the devoted work of the Secretariat in organising them. He desired, however, to make a few general observations on the programme of interchanges for next year, particularly in relation to the views which were held on the subject in Great Britain. He believed it would be useful if the various members of the Health Committee, in discussing the system of interchanges, would frankly inform their colleagues how those interchanges were regarded in their respective countries. It was from that point of view that he intended to discuss the programme for next year.

He felt some misgiving as to the tendency to drop the system of general interchanges in favour of interchanges which were more of the nature of special missions. No general interchange was proposed for next year.

The British attitude towards interchanges was largely governed by the expectation that the system of general interchanges would be continued. The system of interchanges was regarded as affording an opportunity for large numbers of medical officers, particularly of the rank-and-file, to ascertain how health problems were being dealt with in foreign countries. Interchanges were not regarded so much as a means of collecting information and making reports but rather as a means of benefiting individual medical officers of health, who rarely had an opportunity of leaving their districts. The advantage of interchanges, in a word, was that they tended to widen the outlook of the ordinary medical officer of health.

When the system of interchanges was first organised, he had come to the conclusion that the best method of assisting them was to organise the interchanges outside the Government departments. The mainstay of public health work in Great Britain was the work of local medical officers of health appointed by the local authorities. The medical officers of health had a society and corporate spirit of their own, and they as officers dealing with every branch of public health activity were best qualified to show the foreign visitor what was being done on the spot. The Society of Medical Officers of Health therefore had supervised the interchanges, received the visitors and secured the assistance and hospitality of local authorities. He had confined himself to ensuring liaison between the foreign visitors and the medical officers of health, and to obtaining subsidiary aid from the central departments and the interest of the Ministers. This liaison had been successfully established, and the interchanges had year by year continually improved. So far as Great Britain was concerned, it was not true to say that the general system of interchanges, as it was now organised, gave the authorities too much trouble. It was easier and more efficient now than at the beginning, as they had learnt by experience.

British medical officers of health had anticipated that, by organising numerous general interchanges and giving facilities to foreign visitors, they would themselves benefit to some extent from general interchanges in foreign countries on a basis of reciprocity. If general interchanges were now abolished in favour of special interchanges, the Society of Medical Officers of Health would naturally have less inducement to give assistance in future. The system of special interchanges concerned only a few doctors and experts and, by encouraging this new system of interchanges, the old system, which for three or four years had worked with such success, was being virtually set on one side. The whole idea governing interchanges appeared to be undergoing transformation. The new special interchanges would deal with housing, sanitary engineering and the milk supply. These problems were to be studied by small groups of interchangists, not all of them doctors, but persons who represented different branches of activity and different aims. The purpose of the new species of interchange was to obtain expert opinion and reports to the League on the progress effected in certain directions in certain countries; they were, in fact, missions of enquiry and not interchanges. In order

to provide for the needs of these special interchanges in Great Britain, it would be necessary to make special arrangements each time. They could not be merely turned over to the Society of Medical Officers of Health and it would be necessary to create special *ad hoc* organisations.

He was not maintaining that the staple British plan of interchanges was the best one, but merely informing the Committee of the best way of obtaining British participation, for which he thought some allowance should be made in the general programme. He hoped that every member of the Committee would present the views of his own country. The purpose of the exchange was to secure the greatest convenience of the greatest number of countries.

Professor Léon BERNARD apologised to the Committee for returning again to the word "interchanges". He was convinced that the wrong use of this word regardless of its real meaning in French had greatly contributed to misunderstandings in France with regard to this special undertaking of the Health Organisation, and had prevented that undertaking from achieving the success which was desired. It might be well in French texts either to use the English word "interchanges" or to call them "voyages d'études".

The report of the Medical Director had alluded, in reference to the question of the cinema, to the productions of the L. U. C. E. He would return to that question when he came to discuss his note on the Commission for Instruction in Public Health.

He further desired to submit an observation of a general character on the interchanges, which he would ask the Medical Director to consider. It had been regularly noted that, towards the end of the interchanges, the participants were overworked in every respect, and that this situation was detrimental to the success of the interchanges. Moreover, certain health administrations could not dispense for very long with their officials, and there were also professors and other people who similarly were unable to be absent over a long period. It would therefore be well to examine the question of the duration of the interchanges.

He entirely approved the proposed interchanges on housing and social insurance. He would remind the Committee of the extensive programme of cheap housing which was about to be carried out in France as the result of the initiative of M. Loucheur. A visit to France would therefore be useful both to his own country and to participants from other countries.

The new programme of social insurance would be applied in France as from 1930. In his opinion, insufficient attention had been paid in France to the aspect of the problem which concerned preventive medicine. It would be of great interest to his country if it could be shown the part which must be played by preventive medicine in the problem of social insurance.

He accordingly thanked Sir George Buchanan for his observations, which helped to give greater definition to the ideas in regard to interchanges in general. He would not be surprised to hear that Sir George was rather tending to regret the modification of the interchanges as they had been conceived at the outset. It was true that England was in a position to show very remarkable results in the matter of public health. Personally, however, he was glad to note the development which was becoming apparent. Doubtless it was of advantage to enable public health officials to travel, but these officials had not the necessary authority in respect of the application of health measures. On the other hand, the best practical results might be anticipated from interchanges devoted to definite objects, and participated in by highly competent persons. In any case, it was quite easy to reconcile the two systems and, according to the means available, to organise one year an interchange of one description and, another year, a different kind of interchange.

Dr. LUTRARIO said he did not wish for the moment to discuss the substance of the question contained in paragraph 2 (Interchange in Italy). He merely wished to emphasise the satisfaction felt in his country as a result of this interchange. He shared that satisfaction both as an Italian and as former chief of the public health service in his country. As an Italian, he was glad that the interchange had brought together a highly distinguished group, and he was extremely grateful to the Medical Director. As former Director of the public health service of his country, he was glad that these distinguished persons had been able to realise on the spot the considerable efforts made in his country to reach the present level of achievement. He hoped that the participants, on returning home, would carry away with them an excellent impression of the solutions which had been found for the various problems. Reciprocally, his country could not fail to profit from the observations made by the participants. He would also emphasise the fact that this had been an interchange of a general character, such as had been contemplated at the outset. This interchange had even been more general than usual, since it had extended, not only to health organisations, but also to relief work, and even to economic and social aspects of the life of the country.

Regarding the programme of interchanges for 1929, he gladly welcomed the proposal which had been made to associate with the public health officials a number of administrative officials. That was an arrangement which was both opportune and useful. He had, during his long career, realised the great difficulties which resulted from the fact that administrative officials had no real faith in the benefits of health measures. It was well that they should be brought to realise the facts as they were. On a previous occasion, thanks to the support which had been given him by M. Velghe, he had been able to associate engineers with the participants in certain interchanges. It was now proposed to attach to the interchanges administrative officials. He hoped that, at no very distant date, it would also be possible to associate public officials with this work.

M. VELGHE endorsed the tributes which had been paid to the interchanges and to the Medical Director, who had organised them. He nevertheless wished to make a few criticisms. The first of those criticisms applied to himself. He had already organised a certain number of interchanges, on which he had not failed to be complimented by the Secretariat. He was himself, however, well aware of the defects of their organisation, and he would have been glad to have heard more criticisms, and to have received more advice from the officials of the Secretariat. The difficulties which might arise in the organisation of interchanges were only revealed at the end of the proceedings. He insisted that the officials of the Secretariat should not hesitate to stake their opinions quite frankly. Such frankness would render the greatest service to administrations.

Another criticism applied to all the health departments which sent participants to the interchanges. It seemed to him that insufficient discretion was exercised in the choice of the persons who were sent. First, it was regrettable, from the language point of view, that participants were sent who were sometimes entirely ignorant of the language of the country visited, so that they could derive only a limited profit from what they saw. Moreover, a certain number of participants regarded these interchanges rather as tours than as serious missions. He was himself convinced that the selections made in the past had not been above criticism. His observations were intended to be quite general and were inspired by a desire that money should not be uselessly expended. How could such a defect be remedied in the future? He could not say. In any case, it would be well for all members of the Committee to draw the attention of their health departments to this point, which was of extreme importance.

He associated himself with the observations of Professor Bernard as to the excessive duration of the interchanges.

Professor Léon BERNARD interposed in order to say that the two questions were mutually connected. The choice of the participants would be easier if the interchanges did not last so long.

M. VELGHE quite agreed. Personally, he had noted that the participants in the Belgian interchange were overworked. There had been too many lectures, excursions, receptions, trips in automobiles, etc. A programme so fatiguing might be supported for a fortnight, but not longer. The practical result was that the participants did not go upon certain excursions which were particularly useful. He would certainly approve any proposal of the Medical Director to the effect that the duration of the interchanges should be reduced by perhaps one-half. It was necessary, on the other hand, to leave the participants free, not only every Sunday and at week-ends, but perhaps even longer than that.

Unquestionably, the interchanges were organised in the interests of the participants; but, at the final meeting at Geneva, the discussions and final reports were of insufficient benefit to the health administrations. He wondered whether they all could not profit more from the interchanges. Participants, if they were officials belonging to health administrations, might easily be asked for information, but they were not always public health officials. Had the health administrations which did not participate derived any appreciable advantage from the recent interchange on rural hygiene? If not, he regretted, it less for his own country than for the countries which had thus an excellent opportunity of deriving considerable benefit. He was unaware, moreover, to what extent individual missions were of benefit to all administrations represented in the League of Nations. Perhaps there existed at Geneva a collection of the reports sent by the participants as evidence of their gratitude.

He agreed with Professor Léon Bernard in respect of the future. It was necessary to be eclectic and to admit all forms of interchanges, individual or collective missions, special and general interchanges. All these were very profitable and should be used to the extent of the resources available.

Two of the proposed interchanges specially called for his attention :

1. *Sanitary Engineering.* — He was not altogether sure whether this interchange might be very useful, but perhaps other delegates took a different view. If such was the case, he would accept their views.

2. *Housing.* — He would very much like to know the programme of this interchange. The problem of housing had numerous aspects, financial, economic, social, sanitary, etc. It would be an impossible undertaking to examine all these aspects of the question during the interchange. It had been suggested that administrative officials should participate, as well as architects, etc. The problem was too vast to be covered in its totality and its various aspects were too different one from another. Moreover, the publications of the International Labour Office furnished a considerable amount of information on the political and financial aspects. The important point was the study of practical measures. He presumed that such would be the aim of the interchange, since it would cover urban zones. He did not, however, approve of that expression. There were other fields of practical work, as, for example, the garden cities which had been built in the open country.

The MEDICAL DIRECTOR said that the Section understood the question in that way.

M. VELGHE, continuing, said he entirely approved of an interchange of officials devoted to studying the practical aspects of housing as concerned the buildings themselves, and the health conditions, not only of a group of houses, but of each house in particular. Such an interchange would be extremely profitable to the majority of countries, in which, particularly since the war, the problem of housing had assumed considerable importance. He

was sure a study by competent persons of the information to be gained from the practical steps which had been taken in past years might lead to important conclusions which it would doubtless be possible to utilise in other countries.

The MEDICAL DIRECTOR thanked M. Velghe for his criticisms. After the six years during which the system had been working, the time had come to speak frankly in the full Committee.

The Secretariat had clearly realised that it was necessary to limit the duration of the interchanges in the strictest possible way. The problem at once arose of collective as opposed to specialised interchanges. Great Britain was the only country in which visitors might go to any district and find the same degree of efficiency in the public health services. The case was otherwise, for example, in Germany or in the United States. The organisation of a collective interchange in England was therefore much easier than anywhere else, even in Germany. Moreover, how was it possible, in the space of a month or six weeks, to see everything there was to be seen if all the participants were expected to familiarise themselves with the working of the whole public health service within the framework of the economic life of the country visited?

He would ask Dr. Lutrario and Dr. Hamel to forgive him if he ventured to refer to Italy and Germany in discussing the duration of the interchanges. The Health Section had in advance considered that it was essential strictly to observe the week-end holiday, but that had been done only in England. The break-off was indispensable for three reasons:

1. The participants needed to be left to themselves for some little time.

2. It was indispensable that they should be able to discuss matters among themselves and with a representative of the health administrations, to ask questions and obtain information. At Geneva, during the eighteen final conferences, the Secretariat had often been struck by the really elementary questions raised by the participants, in regard to which they should have been able to obtain information during their tour. The blame must not be laid upon themselves or on the health administrations. One of the reasons was that the participants had not the material time to put the necessary questions.

3. It was certainly to the interest of the health administrations to acquaint themselves with the impressions of the visitors, who were often highly competent. It had not been possible in Germany and in Italy to give effect to this principle, which the Secretariat had not ceased to emphasise. In those two countries even Sundays had been used for travelling. In this respect the Secretariat frequently found itself confronted with fixed arrangements in spite of former undertakings to the contrary, and he would thank M. Velghe for having raised the question. The criticisms made would give the Secretariat at least authority in discussing the interchanges with health administrations, and he would also be grateful to the various members of the Committee if they could make their health administrations realise that it was extremely difficult for the Secretariat to organise a collective interchange unless there was a guarantee that the programmes would be strictly carried out. He fully understood the difficulties of health administrations which depended on a central authority. They might adopt a programme, but there were always other interesting things to show the participants. The participants were so well received that they were unable to refuse an invitation. This was the reason for that fatigue to which reference had been made. Long automobile excursions were likewise exhausting. Action by the Secretariat became extremely difficult when all arrangements had already been made. If the Health Committee would itself emphasise the point, it would be rendering the greatest service to the Secretariat.

He would abstain from dealing in too much detail with the selection of participants. Important countries had sent officials of advanced age as a sort of consolation for an approaching retirement. The Secretariat had encountered most serious difficulties when it had wished to refuse participants appointed as the result of pressure often brought to bear by distinguished persons.

It was necessary, however, not to exaggerate. Of some six hundred medical officers who had hitherto derived advantage from the interchanges, the percentage of bad candidates was not very high. Every year the selection appeared to be made with more discernment and he was glad that Dr. Lutrario had said that the Italian tour had brought together a very distinguished group. Even in that group, however, there had been serious difficulties arising from language. On that point he disagreed with the President and with M. Velghe. If the Committee made the selection of participants depend on the language factor, there would be an entirely artificial choice. Here, again, it was necessary not to exaggerate. In very many cases, a participant, arriving in a country without knowing the language, left it after having contrived to deal very successfully with the situation. He would quote the case of a mission in the United States in which a Russian participant had taken part who did not know a word of English and had not, so to speak, uttered one word during the whole tour. At the final conference at Geneva, however, in which all the participants had been asked to submit a report, he had presented, in Russian, the best statement of all on the campaign against tuberculosis in America. There were frequent cases of that kind.

There was a point in regard to which a radical reform was necessary. He was referring to lectures, which it was essential to suppress. Although these lectures were printed in advance and the participants had copies of them, no means had yet been found of preventing their authors from reading them. The system introduced last year in Germany should be taken as a model. A small pamphlet of convenient form had been prepared containing individual statements. After fifteen minutes' reading, every participant was in a position to ask questions.

It was also with a view to accelerating the interchanges that recourse had been had to the film. The question would again come up on the note of Professor Léon Bernard. He would himself observe, though he hoped for the best, that the success of the enterprise was far from easy to ensure.

The question raised by M. Velghe as to what advantages accrued to the health administrations from these interchanges had often been raised by the Secretariat. The Committee would remember that the Secretariat, four or five years ago, had written to all the health administrations, putting to them three requests : (1) to prepare a list of candidates, not only for the current year, but for a series of years, in order that it might be possible to distribute in the most appropriate manner the participants among several tours ; (2) to submit to the Secretariat their observations at the end of each tour on the return of their officials ; (3) to communicate the copy of the report with which the officials presented them. In one year, only one country, namely, Norway, had sent a list of twenty-two candidates, and no steps had been taken to accede to the other requests. The Secretariat had, on the other hand, received from the officials themselves a large number of reports and the Committee had laid down the rule that they might be published on three conditions : that the reports were endorsed by the administration of the country visited and by the administration of the country to which the official belonged and be deemed by the Committee to be worthy of publication. Two reports only had hitherto fulfilled all these conditions. The Secretariat had often asked whether it was not necessary to begin to form a library of the documents relating to these interchanges. Conversations had taken place on the subject in Germany and the Secretariat had received certain promises, but nothing more. He would add that the Japanese participants, who had undertaken individual missions, had often sent to the Secretariat long and interesting reports.

It was essential to find a formula which might ensure to the administrations a more immediate advantage. That was one of the reasons for the introduction that year of an interchange of specialists and he would point out to Sir George Buchanan that such a proposal was by no means a novel idea. From the outset there had been such interchanges. He would recall the interchanges of tuberculosis officers with school medical inspectors, the interchanges of port health officers and of medical officers specialised in industrial hygiene. At the request of Dr. Lutrario and M. Velghe, there had been an interchange of sanitary engineers. The Secretariat was not proposing to suppress collective interchanges but, owing to the difficulties to which attention had that day been drawn, and of which he had for long been aware, he desired that these interchanges should be organised everywhere as perfectly as in Great Britain. The necessary preparations would require at least twelve months.

The question of housing had been under consideration for several years. For financial reasons it had not yet been possible to organise this interchange. The interchange in regard to industrial hygiene had been decided upon last year and the Secretariat had entered into an arrangement on that subject with the International Labour Office.

The question of the control of milk had been discussed on two or three occasions. The only new proposals related to sickness insurance and preventive medicine.

There was no idea of the participants submitting a " report to the League of Nations ". In his opinion, the most interesting result would be collective reports from these groups to the Committee on the experience acquired by them during the interchange and on subjects proper for international study by the Committee. He would venture to make the following suggestion : If any particular subject seemed to the Committee to be ripe for study on a comparative basis, it would be of great utility, both to the Committee and to the health administrations, to obtain collective proposals for international studies from such groups on the basis of their experience. It did not, on the other hand, seem to him that there was much to be hoped from individual reports from participants ; they would inevitably contain many repetitions and would often turn upon points of no practical interest. The position would be very different in regard to a collective opinion upon a subject of international study.

He thanked Dr. Lutrario for having asked for the participation of administrators other than doctors. There were administrators and prefects who were more interested in health matters than their technical colleagues, and it was advisable to give them an opportunity of participating in these interchanges when they were willing to carry out a practical programme.

The reason for the interchange on housing had been well defined by M. Velghe. The proposal was to visit the principal centres where practical steps were being taken and the allusion to the matter in the report would be amended.

The interchange on health insurance might be of real importance. There were medical advisers to great insurance companies who had seldom, if ever, had an opportunity of studying in detail the working of the health services and institutions of preventive medicine. Moreover, health officers, extremely well qualified in their own subject, were unacquainted with either the practice or the difficulties of the doctors attached to insurance funds. Since there was agreement as to the necessity of co-operation between the two parties, a collective interchange would be extremely interesting. It would be necessary for the members of the Commission on Social Medicine to be able to work with a full knowledge of the facts.

He would next touch on an aspect of the question which had not been examined, namely, the budgetary aspect. The funds for the interchanges were derived from two sources, namely, the League of Nations and the subsidies of the Rockefeller Foundation. The Health Organisation was guaranteed the Rockefeller subsidies for only three years to come. The Secretariat could not say at present what would happen at the end of that period. It would therefore be necessary, with a view to the future, gradually to adapt the system to a new regime in the direction of the greatest possible efficiency combined with the maximum of economy. There were two ways of achieving the final object of the interchanges. The first and most effective was to create an *esprit de corps* between the different health services and between all those who were entrusted with the application of practical measures and who were more numerous than the strictly medical body. For an organisation of a series of

interchanges including hundreds of participants, it was impossible to rely upon the League of Nations, and it would be necessary to obtain funds from outside sources. The Committee would realise that it was necessary to visit not only European countries, but also those overseas as well as regions which had hitherto been left on one side or almost wholly ignored, such as Africa, the Near East, Latin America and North America. He had examined some of the possibilities and had tried to ascertain whether he would be able to submit to the Committee a draft scheme for such a general organisation on the basis stated. He had not been successful in this design and, in his view, there was no choice but to adopt the second method, which was to make a limited choice of subjects, of officials and of countries. In order to obtain a maximum of benefit from the interchanges, it was necessary that each interchange should bear upon a definite question and that the final report should emanate from persons of a certain competence. It was in order to achieve this result that the plan for 1929 had been elaborated.

M. KUSAMA observed that, if direct communications had not reached the Secretariat from administrations in regard to the value of the interchanges, it might nevertheless be seen from the discussions of the Second Committee of the Assembly that the Governments were unanimous in their appreciation of the advantages of the interchanges.

The Japanese administration derived an immense benefit from individual missions. The interchange on the food supply had profited, not only the individual official, but his administration and consequently the whole Japanese population.

He desired to say how much the Japanese administration appreciated the interchange on rural hygiene and the interchange proceeding in Italy, in which Japan was very happy to be able to participate.

It was agreed, as the result of further observations by Professor Léon BERNARD, that in the French text the expression "échanges" should henceforth be replaced by the expression "voyages d'études".

Colonel GRAHAM, referring to the duration of the interchange, emphasised that the question did not arise for Europe in the same way as for Asiatic countries, owing to the question of distance. If too short periods were arranged, there would be a risk of spoiling the whole system. Hitherto the Medical Director had given a free hand in the organisation of interchanges. If this policy were continued in future, he would endeavour to take into account the observations which had been made. He would emphasise, however, that during the last interchange he had begun by allowing the participants two days of complete rest. He had afterwards asked them whether they desired the programme to be abridged and they had replied in the negative.

M. VELGHE thanked the Medical Director for having so well accepted his observations. He hoped that those observations would meet with the same reception from his colleagues. He was glad to have provoked the very interesting declarations of the Medical Director, which showed that the latter had done everything possible to work under the best conditions and that he would make further efforts in that direction.

Sir George BUCHANAN, referring to the interchange on rural hygiene, said that he hoped that account would be taken of his previous suggestions so far as Great Britain was concerned. If there was to be a rural hygiene interchange in that country next year, it would most conveniently be organised on the lines of previous interchanges, the only difference being that more rural areas would be visited.

The MEDICAL DIRECTOR said that he thought those suggestions were exactly in conformity with his intentions.

Sir George BUCHANAN, referring to the interchange on housing, said he was glad to note that the membership would be restricted and that there was no question of obtaining a report of experts to the Committee on what they may have seen in the various countries. This problem of Great Britain was very delicate. During the last few years, sixty-one million pounds of public money had been expended in the construction of a million dwellings, thanks to the action, not only of the Government, but of local authorities. Housing work had become a matter of contention between the political parties and no one could foresee the results of the intervention of a Committee of the League of Nations on the municipal or even parliamentary elections. It was necessary to be very prudent in dealing with this matter.

The MEDICAL DIRECTOR thought it would meet the views of Sir George Buchanan if the following words were added to his report: "with regard to the possibilities of international studies . . ."

Sir George BUCHANAN agreed. He went on to say that the Factory Department of the Home Office as well as medical officers of health would endeavour to facilitate the interchange on industrial hygiene if Great Britain were visited. It would be advisable, owing to previous experience, to suppress lectures in these interchanges and to restrict the visits to factories to the experts.

In view of the connection between sickness insurance questions and preventive medicine and the fact that, from the point of view of preventive medicine, there still existed many divergencies within the countries themselves, it was necessary to wait for the question to be cleared up and for the necessary co-operation on the two subjects to be realised in each country. The Committee might return to this point during its meeting on Monday.

The programme of interchanges was approved subject to note being taken of the discussion and the paragraph relating to the question of sickness insurance being reserved for further discussion.

396. **Report of the President on the Laboratory Conference on the Sero-diagnosis of Syphilis.**

In the afternoon, the Health Committee met at 3.30 in order to hear a description by its President of the organisation, methods and results of the Laboratory Conference held at Copenhagen from May 21st to June 4th, 1928, for the purpose of comparing the various methods for the sero-diagnosis of syphilis. During this lecture a film was shown.

FOURTH MEETING.

Held on Monday, October 29th, 1928, at 10 a.m.

President: Dr. Th. MADSEN.

The PRESIDENT welcomed Dr. Abt and congratulated him on his appointment as Director of the Paris Office. He was convinced that, with the co-operation of Dr. Abt and M. Velghe, the Office international and the Health Committee would work usefully in collaboration.

397. **Report of the Medical Director (Continuation) : Technical Secretariat of Commissions and Conferences.**

1. *Second International Conference on Sleeping-Sickness.*

Dr. RAYNAND asked whether, at the Conference which was to take place in Paris, the problem of the health conditions of natives throughout Africa might also be discussed. Two years previously, in a communication made to the Committee, Dr. Raynaud had drawn its attention to the very numerous diseases prevalent among the natives and the precarious situation of labour. The same question had recently been raised at the meeting of the Office international. As the League of Nations had paid much attention to the position in Africa in regard to sleeping-sickness, could it not extend its activity to this other field?

Sir George BUCHANAN said he thought that any enquiry into the possibility of giving medical assistance to natives would have to be strictly connected with sleeping-sickness if it was to be discussed at the forthcoming conference in Paris. He would communicate the suggestion which had been made to the British delegates to that Conference, so that they might be prepared to discuss the matter.

The MEDICAL DIRECTOR said it was obviously very difficult to foresee immediately what would be the conclusion of the Paris Conference. The procedure suggested by Sir George appeared to him to be admirable.

The Conference on Sleeping-Sickness might make practical proposals to the effect that action should be taken on its conclusions. In that case, a question of procedure would arise. If its conclusions were to be binding on the Health Committee or on the whole of the Health Organisation, ought the Committee to wait until its next session before discussing them, or would the Committee give instructions in advance to its Bureau, assisted by those members of the Committee who would represent their countries at the Conference, to examine the possible action which might be taken on any conclusions reached by the Conference?

Professor Ricardo JORGE recalled that Portugal had taken an active part in the investigations into sleeping-sickness and in the campaign against this disease. His colleague, Dr. Raynaud, had referred to the medical and social assistance which might be afforded to natives of Africa. In the Portuguese colonies, especially at Angola, Dr. Mora had paid particular attention to this problem. He hoped that the Paris Conference would take note of Dr. Mora's work and would examine what had been done and especially what ought to be done.

The Committee approved the second procedure suggested by the Medical Director.

2. *Joint Commission of Experts for the Study of the Relationship between Public Health Services and Health Insurance Organisations.*

In reply to a question from Professor Léon Bernard, the MEDICAL DIRECTOR said that the report on tuberculosis would probably be completed in a few months.

Professor Léon BERNARD urged the great importance of the work of the Joint Commission of Experts. The coming into force very shortly in France of the law on social insurance perhaps gave special importance in his eyes to the question; it was, however, clear that no activity of the Secretariat could be more valuable at the moment than its work in this connection.

Sir George BUCHANAN asked whether the Joint Commission would meet before the report was presented.

The MEDICAL DIRECTOR replied that there would be a meeting of the Joint Commission early next year, but that the report would be ready before the end of 1928.

Sir George BUCHANAN said the proposal to appoint a special Sub-Committee was a valuable one. It was desirable to secure a better co-ordination between the insurance services and public health services in order to prevent any overlapping of their activities. This was an internal problem for each particular country. The different countries, however, could compare notes and discuss how such co-ordination could best be effected.

In this connection, he would refer to the proposal in the section of the report dealing with interchanges. It had been suggested that an opportunity should be given to public health officers to examine the insurance system in countries other than their own, and that, reciprocally, insurance officers should be given an opportunity to see public health work in other countries. That suggestion appeared to be closely connected with the present proposal. He would like to have some further explanation on the matter.

The MEDICAL DIRECTOR said it was merely proposed to give an opportunity to the members of the Joint Commission to visit in common: (1) districts where the work of co-ordination between the services was in process of being secured; and (2) certain selected areas where certain features of preventive medicine could be studied.

Sir George BUCHANAN said that the proposal defined in that way appeared useful, but it would not be readily inferred from the paragraph on the subject in the interchange chapter. There should be a reference to the matter in the Minutes.

The MEDICAL DIRECTOR said he would transfer the paragraph of his report dealing with the interchange to the paragraph under discussion.

Interchanges (Continued).

The MEDICAL DIRECTOR, referring to the observations made at a previous meeting on the advantages derived by health administrations from the interchanges, alluded to a letter he had received the previous evening, which afforded striking proof of the truth of his observations. One of the French Medical Officers participating in the interchange in British India, Dr. Hermant, who had occupied a high post in Indo-China and possessed great colonial experience — he was one of the two commissioners carrying out the enquiry in the Pacific — had himself translated the manual of Colonel Graham on the organisation and work of the health services in British India. Dr. Hermant had asked how it would be possible to publish this pamphlet, which, in his view, was of great interest from the propaganda standpoint. The letter afforded striking proof of the value of interchanges and was a well-merited tribute to the work of Colonel Graham.

M. VELGHE thought there was a slight misunderstanding between the Medical Director and himself. He had never for one moment cast doubt on the advantages obtained by health administrations from interchanges. He had merely asked the Health Section to increase those advantages and to take steps to make it possible for all health administrations to obtain the maximum possible benefit of such interchanges.

3. Leprosy Commission.

No observations.

398. Studies and Investigations in Course of Preparation: Action taken on the Resolutions of the Last Session the Health Committee.

1. Committee of Expert Statisticians: Study of the International List of Causes of Death and Morbidity Statistics.

No observations.

2. Dangers resulting from the Use of X-Rays.

Dr. CARRIÈRE, completing the list of countries contained in the Medical Director's report, said that he had just set up a Committee of Experts which would be entrusted with the duty of examining the question in so far as Switzerland was concerned and of enquiring how the internal agreements already made between the members of the Radiological Society could be given an official character.

Dr. JITTA thanked the Committee and the Health Section for the work which had been accomplished. He had not yet been able to submit a report containing any conclusions whatever, since certain countries were merely beginning the study of the question. He would draw up his report as soon as possible, but feared he would be unable to submit it at the next session.

3. Study of Health Conditions in the Islands of the Pacific.

No observations.

4. *Action taken on the Recommendations of the International Rabies Conference, 1927.*

Colonel GRAHAM said he had received a note on the work of Colonel Cunningham at Kasauli. This note gave a summary of the work which had been done at Kasauli for the last three years. It had been started before the Paris Rabies Conference, but had a direct bearing on the enquiries which were being made as the result of that Conference.

5. *Yellow Fever: Letter from the Belgian Government.*

Sir George BUCHANAN said that the resolution of the Committee had been carefully framed to indicate that responsibility for considering the proposal of the Belgian Government rested upon the four countries to which reference was made. It would be for those four Governments to consult each other, and the Health Organisation would only begin to act on an agreed recommendation from those Governments. As far as the suggestion that the matter should be considered at the International Conference on Sleeping-Sickness was concerned, he would inform the British delegates that they might be asked to consider the proposed extension of their programme.

The MEDICAL DIRECTOR said that the Health Section had obviously kept within the terms of the resolution, but nevertheless he wished to explain the reason for the exchange of views mentioned in his report. The persons referred to had begun to attack the problem when they had met to examine the preparatory work necessary for the Conference on Sleeping-Sickness. They thought that useful conversations could only take place on the return of Dr. Lasnet, when the latter would be in a position to lay before them in detail the recommendations adopted at Dakar. Dr. Lasnet, as soon as he returned, had been informed of the Belgian Government's letter and the conversations that had taken place. Dr. Lasnet had summoned a private meeting, at which the Conference at Dakar had been discussed as well as the opinions which the principal health advisers should lay before their Governments. He would emphasise the fact that the chief health advisers of a certain number of Governments were involved. One of them, Dr. Stanton, had taken the view that the purposed informal meetings might take place before his departure for West Africa. As was stated in the Medical Director's note, the advisers had agreed that nothing definite could yet be contemplated and had decided to meet at the Sleeping-Sickness Conference. It was at that moment that their suggestions would be made. If their suggestions required action, would it not be possible to apply the procedure which had just been adopted in regard to the possible action to be taken on the decisions of the Sleeping-Sickness Conference?

M. VELGHE quite understood that the persons in question had thought it their duty to raise the other questions, which were also a matter of concern to the Health Committee.

He proposed that the Committee should take note of that part of the report of the Medical Director. He also agreed with the procedure suggested by the Medical Director. The Bureau, however, should not forget that the question was of interest, not only to the Health Committee, but to the whole of the Health Organisation. From the discussion might arise an arrangement or a treaty, a question which came essentially within the scope of the Permanent Committee of the Office international d'Hygiène publique.

The MEDICAL DIRECTOR entirely agreed with M. Velghe.

6. *Eucodal and Dicodide.*

No observations.

7. *Protection of the Blind.*

Dr. CARRIÈRE said that the reply from Switzerland was ready and that it would shortly be forwarded to Geneva.

Dr. JITTA informed his colleagues that an International Congress of Ophthalmological Societies would take place at The Hague in 1929. The protection of the blind and the study of trachoma, two questions being investigated by the Committee, were on its agenda. He did not know whether the Health Section had received an official letter from the organisers of the Conference. In any case, he was instructed to ask whether it would not be possible for the Committee to co-operate with the International Ophthalmological Society in so far as anything connected with the protection of the blind was concerned. That society was one of the most competent in this respect, and to work together with it would be of the greatest importance. It was necessary, in fact, to avoid overlapping. On other occasions it was true that the Committee had not welcomed offers of co-operation with any particular society — for example, in connection with the study of rheumatism. On that occasion, however, a new investigation had been proposed, whereas the problem of the protection of the blind was already being studied.

Dr. LUTRARIO warmly supported the proposal of Dr. Jitta. He had, previous to the meeting, had a private conversation with his colleague. An investigation of considerable scope had been begun on trachoma and the Section had already collected a very large number of documents on the disease. Owing to other tasks, the question had been put aside. The present moment afforded an admirable opportunity of taking up the problem again and regarding it from a practical standpoint.

Sir George BUCHANAN thought it was certainly desirable that the Ophthalmic Conference should be provided with any of the information collected by the Secretariat which could be made available in time. It would be well if a report on the subject were presented to the Conference by some member of the Committee attending the Conference as an observer. A good deal of work had been done by the Secretariat, and this work should be made known. In regard to the work on trachoma, he thought the member of the Committee would have to be guided by the advice of the Secretariat. If there was any way in which the mass of material at the disposal of the Secretariat could be analysed and summarised for the benefit of the Conference, it would be well that the work should be undertaken. Subject to the advice of the Medical Director, he would suggest that one observer, or perhaps two, might attend the Conference and submit such documents as would be available, showing the work which had been done at Geneva.

The MEDICAL DIRECTOR agreed with Sir George Buchanan. As far as the second point was concerned, if the Committee took that view, Dr. Jitta would probably wish to submit to the International Ophthalmological Society the results of the enquiry when it was finished, or the results obtained up to date. As far as trachoma was concerned, an enormous quantity of documents was in existence. The Secretariat had already analysed them. This analysis would be printed and held at the disposal of the members of the Committee and of the International Ophthalmological Society.

Dr. JITTA thanked the Medical Director for his suggestion. The question, however, was somewhat different. What the International Ophthalmological Society desired was a closer form of co-operation with the Committee. It was obvious that, when the reports had been submitted, the matter would not be at an end. More particularly, problems of the prophylaxis of trachoma and of the protection of the blind were long undertakings and would have to be more widely studied by the International Ophthalmological Society. Not only should a report be submitted, but the co-operation of the Committee in the future should be assured. He did not wish to urge his point any further for the moment. Since Dr. Lutrario had originally suggested the enquiry on trachoma it would be well if he and Dr. Jitta should be the two representatives of the Health Committee. Dr. Lutrario would deal with the report on trachoma, while he would deal with the report on the protection of the blind. That would be the beginning of co-operation and the Committee would show the International Ophthalmological Society that it did not wish for duplication of work but that, on the contrary, it wished to collaborate in achieving the same object.

The proposal of Dr. Jitta was approved.

The report of the Medical Director was approved.

399. Nutrition: Proposal of Professor Léon Bernard (see Annex 2, page 70).

Professor LÉON BERNARD read his note regarding the insertion on the Committee's agenda of the question of nutrition (document C.H.765).

He was well aware of the complex nature of the problem. It touched on many points which might be considered to be outside the competence of the Committee and raised many delicate questions. He also thought it should be limited to its scientific aspect in relation to social problems and the welfare of populations, a subject which came within the scope of the Committee's activities. He did not ask that the question should be discussed at length forthwith, but merely that the Committee should place it on its agenda, and thus follow a practice which it had frequently adopted in the case of other questions raised by his colleagues. He hoped that the Health Section would prepare a report, to be submitted at the next session, stating whether the Committee could and ought to proceed with these investigations. It would be unfortunate if the Health Organisation appeared to remain indifferent to a problem intimately connected with all the questions within the scope of its activities.

The PRESIDENT said that this was a very vast and complicated problem. It had been studied in several countries. It had also been studied in the Secretariat. He had often discussed it with the Medical Director and there was a large quantity of documents in the Section. He did not propose to open a full discussion on the question immediately, but merely to submit the matter to the Secretariat with instructions to proceed to an enquiry, submit a report, and perhaps make proposals.

Professor OTTOLENGHI warmly associated himself with the proposal of Professor Léon Bernard. He and his colleague had already discussed two years ago the interest attaching to the study of the problem of nutrition. Though the question could not be completely examined, there were many aspects of it concerning which investigations could be usefully begun, for they were of international importance. He had already mentioned several of them. For example, certain countries possessed incomplete legislation or official procedure for the sanitary control of foodstuffs, which meant that such foodstuffs as were refused by towns with better developed sanitary inspection were introduced into and consumed by small and therefore less supervised centres. It would be very useful if the Committee could get these countries to prepare suitable legislation to safeguard health. There was also the question of vitamins, the importance of which could be estimated from Professor Ottolenghi's standpoint. Take, for instance, a very valuable food for children, of a high prophylactic value, which came within the scope of the Committee's activities — cod-liver oil. This product

was not always of the same value in so far as the number of vitamins it contained were concerned. There were very dangerous counterfeit preparations. Individual research work, only in certain countries or certain laboratories, had been carried out in regard to this matter ; and it would be highly desirable if all countries could benefit from the methods already known to determine the anti-rachitic value of samples of cod-liver oil. Should the Health Section prepare a programme for preliminary investigation, such a programme might afford an opportunity of finding subjects easier to deal with, regarding which important and practical results might be achieved of interest to the health administrations of all countries.

M. VELGHE noted with satisfaction that the proposal of Professor Léon Bernard had been worded with the greatest prudence. By the terms of the Rules of Procedure, a request for a matter to be placed on the agenda necessitated a discussion. Nevertheless, he was willing to agree to the President's proposal that the discussion be postponed to another session. He therefore reserved his right to express his own views later. Nevertheless, he wished immediately to make reservations on that part of the remarks of Professor Ottolenghi dealing with the control of foodstuffs. If a discussion was to take place on that point immediately, he would have to express his formal opposition to raising that aspect of the question. Only a confused discussion would result, which would not afford sufficient direction for the Health Section.

Sir George BUCHANAN supported the views of M. Velghe. The subject was of great importance and it might more profitably be considered at a later session after the members of the Committee had been able to reflect on the subject and discuss it in their own countries.

The MEDICAL DIRECTOR said he understood that the question was being placed on the agenda of the next session. Consequently, he would prepare a memorandum to be distributed to the members of the Committee one month before that session.

Professor Ricardo JORGE said that, with Professor Ottolenghi and Sir George Buchanan, he only accepted the proposal of Professor Léon Bernard with express reservations. In his view, the problem of nutrition should be a permanent subject of investigation by the Committee. He preferred, however, that certain foodstuffs of vital importance should be dealt with first — for example, milk, bread and meat. After limited work upon these subjects had been done, it might be possible to widen the scope of the enquiry. Such a procedure would be more practicable, logical and lead to better results, for, faced with the problem in its present form, the Committee might find itself wandering in a maze from which he did not, at the moment, see any outlet.

Professor Léon BERNARD noted that the proposal of the President was entirely in agreement with his own. He was perfectly well aware of the size and complexity of the problem. The observations made by Professor Ricardo Jorge showed that a certain degree of misunderstanding of his intentions existed. He thanked his colleagues for the way in which they had received his request, and thought that the Health Committee would not regret having placed upon its agenda a question so closely bearing upon its main activities.

400. Report of the Chairman of the Cancer Commission (see Report to the Council on the Thirteenth Session of the Health Committee, document C.555.M.175,1928.III).

Sir George BUCHANAN reminded the Committee that at its last session there had been a discussion of the programme of the Cancer Commission. The main lines of the activities of that Commission had been reviewed in considerable detail, and directions had been laid down as to the objects of the enquiry and the subjects on which it seemed desirable to concentrate.

That review had taken place only six months ago, and it was unnecessary to discuss the whole question again in detail. The Cancer Commission would meet on the following day to consider the progress which had been made in various directions, and it would present a report in due course.

The document C.H.744 was merely a note which, with the approval of his colleagues, he had prepared for the information of the Health Committee, to indicate that progress was being achieved. A good deal of work had been done, mainly by experts outside the Commission. The results of this work were gratifying, as the Commission, in dealing with the subject of radiology, was breaking new ground. The Commission had asked various clinics to assist them with their knowledge and skill, and the clinics, far from resenting that invitation, had very readily responded.

He would like to refer in particular to the assistance rendered by the radiological institutes in Paris, Stockholm and Munich. The Commission hoped to be able to present at the next session of the Committee a comparative review of the work done at the three institutes, with a clear exposition of the methods followed and the results achieved. The institutes were pursuing different methods, and each of them was now for the first time being made fully acquainted with the work which was being done by the other two.

An enquiry had also been started into occupational cancer. It was too early to point to definite results, but he would emphasise that the enquiry was being kept within reasonable limits. No attempt was being made to cover the whole field or deal with all occupations, but merely to examine one or two definite problems, such as the incidence of cancer in the workers in the cobalt-mines in Schneeberg.

The Cancer Commission was generally following the directions which it had received from the Health Committee during its last session. It had given some attention to the question, which had been discussed by the Health Committee at its last session, as to how far it might be able to encourage an enquiry into the relation of cancer to constitution. This matter was still under consideration.

Dr. Alice HAMILTON said that the danger incurred from radium was one aspect of the problem of occupational cancer. She would shortly be able to place at the disposal of the Committee some interesting facts derived from autopsies and clinical histories relating to some twenty cases of occupational diseases due to radium, in some of which bone sarcoma had appeared. These cases had occurred among the workers who applied luminous paint to the dials of watches. The report should be ready by the spring of 1929. Its conclusions would apply generally to the use of radium in radiotherapy, both in respect of doctors and patients.

Professor Léon BERNARD, as a member of the Cancer Commission, wished to thank Sir George Buchanan, Chairman of that Commission, for the efforts he had made to give a fresh impetus to its work.

Dr. LUTRARIO thanked Sir George Buchanan for his allusion to the proposal of the Italian group regarding the problem of cancer and constitution. That was a subject which had now entered into the big field of science.

He noted that the question would be taken up at the forthcoming meeting of the Cancer Commission.

401. **Report of the Commission on Smallpox and Vaccination** (see Report to the Council on the Thirteenth Session of the Health Committee, document C.555.M.175.1928.III, page 18).

Professor Ricardo JORGE made a number of comments on the report on the session held at Geneva from August 22nd to 25th, 1928, by the Smallpox and Vaccination Commission (document C.H.739). He laid particular emphasis on the very important work done by the Commission. First there was the volume which had just been published by the British Government, and which contained the report of two Sub-Committees. That was a work embodying many documents, and which would certainly not be forgotten. Sir George Buchanan should be thanked for his share in the work, for he had been one of the members of the first Commission. He also thanked Dr. Jitta, who had submitted the detailed results of the investigations made in the Netherlands. Professor Groth had submitted a memorandum on the replies of twenty-nine institutes to the questionnaire concerning the preparation and preservation of vaccine lymph. Finally, a very interesting collection of documents had been submitted by the Secretariat.

As was to be expected, the Commission had received fresh data during its meeting. It could obviously still not take a decision on the question of post-vaccinal encephalitis. Nevertheless, it could no longer be said that the mystery of this phenomenon was complete. There were already definite data and results in the triple ætiological, histological and experimental field.

Professor Ricardo Jorge finally read the conclusions adopted by the Commission.

Dr. CARRIÈRE wished to draw attention to the conclusion in which the Commission said that nothing in the facts noted should militate against anti-smallpox vaccination and that vaccination ought to be carried out in the first year of existence. From the practical point of view, that was the main result of this last Conference which interested the administrations.

Dr. JITTA did not wish to enter into details with regard to the investigations carried out in the Netherlands nor the considerations put forward by Dr. Carrière. In the present circumstances, it had been impossible to maintain the system of compulsory vaccination in the Netherlands. He was sure, however, that, if an outbreak of smallpox occurred, the population would certainly be vaccinated. Post-vaccinal encephalitis still unhappily occurred in the Netherlands. The number of cases did not increase, but remained stationary. A comparative table of statistics covering the first six months of 1927 and the first six months of 1928 had been drawn up, though it had been difficult to do so, for, although the number of injections distributed was known, the number of those used was not known. In 1927, about 65,000 cases of vaccination had occurred, which was a fairly small proportion compared with other years, and there had been 35 cases of encephalitis, with 10 deaths. In the first six months of 1928, 28,000 vaccinations had been carried out. This was an important figure in view of the fact that vaccination was no longer compulsory. There had been 10 cases of encephalitis, with 4 deaths. The proportion therefore remained unchanged.

Although the conclusion had been reached in the Netherlands that the form of the virus had nothing to do with cases of encephalitis, a trial had been made of virus coming from other than Dutch sources. It had been procured from countries where no cases of encephalitis had been discovered, and those countries had been asked to continue to use the same vaccine during the period when experiments were being made with it in the Netherlands. No cases of encephalitis had occurred in the country in question, but two had been observed in the Netherlands. To justify the conclusion that there was a local source of infection peculiar to the Netherlands, further experiments would be necessary.

Sir George BUCHANAN thanked Professor Ricardo Jorge for his excellent summary of the position. He understood that Professor Jorge intended to define the action which the Commission on Vaccination was to take in a number of final paragraphs which would come up for discussion later on.

There was one point to which he would refer. The whole question of post-vaccinal encephalitis had been debated both in the Health Committee and by the Office international d'Hygiène publique. The debates in Paris had been of a general character, whereas the enquiries in Geneva had been intensive. The way in which the subjects had been dealt with by the two institutions seemed to him to be an excellent example of useful and appropriate collaboration between the two bodies.

The discussion of the last report of the Vaccination Commission by the Office international d'Hygiène publique had perhaps been somewhat irregular, since the report had not at the time been considered by the Health Committee. The Health Section of the Secretariat, however, had thought the matter to be of sufficient importance to justify the publication of the report in the medical Press before it had come before the Health Committee. The report had therefore become a public document, and its discussion in Paris might on that ground be justified.

He had been struck during the Paris discussions by the continued scepticism of countries which had not yet discovered any cases of post-vaccinal encephalitis. Professor Cantacuzène had even represented that, in countries where vaccination was correctly practised, such cases were not to be found. He would draw particular attention in this connection to the recommendations contained in paragraph 16 of the report. If it were true that post-vaccinal encephalitis attacked especially children of school age, then the negative results reported in certain countries did not prove very much, because in those countries the practice might be to vaccinate all children in the first year of life. If, however, a country could be found in which it was the practice to vaccinate children for the first time when they had reached school age, and in which no cases of post-vaccinal encephalitis could be found, there would in that case be established a negative point of some value. He would ask Professor Ricardo Jorge whether he would include in his suggestions for further action a request to the effect that certain countries should be asked to make an enquiry in accordance with the recommendations of paragraph 16 in cases where it was the practice to vaccinate children of school age.

The MEDICAL DIRECTOR wished to make observations on three points :

1. The question of the publication in the medical Press of a summary of the conclusions and work of the Commission before its report had been submitted to the Health Committee had already been discussed. The Health Section had made an experiment during the last six months in making known to the medical Press the results of the work of the Health Organisation. It would be for the Committee to take a decision on the point. The procedure was governed by Article 10 of the Rules of Procedure, which the Medical Director read. It was obvious that no action should be taken on a decision or a proposal of a Commission until that decision or proposal had been approved by the Committee. Ought Article 10 to be strictly applied and should it be maintained that documents should remain confidential until the Committee had discussed them? It seemed to him that there was good reason to communicate such documents to the Press in a form previously sanctioned by the Chairman of the Commission concerned. On the other hand, he did not think that resolutions or proposals should be the subject of discussion in any organisation before they had been discussed in the Committee, for, though the responsibility of the Committee was not involved in the present case, the position might be different in other cases. He would suggest that the proposals in question should be published in the medical Press but not discussed publicly or formally until they had been discussed by the Health Committee, to which they were referred.

2. What were the instructions which the Health Section should follow in regard to the conduct of the enquiry? The enquiry had occupied much time in Geneva, as well as in Paris, and would still be frequently discussed. Nevertheless, it was customary in the Health Organisation to continue an enquiry to its logical conclusion and, if necessary, to break it off in order to discover whither it was leading.

Paragraph 16 of the report of the Commission contained very interesting instructions, to which Sir George had referred. The Commission had said :

“ It thought that, from the international point of view, it was of the greatest importance to conduct fresh enquiries into the question of post-vaccinal encephalitis, to be carried out in countries other than the Netherlands, England and Wales.”

Some enquiries had already been made. It seemed that, so far as Europe was concerned, they could only be carried out in the three countries where vaccination took place at school age, that was to say, in the three Scandinavian countries. As Sir George had pointed out, the enquiry ought to be carried out by the national administrations, but the secretariat of the Commission could be placed at their disposal. He would add that their President could perhaps give an account of the results of the enquiry conducted by the Danish administration.

3. The Sub-Commission dealing with the preparation and preservation of lymph had confined itself to making recommendations of a general kind. The Health Section did not clearly know what action could be taken upon them. In this matter, too, more precision was necessary. The only recommendation of a fairly concrete kind from the Health Section's point of view was that on page 8 of the report, at the end of paragraph (a), concerning diluted lymph. The Sub-Commission said :

“ The investigation of this question should be left to the discretion of the institutes and the guiding principles briefly outlined above made it unnecessary to draw up a

special plan of study. It would be desirable that any results obtained should be reported to the Health Section of the League of Nations for the information of the Smallpox and Vaccination Commission."

The Health Section would have, therefore, to play a passive part and to await communications from the institutes in question. So far as the methods of work were concerned, he thought that the Health Committee, at one of its next sessions, should come to a decision on the final steps to be taken as the result of the work of the Commission.

The PRESIDENT, with regard to the publication of proposals in the medical Press, said that, when a Sub-Committee itself desired that its resolutions or proposals should be published, it should be allowed to publish them. These proposals or resolutions ought, in the first place, however, to be communicated to all the members of the Health Committee. If there was any doubt on the matter, the question should be submitted to the Bureau of the Health Committee.

This proposal was adopted.

In regard to investigations into post-vaccinal encephalitis in countries where vaccination took place at the school age, the PRESIDENT said that in Denmark a committee was collecting information from all the physicians in the country. He thought that, in a few months, interesting material would be available and that there were few countries in which more definite information could be obtained. The help of Dr. Mackenzie would be of great value to the Danish Administration.

Dr. ABT informed the Committee that two cases of mild encephalitis had recently been discovered in Sweden and that the Government of that country had instructed Dr. Kling to make an enquiry into the matter. Dr. Abt wished to bring this fact to the notice of the Committee, as it met the question raised by Sir George Buchanan in regard to paragraph 16.

Dr. LUTRARIO said that, in Italy, although the most serious attention had been paid to the question by the General Health Administration, no case of post-vaccinal encephalitis had been notified. Vaccination in that country was carried out solely by means of animal lymph. It was compulsory and was in two forms: (1) ordinary vaccination, which occurred three times — in the second six months of life, at school age and when recruits were called to the colours; (2) extraordinary vaccination, which took place at any moment when there was a danger of smallpox being imported.

Dr. HAMEL said that, in Germany, vaccinations and revaccinations had been performed last spring in the usual way. Only a few isolated cases of post-vaccinal encephalitis had occurred. In all, eight doubtful cases had been reported, of which four had been found in Saxony; two of the latter had been confirmed subsequently. All these cases had occurred at considerable distances from the Dutch frontier.

FIFTH MEETING.

Held on Tuesday, October 30th, 1928, at 10 a.m.

President: Dr. Th. MADSEN.

402. Report of the President on the Proposals of the Meeting of Experts on Vaccination by means of BCG (see Report to Council, document C.555.M.175.1928.III, page 28).

The report of the President on the results of the meeting was read (document C.H.764).

The PRESIDENT added that all the members of the Committee would unanimously desire to thank the Director and Deputy-Director of the Pasteur Institute for the hospitality which had been accorded to the Meeting.

He would make a few observations on that Meeting and give further details if his colleagues so desired. The Committee of Bacteriologists had unanimously been of opinion that, up to the present, all experiments with BCG proved, so far as animals were concerned, that the injection of BCG did not result in evolutionary tuberculosis, but merely provoked lesions which disappeared without leaving any permanent trace. It was then proposed to make a series of experiments on various points in order to discover, first, whether it would not be possible to increase the virulence of the culture and, secondly, whether BCG was a fixed virus as certain experts had said that BCG might perhaps be attenuated up to a certain point so that it would not provoke any lesion and that in such a case immunity would not be conferred. Considerable discussion had taken place concerning the experiments of M. Petroff, from which it appeared that BCG might be dissociated into two different cultures, one virulent and the other non-virulent. Endeavours by Kraus and Tschecknovitzer to repeat these experiments had failed. According to the opinion of the bacteriologists present, there had been, in the case of M. Petroff's experiments, a mixture of other cultures of human tuberculosis. However that might be, it was thought desirable to make an attempt to repeat these experiments.

He would like to emphasise the prominent part taken in the experiments by Professor Cantacuzène, who had been engaged in them for two years in Roumania and had collected a considerable amount of information on the subject. Professor Cantacuzène had never found that BCG was virulent, although his experiments had been continued for a long period.

The proposals of the Committee of the Veterinary Experts were extremely precise. Their experiments were calculated greatly to assist the researches which were being made into the harmlessness of the vaccine and the immunity conferred.

He invited Professor Léon Bernard to summarise the conclusions of the Committee of Clinicians.

Professor Léon BERNARD explained that the work of the Committee of Clinicians had been divided into two parts. First, the Committee had examined the documents collected by Professor Calmette and other experts. It had not wished to pronounce a final judgment on these documents, but had gained the impression from the documents as a whole that the harmlessness of the vaccine was proved. Tens of thousands of children had been vaccinated throughout the world and more than 100,000 children in France. If any danger had attached to the vaccination, it would have become apparent.

Secondly, it was not possible to form an opinion as to the effectiveness of vaccines until experiments had been made over a greater number of years than was the case with those which were at present proceeding. For that reason, the Committee had adopted a prudent formula and had referred to a "certain degree of immunity". That formula was based on a number of definite publications, particularly those covering the Netherlands. He would emphasise that, for the moment, it was possible only to form an impression, as there was a point which still remained obscure: namely, the statistics of the mortality among unvaccinated children in contact with tubercular surroundings, which very seriously diverged.

The second part of the work of the Committee merited special attention. The Committee had framed a programme providing for further researches which would not be open to the criticisms which had been formulated, particularly by Dr. Greenwood. The best method would be to ask the statisticians themselves to indicate the method to be followed in future. Such was the object of the proposal that the Commission of Expert Statisticians should be consulted. In order, however, to facilitate the task of the statisticians who were not clinicians, the Committee had thought it advisable to draw up a form to serve as a model for observations and a form for autopsies on deceased children. These two documents and the method to be established for collecting and tabulating results would be referred to the Commission of Expert Statisticians if the Health Committee so decided. Once the documentary basis had been fixed in that way, the Committee would be asked to invite a certain number of dispensaries, clinics, etc., to collect the necessary documents.

Professor Léon Bernard then read the note summarising the proposals of the Committee of Clinicians (document C.H.767), laying particular emphasis on the last paragraph referring to the utility of clinical researches in Great Britain and the United States. The Committee of Clinicians had not thought it necessary itself to name the bodies which would be entrusted with the researches.

The PRESIDENT said he was sure that all his colleagues would think it undesirable to open a discussion on the value of BCG, and that they would agree to examine only the proposals which had been submitted. Similarly, with regard to the programme of work drawn up by the bacteriologists, there was no need for the Committee to take a decision as to the various laboratories where it would be desirable for the experiments to be continued, as the laboratories had received the proposals, which they would follow up or not, according to their convenience.

Sir George BUCHANAN said that, as there had not been any British participants in the Paris Conference, it might perhaps be useful to the Committee if he would say a few words as to the point of view which prevailed in his own country. Great Britain had numerous organisations dealing with the problem of tuberculosis, and could not, therefore, remain indifferent to the question of the efficacy of BCG. Experimental work had been in progress for some time under the direction of the Ministry of Health and the Medical Research Council, and in this particular field the only sure method of obtaining British collaboration was through the Government Departments concerned, rather than by independent application to individual experts.

The experimental work in Great Britain had not yet demonstrated that the use of this vaccine was entirely without risk. It was hoped that the necessary experiments would soon be completed, so that a definite opinion could be formed. Whilst these remained unfinished, the British authorities felt that they could not usefully participate in the Paris Meeting.

It might be urged that the risks involved in the use of BCG must be so infinitesimal in relation to the proved benefits that this vaccine ought to be used at once without waiting for further experimental work. Existing statistics, however, were ambiguous, and he noted that the resolutions of the Conference confirmed the view that further work would have to be done. Work in England would proceed parallel with that undertaken under the auspices of the Health Organisation, and the results obtained would, of course, be interchangeable.

The President had asked the Committee to approve the proposals of the Paris Meeting and the future programme of work. He would, as a member of the Health Committee, like to have one or two points elucidated. He understood that information was to be collected by selected institutions and that the results were to be sent to the Health Section of the Secretariat for analysis and submission to a further Conference. It should be clearly understood that these data were being assembled for the Conference and at the demand of the Paris

Meeting. The collection of the information did not imply that the Health Section or the Health Committee was undertaking to issue an opinion in regard to the value of BCG, and it was important that this procedure should not give the impression that the scientific world was awaiting the opinion of the League of Nations on the merits of that preparation. He understood that the information, when obtained, would be forwarded to the experts, and that the Health Committee would remain free to take such subsequent action as might be called for.

It was further proposed to consult the Commission of Expert Statisticians. He had examined the form which had been prepared, and believed that it was an excellent document. He could not quite see what advantage would be gained by submitting it to a body of statisticians and requesting that body for an opinion. The statisticians would probably enquire why they had not been consulted before the form had been drafted. The statisticians had not been a party to the discussions, and were really not in a position to give their views with a full knowledge of the facts. It was not a good practice to regard medical statisticians as merely mathematical experts who should be asked to assess results. They should be regarded as an important factor in the general system of medical investigation and associated from the beginning with the work that was being undertaken.

The statisticians, on being confronted with the present document, would wish to know what value was attached by the clinicians to the various headings, and, in the absence of any information on that subject, might be reluctant or unable to express an opinion.

He would point out, moreover, that the Health Committee had no standing competent body of statisticians to advise it on such points. The Commission of Expert Statisticians had been appointed, but its duties had been strictly limited to the special task with which it had been entrusted — namely, the preparation of the International List of Causes of Death. That Commission could, of course, be asked to take up the present question, but it had not been appointed as a standing Commission of statistical experts. He would himself be inclined to omit the consultation of the statisticians, and to make use of the form which had been prepared without further advice. If, however, the Health Committee thought that it was bound to consult the statisticians, he would suggest that the report of the Conference should be submitted to them, and that they should be asked if they had any observations to offer. They would, in that case, be left free to state, if they so desired, that in the circumstances they did not feel called upon to express their views.

He was inclined to doubt whether any official communication to the British authorities at the present moment would contribute to advance matters in his country. If any general request were made, beyond the particular anti-tuberculosis centres mentioned in the report, for new investigations into the value of BCG, care should be taken to explain that this work was in addition to, and not in replacement of, the study which had been initiated earlier in the year by the Committee of the Office international d'Hygiène publique. The Paris Office had already invited various countries to work out the normal proportion of tuberculous children in houses in which cases of open tuberculosis resided, and work in this direction was already in hand in several countries.

The MEDICAL DIRECTOR said he would at once give Sir George Buchanan the necessary explanations.

It was understood that the Health Committee was in no way bound in respect of declaring an opinion as to the value of BCG. The note of the President was very explicit on that subject. The President was merely asking the Committee to approve the proposals of the Meeting as to methods of future study, but not to discuss the opinions of the experts, so that the question remained intact in so far as the Health Committee was concerned.

Sir George Buchanan had argued that the procedure followed in respect of the statisticians was not very correct, as they had not been invited to the Meeting and were only being asked for their views after the work had been done. The Meeting, however, had consisted of bacteriological, veterinary and clinical experts who had had personal experience in the use of BCG. One or two of the statisticians had made some very interesting studies of the documents in question, but it had not been possible to appoint a group of statisticians who had studied those documents. The Meeting had not decided to submit to the statisticians for their opinion the form and autopsy schedule, but was asking them to "indicate the best methods of collecting and analysing documents on the morbidity and mortality among children in early infancy, both among the vaccinated and unvaccinated children" (document C.H.745, No. 4, page 5). The Meeting had made this proposal for a simple reason. There existed a whole class of statistical questions of a general character connected with the study of clinical statistics, as, for example, the question of deciding the general infantile mortality in countries where clinical observations were collected and how that mortality should be analysed, by month and week, etc. On all such questions the opinion of the statisticians was desirable, but it was better to ask for their advice on definite points than to invite them to participate in a discussion in which the majority of them would have been ill at ease.

Sir George Buchanan had said that the expert statisticians of the Health Committee had been entrusted with a task different from that which was now proposed. It was, however, for the Health Committee to amend its instructions as it desired. The experts could, of course, refuse to accept amended instructions, but it was extremely doubtful whether they would do so, particularly as their Chairman was the father of contemporary medical statistics, Dr. Westergaard, and as it included the heads of the official statistical services of the great countries of the world. Moreover, the Commission of Expert Statisticians might co-opt or associate with its work any other statisticians whose advice it might consider to be desirable.

A very important point had been raised by Sir George Buchanan, namely, the fact that the present investigations were being undertaken with a view to a future meeting, which

would examine the result of the enquiries and submit a new report. Such was the case, but it must be added that this new meeting would not meet before the Health Committee had studied the question and decided that it should be convened. Professor Neufeld, at the end of the Meeting, had offered the hospitality of the Robert Koch Institute in Berlin to the second Meeting if it should take place and that offer had been accepted. It was understood that the President of the Committee and the Health Section would keep the members of the Committee informed of the development of the enquiries in question.

Finally, Sir George Buchanan had asked, in the event of an official letter being addressed to the British Ministry of Health, that the position should be very clearly explained. The Section would forward all the documents of the Meeting and would prepare the letter to which Sir George Buchanan had referred in collaboration with Sir George Buchanan so that there might be no misunderstanding.

Professor OTTOLENGHI said he was quite ready to accept the proposals of the Committee of Clinicians, which were in accord with his own personal experience. He was glad to see the Committee undertaking a task which might be of very great importance.

He noted that the Health Committee was asked to follow a different procedure in regard to the proposals of the three Committees of the Paris Meeting. The Health Committee would remain passive in respect of the proposals of the bacteriologists and the veterinary experts, but would, on the contrary, adopt a more active attitude in respect of the proposals of the clinicians. He did not know whether this was a very happy distinction, and wondered whether it would not be desirable for the Committee to express a formal wish that effect should be given to the proposals of the two other Committees, even though it did not itself wish to indicate the institutes which should undertake the proposed enquiries.

He approved the proposals of the clinicians because they came from Professor Léon Bernard, who was both a clinician and an eminent health expert. He would, however, lay special stress on the fact that the studies to be undertaken did not merely come within the scope of clinicians, but also very largely within that of health experts, as vaccination against tuberculosis was a problem which very closely concerned the question of social hygiene.

Referring to the proposed form which had been submitted to the Committee, he also thought that the effects of the vaccination should not only be followed from the clinical point of view but also from the social point of view, and in particular with regard to the conditions of environment which might bear upon them. It would perhaps be useful for the Committee to express its feeling on the subject. In Annex 3, dealing with the draft form for the observation of living children, there was a reference to a "tubercular environment". Was it really necessary to add this restrictive reference? Personally, he had always felt it necessary to study the effects of vaccination under all the conditions of ordinary practice, in specially infected environments — *e.g.* in all tubercular families — as well as immune environments (family), *i.e.*, belonging to populations which were always subject to tuberculosis and in which chances of infection, though rarer, could not fail to exist. He would ask, then, for the suppression of the reference to a tubercular environment.

Sir George Buchanan had submitted observations on the form which appeared to be justified. Doubtless it had not been desirable to invite the expert statisticians to the preliminary discussions on the drafting of the form. It would, on the contrary, be useful that statisticians, health experts and clinicians should meet in order to study, and, if necessary, modify, the form, so that it might serve the best purposes.

In regard to the institutions which had been invited, would it not be possible for the President of the Health Committee and the Chairman of the Committee of Clinicians to consider whether it would not be desirable to apply to other institutions, in order to associate the dispensaries with the clinics, as the dispensaries often played a part of the first importance in view of their permanent and close contact with the population, which was not always the case with children's clinics? This point might perhaps be more precisely defined in the invitations.

He desired that the Opera Nazionale per la Protezione della Maternità e dell' Infanzia of Rome would accept the invitation addressed to it. That institution, thanks to its organisation and object, as outlined in the law which created it, was in the best position to foster studies on the value of antituberculosis vaccination, in close contact with clinics and dispensaries.

Reference was made concerning Italy to the Vaccine Institute at Milan (Annex 1). He would also draw attention to the important experiments which had been made at Bologna since 1925. Reference had been made at the Paris Meeting to these experiments, in the report of M. Ronzoni, but those references had perhaps escaped the notice of the drafter of that annex, and he would ask that account should be taken of them.

Finally, in the last paragraph of the report of the Meeting, on page 6, there was a reference to the Committee set up for the investigation of the problem by the Health Section of the League of Nations. Was that the Committee which had met in Paris and which thus assumed a permanent character, or was it a committee which would subsequently be nominated?

Professor Léon BERNARD thought that the reply of the Medical Director would meet the views of Sir George Buchanan.

He was under the impression that Professor Ottolenghi had misunderstood the reference to a tubercular environment. Apart from the question whether the observations of his colleague did not deal with the substance of the question, he would merely note that Professor Ottolenghi went rather further than the Committee of Clinicians. That Committee had merely wished to define the framework within which further experiments would be

made. If one wished to form an opinion on the subject reasonably quickly, it was essential that the vaccinated children should be exposed to tubercular infection in an environment which might easily be observed and not exposed to an infection more or less obscure. The Committee of Clinicians had intended to refer to an experiment which would be undertaken under certain conditions, namely, those which prevailed in a tubercular family.

As to the collaboration with statisticians, he would say that, as the statisticians had not been present at the Meeting, it was necessary for the clinicians, who must at the same time be health experts in problems attaching to infancy, first to indicate the points on which information was requested with a view to obtaining useful statistics, and, secondly, to enquire whether there were not other points which might seem to be interesting but which had escaped the notice of the clinicians. How was this future collaboration of the statisticians to be established? That was a question which concerned the Health Section.

The question of children's clinics was of the utmost importance. It was clearly necessary to apply to a clinic which was in touch with maternity hospitals, dispensaries, etc. The Committee of Clinicians had not referred separately to dispensaries, because dispensaries dealt with many matters besides technical considerations, so that there was a risk of the work not being as well done as was necessary and of the dispensaries not having at their disposal all the necessary resources. He was sure that Professor Ottolenghi was in agreement with him. It would later be necessary for the various points to be cleared up in conversations with the persons concerned as to the way in which the contemplated researches were understood.

The PRESIDENT, referring to the last observation of Professor Ottolenghi, said that the reference at the end of document C.H.745 (4), was a drafting mistake and should be suppressed.

Sir George BUCHANAN said he was grateful to his colleagues and to the Medical Director for clearing up a point of some importance. It was essential not to give the impression that the Health Organisation was conducting an enquiry with a view to giving a definite opinion on the value of BCG. The Medical Director had said that the Health Committee must also have a free hand in regard to the summoning of a further meeting. That, however, might be a rather difficult matter. It was impossible to say at the moment when or how it might be necessary to convene it, but the present procedure was based on the assumption that it would meet, and that information was being prepared for the benefit of such a meeting.

The MEDICAL DIRECTOR agreed.

Sir George BUCHANAN said he did not oppose the reference of the form attached to the report of the Paris Meeting to the Commission of Expert Statisticians in order to see what the latter was prepared to do about it. He still, however, maintained his attitude on the general question. Medical statisticians should not be regarded as persons outside the team work of the medical profession. In the discussion of medical problems such as the present one, the medical statisticians should be brought in at an early stage.

He would be happy to assist the Medical Director in obtaining any information from Great Britain. All parties alike were interested in ascertaining the truth and removing all sources of error.

Professor Léon BERNARD said he would like to remove a misunderstanding in the mind of Sir George Buchanan, so that there might be complete agreement on the question of the collaboration of the statisticians. There had never been any question of submitting a report to the statisticians. The clinicians, however, having to study statistically a collection of clinical documents, and desiring to avoid in future any criticisms of their work on the part of the statisticians, had decided to submit to them, not the final, but the preliminary work. In order to facilitate the task of the statisticians, the clinicians had established a preliminary draft, consisting of a form and an autopsy schedule, which would be communicated to the statisticians before being used. That procedure proved that he was in complete agreement with Sir George Buchanan on the nature of the collaboration which it was necessary to establish with the statisticians.

Finally, he thanked Sir George Buchanan for the assistance offered by Great Britain, which had been of great value, since it was essential that Great Britain should not remain aloof from the investigations in progress. He would specially emphasise the value of the collaboration of Sir Robert Philip.

M. VELGHE pointed out that the part played by the Health Committee had been very clearly defined during the present discussion. It was not for the Committee to endorse the conclusions of the Paris Meeting, but only to enable a more extensive enquiry to take place in accordance with the proposals of the Committee of Clinicians. He quite understood the caution with which his various colleagues had expressed their views, but an unfortunate impression might result if the conclusions of the Committee of Clinicians were compared with the conclusions of the Committee of Veterinary Experts. The Committee of Clinicians stated: "As regards the premunising properties of BCG in respect of tuberculosis, vaccination by BCG confers a *certain* degree of immunity". The veterinary experts stated: "The same experimental facts and the observations noted in the use of BCG among the bovines show *quite certainly* that this culture has premunising qualities against tuberculosis infection, whether experimental or natural. These recognised premunising qualities *justify and encourage* the extension of experiments with BCG as a preventive measure against bovine tuberculosis." He would have liked some authoritative statement during the discussion *somewhat enlarging*

the conclusions of the clinicians, or at least indicating that the conclusions, so far as human beings were concerned, should not give rise to any feeling of hesitation, that great hopes might be entertained for the use of BCG, that it was desirable to continue the experiments and even to extend them. He did not think that such a statement would go beyond the prudence which was necessary, and he hoped that his impression was shared by all his colleagues.

The PRESIDENT, referring to the difference noted between the conclusions of the two Committees, reminded the Health Committee that the vaccination of bovines was effected in a different manner from human vaccination.

M. VELGHE said he quite realised the distinction. What he desired to know was whether it was at that moment too much to say that the Calmette-Guérin process, which had been tried for several years and whose immunising quality had been recognised at the Paris Meeting, justified hopes being entertained; that the experiments made on children should continue; and that it was even desirable to extend those experiments further than in the past.

The PRESIDENT thought it would be difficult for the Committee to say more than was actually said in the report of the meeting of Experts, in which every word had been carefully weighed, lest more or less should be said than the Experts wished.

Professor Léon BERNARD said he did not think that he had anything to add to what the President had said. He himself could not speak with the authority to which M. Velghe had alluded. Although personally he was convinced of the excellence of the Calmette method, he had thought, as Chairman of the Committee of Clinicians, that it would have been preferable not even to take up the question, but merely to draft a programme of research without pronouncing any opinion. Nevertheless, the Committee, out of respect for the work already done, had desired not to pass judgment, but to convey an impression, and it had been unable to find a better formula than that embodied in the phrase "a certain degree of immunity", which said neither too much nor too little. It had been easier for the Committee of Veterinary Experts to publish an opinion, because the bovines did not live as long as human beings, and the veterinary experts had therefore had more time to form an opinion. The expression used in the report showed that hopes might be entertained, and even went further. If, however, an attempt was made to use a more definite expression, there would be a risk of interminable discussions in the Health Committee, which would be still more difficult than those which had taken place in Paris. An attempt had been made to achieve unanimity at the Paris Meeting.

M. VELGHE said that the words of Professor Léon Bernard entirely met his views. He had feared that the comparison between the report of the three Committees would create an unfortunate impression and cause hesitation. The very prudent discussion which had just taken place might have resulted in increasing that feeling. None of his colleagues, however, had disputed the statements of Professor Léon Bernard, and those statements should be placed in the Minutes in order to remove an impression which was doubtless also shared by other members of the Committee.

The PRESIDENT emphasised the fact that Professor Léon Bernard had spoken personally and not as a member of the Committee.

Professor Léon BERNARD added that he had not even spoken as Chairman of the Committee of Clinicians.

The proposals of the Meeting of Experts on Vaccination by BCG were adopted.

403. **Report of the Commission on Opium** (see Report to Council, document C.555.M:175. 1928.III. page 31).

Dr. CARRIÈRE reminded the Committee that, last autumn, it had voted a resolution inviting the Office international d'Hygiène publique to consider whether dilaudide, a derivative of opium, and benzoylmorphine and esters of morphine in general, should not come under the Opium Convention. The Permanent Committee in Paris had forwarded the resolution to its Commission of Experts, which had replied in the affirmative. This opinion was adopted by the Permanent Committee and communicated to the Health Committee. The Opium Commission of the Health Committee had examined the report submitted to it, and had decided to recommend the Health Committee to accept the views of the Paris Committee, and therefore to inform the Council that the substance in question should come under the Opium Convention. He had prepared a draft resolution, which he would submit for the approval of the Committee, subject to formal amendments. He did not think it necessary to open a discussion on the subject, which had already been debated in Paris. He had previously explained the reasons for the present proposal.

The draft resolution of Dr. Carrière was adopted.

Dr. CARRIÈRE pointed out that there was also a legal question to be settled. The draft resolution referred to a group of products, namely, the esters of morphine, whereas Article 10 of the Opium Convention referred to a substance. A legal question therefore arose, which the competent organs of the League of Nations would have to settle, namely, whether the text of the Convention should be understood in the sense that it might apply only to a substance explicitly mentioned, in which case it would be necessary to set in motion the procedure for every substance that came upon the market, or, on the contrary, whether the text of the Convention might be interpreted in a wider sense.

There were a number of other secondary points which the Committee should consider connected with questions which had already been discussed.

In November 1927, the Committee had considered that two other substances, eucodal and dicodide, should come under the Convention. Certain persons had maintained that, in referring to these two products, no reference was intended to preparations which might contain eucodal and dicodide. The argument seemed to him to be specious, but, since it had been put forward, the question would have to be submitted for a preliminary opinion to the Permanent Committee of the Office international d'Hygiène publique. It had, moreover, been decided at Paris that, if questions of this kind had to be examined, the matter should be dealt with by means of correspondence, and without convening special meetings of the experts.

Next arose the question of the list, submitted at the last session of the Committee, of substances which, in execution of Article 8 of the Convention, were to be withdrawn from the scope of the Convention. The list had been referred to the Committee following certain proposals of the German Government.

Meanwhile, Sir George Buchanan, after having examined the list, had asked that only preparations should be retained concerning which reference was made to a Pharmacopœia or a definite formula given. The Opium Commission proposed to keep in the list only the substances in question, and to forward to the Office international, for more information, a list of the preparations in regard to which no definite opinion had been formed.

In connection with this matter, the question arose whether opium plaster should be withdrawn from the scope of the Convention. It seemed hardly possible to poison oneself by consuming this product. Nevertheless, the question had been raised, and would also be forwarded to the experts of the Permanent Committee of the Office international.

The same question had arisen in regard to Dover's Powder. It had been asked whether it would not be well to lay down that this powder should not be withdrawn from the scope of the Convention unless it contained at least 10 per cent of ipipca. The same procedure would be followed in dealing with this question.

Finally, the German Government had made a certain number of requests. Sterilised solutions of morphine, eucodal and dilaudide, as well as scopolamine and atropine, which contained a fairly considerable quantity of narcotics (2 per cent), should not come under the Convention, owing to the fact that they contained a product, such as scopolamine or atropine, which prevented any abusive consumption of the drug. That question also would be submitted to the Permanent Committee in Paris. There was also a product which was used extensively in India and in England, namely, chlorodyne, which had already given rise to long discussions and whose composition differed according to the various Pharmacopœias. It would be well to have an opinion on that substance. It had first been decided that the product should come under the Convention, but subsequently certain experts had stated that it contained Indian hemp, whereas other experts had denied the fact. There was finally the question of small preparations of cocaine and atropine which were used in eye affections. Their composition and, above all, the very slight amounts involved made it impossible for them to be used illicitly. As, however, they contained narcotics in quantities above the average defined in the Convention, the experts of the Permanent Committee in Paris would have to take a decision.

These various questions were questions of procedure, and the Health Committee was not called upon to formulate any definite opinion in regard to them. It had merely to authorise their examination by the experts of the Permanent Committee of the Office international d'Hygiène publique.

The MEDICAL DIRECTOR said that, though there was every reason not to hasten the procedure for the settlement of questions under Article 8, the position was different with regard to Article 10. It had recently happened that the Council, being unable to receive the views of the Committee sufficiently early, had decided, on the recommendation of the Advisory Opium Committee presided over by Dr. Carrière, to forward a recommendation to the Governments, reserving, however, the decision of the Health Committee. It would accordingly be necessary to accelerate the procedure in order to avoid such a position recurring. Dr. Carrière was not only the Chairman of the Opium Commission of the Health Committee and of the Advisory Committee on the Traffic in Opium, but the Chairman of the Opium Commission of the Office international d'Hygiène publique, and he participated also in the work of the Special Committee of Experts of the Permanent Committee of the Office international. He proposed to authorise the two Commissions — the Commissions of the Health Committee and of the Permanent Committee of the Office international — which consisted of virtually the same members, to take such action as might seem appropriate after consultation with the Chairman of the Health Committee and the Chairman of the Permanent Committee of the Office in the intervals between the sessions, so as to avoid the delay of six months which occurred under the present procedure.

Dr. CARRIÈRE said that the Permanent Committee in Paris had met in advance the recommendations of the Medical Director, and had decided to entrust its Opium Commission with full powers. In other words, the Opium Commission in Paris had full powers to settle a question after consultation with the President of the Permanent Committee without embarking upon the long process of discussion involved by the normal procedure. One step, therefore, had been taken. Would the Health Committee in its turn entrust its Opium Commission, which was only the Commission in Paris under another name, with the same full powers? He presented this request on behalf of his colleagues of the Opium Commission.

The PRESIDENT said that, if the proposed procedure were adopted, he would suggest that Dr. Hamel should be added to the Opium Commission.

The suggestions of the Medical Director and the President were adopted.

404. Report and Proposals of the Meeting of Experts on Syphilis and Cognate Subjects (see Report to Council, document C.555.M.145.1928.III, page 39).

The MEDICAL DIRECTOR reminded the Committee that he had already dealt with these investigations, first, in submitting his report on Latin America and, secondly, when he had given an account of the work of the various Commissions. The Committee, at its last session, had authorised its President to get into touch with experts on syphilis in order to study the possibilities of an enquiry into the value of the modern treatment of the disease. The experts in question were Colonel Harrison, Professor Jadassohn, Professor Rasch, Professor Queyrat and Dr. Stokes (see document C.H.742 (1)). These experts had recognised the great importance of a detailed study on the subject and had proposed two possible methods.

First, there might be a retrospective enquiry into cases already treated, limited to a period of two years (1926-27), so that there might not be an excessive mass of clinical documents to consult.

The second method would consist in adopting a formula for clinical observations and a plan of enquiry to be pursued over a series of years. That method would clearly give more interesting results, but the Committee would not be informed of them for four or five years. The object of the enquiry, however, was to examine the possibility of immediately deriving conclusions from the cases treated.

For that reason, the experts had recommended the first method. In order that the indications collected might have real value, it would be necessary to examine some 65,000 cases. The experts had estimated that this procedure would not give rise to very serious difficulties. They had examined the method in considerable detail for four months, and the Health Section could put at the disposal of the members of the Committee a very complete file.

In what would the enquiry consist? The problem was to transcribe, in accordance with the records of the hospitals, the results obtained on the basis of a model form established by the experts. That was a considerable work. That implied a fairly considerable work of organisation, which the experts were prepared to undertake if the Committee agreed to the proposed enquiry. The enquiry seemed bound to result in very interesting observations, which would come before the Committee perhaps at its next session.

The Health Section must, however, make a reservation. It might happen that the examination of the 65,000 cases, while yielding clear indications, did not indicate that the enquiry might usefully be continued over a series of years. If the Committee desired at once to approve the enquiry, it would merely be the first retrospective one. It would be premature at that moment to approve an enquiry which might extend over a number of years and which could not yet be precisely defined. He thought that the Committee might, without misgiving, adopt the proposals of the experts.

The PRESIDENT added that, whenever he had discussed the matter with the experts, they had at once stated that this was an enquiry of the greatest importance and, according to Dr. Queyrat, an indispensable enquiry. There was a general impression that the classical treatment which had given excellent results when supervised by experts had been abandoned, with the result that many cases of syphilis were not properly treated. It therefore seemed useful clearly to lay down principles for the best possible treatment at the present moment.

A Danish clinic was among the establishments consulted. In Denmark, very exceptional conditions existed. A system had been set up based on an anonymous card index for every case, which enabled the history of the patient to be closely followed.

The proposals of the Medical Director were adopted.

SIXTH MEETING.

Held on Tuesday, October 30th, 1928, at 3 p.m.

President: Dr. Th. MADSEN.

405. The Epidemic of Dengue in Greece : Report of Dr. Mackenzie.

In the first place, Dr. MACKENZIE emphasised the difficulty which he had experienced in obtaining accurate information with regard to the epidemic. On his arrival in Athens, he found that the town was in a panic, 80 per cent of the population being ill or having recently suffered from dengue. The medical and administrative organisations were crippled, the staffs at the hospitals were overworked, and it had been impossible to keep any records.

It was also difficult to ascertain the facts, as dengue was not a notifiable disease and as it presented clinical features which varied considerably. The position was complicated by the fact that many of the cases of illness were due to malaria and to three-day fever. For practical purposes it was decided, therefore, to accept as cases of dengue only patients suffering from a rash with fever which lasted for a minimum of five days.

The weather conditions in Greece in the summer of 1928 were exceptional. The summer months had been unusually dry, and there had been no rainfall since March. These conditions apparently led to a biological change in the insect population resulting in a considerably greater number of *stegomyia* occurring in 1928 than had been noted in previous years.

On the other hand, the number of anopheles in Athens was negligible. In addition to the *stegomyia*, *P. Papatasi* was present in very large numbers. Of the total number of insects collected in houses in Athens in August 1928, 74 per cent were *stegomyia*, 15 per cent were other mosquitoes and 11 per cent were phlebotomi.

With regard to the transmission of the disease, there appear to be little doubt that this was due to the *stegomyia*. Whilst it was impossible to prove this, two facts strongly suggested that this mosquito alone carried the disease. First, as far as could be ascertained, no case of dengue occurred in any person who had used a mosquito net continuously; secondly, several lighthouse-keepers living on islands some distance from the mainland, whose duties had kept them continuously in the same place, were attacked by the disease, which was presumably carried by mosquitoes blown over from the mainland. *P. Papatasi* was suspected as a possible carrier, but there was no definite evidence in favour of this hypothesis.

Dengue occurred in Greece and in Crete in 1881 in epidemic form, almost half the population being affected. In 1889, there were epidemics at Constantinople, Smyrna, Athens and the Piræus, including 10,000 cases at the latter town. In the period 1890-97, the disease was mildly epidemic on the Greek coast of the Ægean Sea and had been investigated by Sir Patrick Manson. A further epidemic broke out in the Piræus in 1910.

Since 1910, there were no further cases in epidemic form until an outbreak in September 1927, when a minor epidemic occurred. The number of cases, however, fell in October 1927, and, though there was a slight revival of the epidemic in November 1927, only sporadic cases occurred up to March of the present year. In this month the disease again became mildly epidemic, and remained so until August, when a sudden widespread extension of the disease occurred, starting first in Athens and the Piræus and later spreading throughout Greece. During August and September 1928, in Athens and the Piræus, 86 per cent of the total population suffered from dengue, including 90 per cent of the personnel of the public health services, 83.5 per cent of the staff of the banks, 82.5 per cent of the employees of factories and business firms and 100 per cent of the inmates of prisons. The total number of cases of dengue up to October 15th, 1928, amounted to 850,940, with 1,378 deaths.

The incubation period of the disease was generally from five to eight days, but might be as long as twelve days. The onset of the disease was sudden, with severe headache, acute muscular pains, high temperature, vomiting and diarrhoea. Mild attacks occurred which were not sufficiently severe to interfere with the patient's work, but in the majority of cases it was necessary for the patient to remain in bed for four or five days.

In many cases the symptoms differed from the classical symptoms of dengue, and this fact rendered the diagnosis of individual cases very difficult. The temperature generally lasted for about five days and showed the typical temporary fall about the third day, but almost every type of temperature was noted. In some cases the temperature continued for a fortnight. The maximum temperature might be as much as 105° F., but was generally between 102° and 103° F.

In 70 per cent of the cases a rash appeared on the second day or later. The exanthema varied very considerably in appearance, the most typical and generalised forms resembling the rash of scarlet fever, whilst others less frequently resembled typhus, measles, smallpox and serum rashes.

Headache was a very constant symptom, manifested either as a constriction of the forehead, or intense neuralgic pains at the back of the head.

The nervous system was often seriously affected, transient paralysis being common, whilst amaurosis and both encephalitic and psychical symptoms were noted. Paralysis of the oculomotor muscles also occurred. Vasomotor paralysis was common and showed itself by localised œdema, red cutaneous patches, flushing of the palms of the hands and the soles of the feet and tenderness over the solar plexus.

Severe myocarditis was a striking feature of the disease. The change in pulse tension was marked and there was a slowing of the pulse which persisted during convalescence.

The respiratory system was generally little affected.

Severe disturbance of the gastro-intestinal system was common and manifested itself by sore throat, vomiting and acute diarrhoea, which might be so severe as to resemble cholera. Whilst in October 1927, jaundice had been a marked symptom of the disease, practically no cases of jaundice had been noted in the present outbreak.

The genito-urinary system was affected in the majority of cases, albuminuria occurring frequently, with sometimes transient hæmaturia.

In many cases there were pronounced hæmorrhagic tendencies, with epistaxis, menorrhagia, hæmaturia and hæmorrhagic rash.

Relapse was common, but was never so severe as the first attack.

There was no confirmed evidence of a case in which there had been a second attack. The opinion of the medical profession was that immunity was conferred for at least a year. In this connection, it is interesting to note that, in 1927, 60 patients were inoculated experimentally against dengue and none of these patients contracted the disease during the present epidemic.

The disease was definitely milder in children, and appeared to vary directly with the age of the patient.

Convalescence was prolonged and was accompanied by a peculiar gait, severe pain in the joints, marked pallor and shortness of breath. The disease often resulted in profound depression, with refusal of food. The number of mental cases admitted to asylums increased as a consequence of the epidemic, as well as the number of suicides. Local and general septi-cæmia was also noted in convalescents.

The mortality from the disease was limited largely to elderly persons or to those in a poor state of health or who were neglected.

No definite characteristics were shown in the post-mortems.

No specific drug had been found effective in dealing with the disease. Salvarsan and neo-salvarsan were tried. Adrenalin had also been administered, but had been abandoned, as not only did it not appear to cut short the disease but it was found to produce an intense feeling of constriction in the patient. Quinine had no effect unless the patient also suffered from malaria. The treatment for the disease had accordingly been symptomatic.

The financial loss due to the epidemic was very great and was to be attributed partly to the decrease in the earning capacity of the population and partly to the fact that both the business and tourist traffic were practically at a standstill.

The steps taken by the authorities in dealing with the epidemic had been delayed by the elections, which occurred from August 15th to 17th, 1928, and had been further seriously interfered with by the sickness of the administrative staff. As a first step, however, a special medical officer had been appointed to deal with the emergency in Athens itself, the Government choosing for this purpose Dr. Papamarkou, who had for twelve years been at the Robert Koch Institute in Berlin and also for some five years in the Dutch East Indies Medical Service. Under this officer's energetic administration, the town had been divided into fifteen districts, each district being in the charge of a committee which consisted of a part-time medical officer, a police officer and a local priest.

Later, the following steps were also taken :

1. Dengue was made compulsorily notifiable throughout Greece.
2. A circular was sent to all districts urging the isolation under a mosquito-net in hospital of new cases in each district for a period of four days.
3. A loan was obtained from the Government of 40 million drachmæ for urgent sanitary improvements.
4. In Athens, twenty-five dispensaries were opened, in various sections of the town, in which doctors treated the poor free of charge.
5. A law was drafted for the severe punishment of persons who failed to carry out the instructions for cleanliness and the prevention of water accumulations.
6. A circular was sent to all registrars of deaths requiring them to notify urgently by cable all deaths from dengue.
7. Tourist traffic visas were refused.

Dr. Mackenzie also made the following further suggestions :

1. The appointment of whole-time medical officers of health for Athens at a reasonable salary and with, as far as possible, security of tenure.
2. The substitution, for the twenty-five part-time doctors, of six whole-time doctors chosen by the Medical Officer of Health, with the approval of the Council.
3. The provision of health visitors and other permanent sanitary staff.
4. The introduction and enforcement of a proper system of disease notification.
5. The provision of closed bins and closed carts for dry-refuse removal by night and of a central incinerator.
6. A comprehensive system of sewage to be agreed upon and the cost to be met by means of a loan.
7. Urgent measures to deal with the water supply.
8. A law specifically defining and limiting the city of Athens, which at present covered an area the size of Paris and was constantly growing.

Dr. Mackenzie, in conclusion, read the letter which had been sent by the Greek Government to the Director of the Health Section of the League of Nations on October 20th, 1928. The letter was signed by M. A. Doxiades, Under-Secretary of State for Hygiene, who requested the assistance of the Health Organisation of the League and intimated certain subjects in regard to which suggestions would be welcomed by the Greek Government.

The PRESIDENT thanked Dr. Mackenzie for his interesting report and for the excellent work which he had done on behalf of the Health Organisation in Greece. There were two questions raised by the report : (1) the problem of dengue in Greece and in the Mediterranean countries ; and (2) the letter from the Greek Government. He would ask the Committee to discuss the first of these questions.

Dr. RAYNAUD said that he was particularly interested in the epidemic of dengue in Greece, as, two years ago, the disease had appeared in the Western Mediterranean. An epidemic of dengue had broken out in Gibraltar in 1888, and he had himself noted the disease in Algiers in 1925. He had been called upon to treat a child suffering with rash resembling the rash of scarlet fever. The other symptoms, however, were not those of scarlet fever. The patient suffered so much that he could not bear to be touched. He remembered reading a description of previous epidemics of dengue, and had realised that this was precisely a case of dengue.

In August 1927, there had been an epidemic of dengue at Tunis, which had been discussed by the medical journals of that city. The epidemic had lasted from August to the end of December. In December, one of his relatives had come to Algiers from Tunis, bringing with him a servant, who had to remain in bed on the third day of her arrival. Several cases broke out in the neighbourhood showing the classic symptoms of the disease. A little later, an epidemic had broken out at Casablanca, in Morocco, the principal symptoms being the appearance of rash and a peculiar walk which resulted in the disease being described as Charleston fever.

Two medical reports were published in Professor Pittaluga's journal on the disease which broke out in Andalusia during the autumn of 1927.

As he was leaving for Geneva, he had been informed that a disease very similar to dengue had been noted at Oran. The cases were not severe, but there were frequent hæmorrhagic symptoms ; there were 30 or 40 cases a day. He had seen in the newspapers reference to cases which had also occurred at Marrakesh, where the population had been asked to take precautions against mosquitoes.

It would seem, therefore, that the countries of the Western Mediterranean were menaced while there was a very severe epidemic in the East. There had been very heavy rains in January at Oran, which had led to the formation of marshes, and there had been extensive attacks of recurrent fever in July which were difficult to distinguish from cases of dengue.

Several of the facts which he had noted did not quite agree with the observations of Dr. Mackenzie. No ill effects, for example, had occurred from the use of adrenalin. Dr. Mackenzie, moreover, had assumed that the stegomyia bit during the daytime, whereas it was rather believed in Brazil that stegomyia did not attack man during the daytime and that yellow fever could be avoided by leaving Rio de Janeiro at night. It would certainly be well for the Committee to consider what should be done in the event of dengue assuming an epidemic form. Notification of the disease should certainly be compulsory, and measures should be taken to prevent infection being carried by vessels.

The disease was not a serious one in Northern Africa. Its severity in Athens was probably due to local conditions and to the fact that the population, owing to the presence of the refugees, had offered less resistance. He did not think that preventive measures could go beyond the inspection and fumigation of ships and the isolation of individual cases.

Professor Ricardo JORGE said that the Medical Director had rendered great service to the Mediterranean countries by his prompt action in sending a representative of the Health Organisation to Athens to make an enquiry and present a report into the epidemic of dengue. That report had greatly enriched the documentary history of the subject.

He had asked the Ministry of Public Health in Portugal for information on the subject, but had been informed that the disease was unknown in Portugal. Italy and Portugal, in fact, appeared to be exempt, unless cases of the disease had passed unnoticed. He had called the attention of the Portuguese doctors to the subject by publishing an article on dengue. Shortly after the publication of the article, a vessel had arrived in the port of Lisbon from Dakar with cases of dengue on board. He had telegraphed to Dakar, and had been informed that there the disease was unknown. He had since seen from the report of Dr. Raynaud and Dr. Burnet that, in 1924, two boats coming from Dakar had carried the disease. One of these boats had put into Lisbon because it could go no farther, 13 out of 15 of the crew being sick. The first case had declared itself four days after leaving Dakar, and the last within ten days. If the Portuguese authorities had not been warned, Lisbon might have been attacked as Athens had been. He had observed the 13 cases, and believed them to be cases of dengue uncomplicated by the presence of any other malady. He could not agree with Dr. Mackenzie that only cases showing fever after the third day should be admitted as dengue.

It rarely happened that, in a widespread epidemic, the principal disease was accompanied by other diseases.

Observations made in Athens appeared to show that the disease was carried by the stegomyia. The observations regarding the presence of jaundice in certain cases in 1927 were interesting, and raised the whole question of the relation of the disease to yellow fever. If the disease should again occur, it would be desirable to make an extensive and scientific application of the tests for yellow fever. He did not think that there was any real connection between the two diseases, though certain of the symptoms might be similar.

Dr. LUTRARIO said that dengue, apart from its endemic centres in Asia and America and in the tropical and subtropical zone, was found more particularly in the Mediterranean (Egypt, the Levant, Greece), where it appeared from time to time, giving rise to epidemics more or less severe.

Italy had remained practically exempt except for one or two outbreaks of slight importance. In September 1907, Gabbi had described an outbreak, limited in extent, which had attacked Messina, and in 1909 another insignificant outbreak was observed by Dr. Caracoci and Dr. Zagari at Francavilla, in Sicily. In 1913, a few cases imported from Libya were noted by Dr. Timpano at Bova, in Calabria. No further cases were known.

Except for these small episodes, he would be prepared to exclude any possibility of there having been real epidemics of dengue in Italy in the past. Its powers of extension and characteristic symptoms would not have escaped the attention of the medical profession and the public health authorities. During his long career as head of the public health service of Italy, there had been no notification of the disease. The historians of medicine, moreover, had not included Italy in the epidemiological region of the disease.

The fact that Italy was exempt was proved by the circumstance that dengue was not included in the list of infectious diseases subject to compulsory notification. Though the list was large, and had been increased by successive revisions, dengue was not included. It had been put in the list only recently as a result of the epidemic in Greece.

The health administration in Italy, on first hearing of the outbreak in Greece, had drawn the attention of the public health authorities and the medical profession to the disease, asking them to use the utmost vigilance in regard to persons coming from the Greek coast and other localities which had been attacked. In this way, certain cases of importation had come to light. At Naples, on board the *Italia*, two typical cases of dengue had been recognised, the patients being two American ladies coming from the Piræus. Subsequently, on the *Albano* in the port of Naples, another case, originating from the Piræus, was reported. There had been a few cases which were merely suspect; on the motor-boat *Assiria* in the port of Trieste, on a Norwegian vessel in Messina and on the *Gianicolo* at Brindisi.

At Brindisi, a suspect case had been noted in the person of the harbourmaster, Lieutenant-Colonel Tommaselli, who had on several occasions, in the performance of his duties, boarded vessels coming from Greece.

Apart from these cases of importation, no indigenous case had been notified in Italy or the Italian colonies.

At Rhodes, on the other hand, the health service had drawn attention to the appearance of a focus, with 50 cases among the military population and 15 cases among the civil population. Not all these cases, however, had the classic symptoms of the disease. Some of the patients appeared to be suffering rather from three-days fever (Papatacū fever). The cases noted were characterised by a sudden and intense attack of fever, coming to a climax on the seventh day, and by a rash from 24 to 48 hours after the onset of the disease; these cases generally were of the mild form of the disease.

Cases appeared to have occurred in other islands of the Dodecanese, particularly at Kalymnos: it seemed that these were rather cases of three-days fever (Papatacū fever).

All the cases, whether imported into Italy or having occurred in the islands of the Ægean, had been isolated and provided with mechanical protection.

On the appearance of dengue in Greece, the preventive measures adopted in Italy in order to guard against a possibility of a spread of the epidemic were as follows:

1. Notification of the disease was made compulsory, as already stated.
2. There was a strict supervision in ports over vessels arriving from affected areas.
3. To such vessels the Maritime Health Ordinance No. 2 of March 15th, 1924, against yellow fever were applied, *mutatis mutandis*. This Ordinance had been modified by Ministerial Decree of July 18th last.

The maritime health measures might be summarised as follows:

- (a) Enquiry as to the whereabouts of the ship.
- (b) Medical examination of all persons on board.
- (c) Disembarkation of the sick as soon as possible by daytime for isolation in hospital, every possible precaution being taken to prevent the patients being bitten by mosquitoes (mechanical protection).
- (d) Sanitary supervision as established by international Conventions to avoid contacts for six days dating from the moment of disembarkation.
- (e) Destruction of mosquitoes on board in all parts of the ship which might shelter them, if possible before unloading, the destruction of the mosquitoes being effected by poison gas.

The same measures, so far as they were applicable, *mutatis mutandis*, were applied to the ordinary airship lines in communication with the affected areas.

The action of the health administration was not confined to the above provisions. It desired to obtain information as to the existence and the possible importance of the carrying agent (*Ædes Ægypti*), which was at the moment regarded as responsible for spreading the disease.

For some time the presence of a few specimens of stegomyia (*Aedes Aegypti*) had been noted along the coast.

Dr. Piras, Assistant in the Health Laboratory of the University of Genoa, directed by Professor Canalis, had in 1916 discovered stegomyia in the port of Genoa. He had found them in the quarantine station and the buildings of the Maritime Health Bureau on board s.s. *Redemption* and on a few barges. The most careful search had been made in other localities of the port, as well as in the town in the neighbourhood of the port, but no traces of the insect were discovered.

Several years previously, Professor Ficalbi, the famous Italian entomologist, had discovered the insect in several districts of the coast, in Tuscany, Campagna, Calabria, Sicily and Sardinia.

Nevertheless, the evidence was to the effect that this species could not be regarded as predominant, as was the case with other species of mosquitoes of the group of the culicids or anophelines (*Claviger, pseudopictus, superpictus, bifurcatus, elutus*).

In view of this evidence in the past, it was necessary to clear up the present position with regard to the carrying agent, and the General Direction of Public Health had very opportunely instructed certain entomologists to make investigations. The coastline was divided into three sections, which were entrusted respectively to Professor Raffaele, of the University of Rome, to Dr. Laface, and Professor Martini, of the Pasteur Institute.

Investigators had discovered *Aedes Aegypti* on the coast in several places. Dr. Lutrario understood that interesting data had been collected, which he would place before the Committee when they had been communicated to him.

The Italian Government had also sent a scientific mission to Greece with a view to making investigations on the spot. The mission consisted of Professors Gabbi, Neri and Pontano, Dr. Canio-Russo and an expert mosquito-hunter. The report was not yet out. The conclusion arising from the above remarks was not, in his view, without interest.

In Italy, there undoubtedly existed the reputed carrying agent of the disease.

In Italy, dengue had been imported but the disease had not been propagated, or had only resulted in very small centres of infection.

There accordingly appeared to be a certain degree of indemnity or immunity — at any rate, up to the present.

To what was that immunity due ?

Was it owing to the fact that the virus of dengue, hitherto unknown, did not find conditions in Italy favourable to its development ?

Was it because the mosquito did not acquire the power to take and transmit the infection ?

Those were questions to which others might be added and which, when solved, would clear up the mystery of the disease, which was found in one district, while it spared another district near at hand and often presenting the same conditions favourable to its propagation.

In malaria there was the phenomenon of anophelism without malaria. Was it not possible that similar conditions might prevail in respect of dengue ?

That was a very fertile field for investigation.

Professor Ricardo JORGE, referring to the research to which Dr. Lutrario had alluded, into the presence of stegomyia in the coastal areas of Italy, said that undoubtedly the species was present. The important point, however, was that the stegomyia must be present in a certain minimum density before they became important in respect of epidemics. When the index of density fell below a certain proportion, no epidemic was to be feared.

The MEDICAL DIRECTOR said that the Committee had to decide what practical steps should be taken to assist an enquiry into the conditions which were giving rise to the outbreaks of dengue in the Mediterranean. Perhaps the first point of interest was to determine the facts as to the presence and distribution of stegomyia in the areas likely to be affected. What was the present knowledge in regard to the subject ? Dr. Lutrario had collected interesting information which he had put at the disposal of the Committee, and further investigations were proceeding in the Italian ports. There was, however, some controversy as to the facts and their significance. Would it not therefore be useful to take up this question and to arrange for a collection and exchange of information concerning the entomological aspect of the problem ? A number of expert entomologists might be appointed in order to establish an authoritative list of specimens found in the suspected areas. These experts could be nominated by us to work in the various centres and might be asked to present a report within the next twelve months.

Professor Ricardo JORGE supported the proposal. He pointed out, however, that the enquiry was of interest to doctors who studied anatomy in connection with their work rather than to entomologists in particular.

The MEDICAL DIRECTOR pointed out that the entomologists of Portugal would be chosen subject to the advice of the member of the Health Committee.

The Health Committee adopted the proposal of the Medical Director.

The PRESIDENT said the Committee would now consider a letter¹ which had been addressed to the Medical Director by the Under-Secretary for Health of the Greek Government. That was the first time that a request of this character had been submitted to the Committee by the Government of an important country and it deserved the most careful consideration.

¹ See text of letter in Report to Council, document C.555.M.175.1928.III, page 46.

The Health Committee, through its Secretariat, might consider how the health conditions prevailing in Greece might best be thoroughly examined and how it might be possible for the Health Committee to place itself at the disposal of the Greek Government with a view to establishing a plan of sanitary reorganisation. He would submit the following draft resolution as a basis of discussion :

“ The Health Committee, having considered the letter addressed to it by the Under-Secretary of State for Health of Greece asking for the collaboration of the League of Nations in the improvement of the sanitary organisation of Greece,

“ Declares its willingness, subject to the approval of the Council of the League of Nations, to accede to this request ; and proposes that its President and Permanent Vice-President, with Professor Léon Bernard and Sir George Buchanan, should hold themselves at the disposal of the Council of the League of Nations and the Greek authorities, if they should express a desire to that effect, to give assistance in the matter of carrying out enquiries and in giving such advice as the situation may demand.”

Dr. LUTRARIO said that, in the event of practical steps being taken to give effect to the request of the Greek Government, Italy, as a near neighbour of Greece, with many interests in common with that country, would be very happy to contribute to the solution of any problem which might arise.

406. Collaboration with the International Institute of Statistics.

The MEDICAL DIRECTOR, presenting document C.H.742(1), reminded the Committee that, during its twelfth session, it had adopted a resolution in regard to collaboration with the International Institute of Statistics in the preparatory work incident to the revision of the International List of Causes of Death. That resolution had been communicated to the President of the International Institute, who had proposed that a Joint Committee should be set up, composed of four members appointed by the Institute and four members appointed by the Health Committee, in addition to the President and the Secretary-General of the Institute and the President and Medical Director of the Health Organisation.

The President of the International Institute was asking the Health Committee to appoint its representatives before those of the Institute were nominated.

He would point out that the Health Committee was not responsible for the preparatory work of the Conference, which had been done entirely by the Institute.

Sir George BUCHANAN thought it would have been better for the Institute to appoint its nominees before the Health Committee chose its own representatives. He felt some misgiving at the reference in the correspondence that had taken place on the subject to a suggestion of the Institute that the members to be appointed should be represented by different nationalities. He did not think that nationality was a prevailing consideration. The important point was to secure representatives who had a practical experience in the application of the “ Long List ” of the causes of death. At the last Conference which had taken place, there had been representatives of thirty to forty countries, and it had been necessary to make concessions in order to meet the views of delegates whose countries had never used the “ Long List ” and apparently never intended to use it. He felt that the Health Committee itself should certainly choose representatives from among the countries which had actually made use of the List. These countries included Great Britain and her Dominions, the United States of America, the Netherlands and Japan. To represent Great Britain he would suggest Dr. Stevenson.

Dr. JITTA said he was glad that successful arrangements were being made for collaboration with the International Institute of Statistics. The Health Committee was naturally not assuming responsibility for the Conference, which was being convened by the French Government and prepared by the Institute. The Health Committee would, however, place at the disposal of the Conference the memoranda and the information prepared by the experts at Geneva. He would suggest that, for the appointment of the representatives of the Health Committee, authority should be given to the President of the Health Committee, and the Medical Director to make the necessary appointments in consultation with the President of the Institute.

Professor Léon BERNARD supported the proposal of Dr. Jitta. He also expressed his satisfaction that co-operation was being secured between the Health Committee and the International Institute.

Sir George BUCHANAN said he would like to know whether the Committee felt the force of the arguments which he had presented in favour of selecting representatives of countries which had in practice applied the List.

Professor Léon BERNARD said he agreed with Sir George Buchanan on this point and expressed his conviction that the Institute would be of the same opinion.

The proposal of Dr. Jitta was adopted.

407. Report of the Cancer Commission.

Sir George BUCHANAN said that the Commission on Cancer had already had a short meeting and had considered the replies of the experts. The Commission felt that it should continue to study the suggestions which had been presented to it and that for the moment no proposal should be made in regard to a general conference of cancerologists.

There was an impression that the Italian group had not been able to stimulate sufficiently the progress of the national enquiry upon which they had been engaged. The necessary encouragement might be given by a communication from the League of Nations declaring its interest in the work and assuring the enquirers of the support of the League.

The MEDICAL DIRECTOR suggested that the text of that communication should be drafted by Sir George Buchanan in collaboration with Dr. Lutrario.

The Committee agreed.

408. Commission on Education in Hygiene and Preventive Medicine.

Professor Léon BERNARD, introducing his memorandum (document C.H.759), said that the first aim of the Commission had been to get the various schools of hygiene to work upon a programme of collaboration. Co-ordination between the schools had not yet been secured and a more satisfactory method of co-operation still remained to be found. Incidentally, he would remind the Committee that, as the result of instructions given to the Commission of Health Experts on Infant Welfare, Professor Gorter and Professor Debré had been asked to carry out independently a general enquiry into the prevention and specific treatment of scarlet fever and diphtheria. This enquiry would afford an opportunity for getting into touch with schools of hygiene and for co-operation between these schools.

He desired to submit a practical proposal in connection with the work of the Commission. The Health Committee had witnessed a number of films, documentary and educational, such as those prepared by the institution known as the L. U. C. E. The Director of the International Cinematographic Institute to be established in Rome proposed to organise within the Institute a number of sections, one of which would deal with questions of public health. Each section should be advised by a special commission of experts, which would guide the Institute as to the value and the composition of the films to be prepared and give their moral authority to those films. It had been suggested that the Health Committee should advise the Director of the Institute on health questions, and he would submit that the body best qualified to give the desired advice was the Commission on Education in Hygiene and Preventive Medicine.

The Commission, on the other hand, had established a programme of education in public health for health experts, doctors and auxiliary services. An extensive tour had been made and many educational institutions visited. An important mass of information of great value had been collected. It seemed desirable, before proceeding further, that the information contained in these documents should be analysed and summarised. For the moment, the information thus prepared would deal only with education in hygiene. The Commission proposed that a small Drafting Committee should be entrusted with the duty of making a preliminary report on the subject.

Sir George BUCHANAN said he presumed that the appointment of a Drafting Committee of the Commission on Education would be a matter of internal arrangement. The Commission would appoint its own Drafting Committee.

Professor Léon BERNARD agreed.

The proposals of Professor Léon Bernard were adopted.

409. Printing of the Minutes of the Committee.

Sir George BUCHANAN presented a draft letter (document C.H.768) to be sent by the President of the Health Committee to the Secretary-General for presentation to the Council of the League of Nations in regard to the printing of the Minutes. He understood that this gave effect to the general desire already expressed by the Committee.

The draft letter was adopted.

SEVENTH MEETING.

Held on Wednesday, October 31st, 1928, at 10 a.m.

President: Dr. Th. MADSEN.

410. Letter from the Prime Minister of Australia on the putting into force of the Resolutions of the International Pacific Health Conference.

The PRESIDENT said that the Committee could not fail to express its appreciation of the spirit in which the letter was conceived (document C.H.754).

M. VELGHE said he was glad to note the very favourable attitude of the Administration of the Commonwealth. It might, however, be observed that they were not quite familiar with the organisation which had been created. The Administration of the Commonwealth had expressed its intention of forwarding all information to the Office international d'Hygiène publique through the Eastern Bureau at Singapore; he had no objection to that procedure, and did not think that any difficulty would arise from the fact that the Commonwealth Administration was dealing unofficially with the Philippines. In course of time, however, certain practical disadvantages might arise, and it would be necessary to revise the procedure. Secondly, in order to conclude special arrangements, negotiations were certainly necessary between the Governments concerned, but they could not legally be made subject to the authorisation of the League of Nations. The letter from the Prime Minister stated that it would be for the Health Committee to formulate recommendations in this connection. He quite understood that the neighbouring countries might wish to conclude special arrangements between themselves, but neither the authorisation nor the recommendations of the League of Nations were necessary. If the Commonwealth were requesting the support of another authority, it would be necessary in that case to refer them to the Office international d'Hygiène publique.

Dr. PARK reminded the Committee that the communications to be forwarded by the Commonwealth included an immediate notification of infectious diseases covered by the Convention, monthly notifications of certain diseases like influenza and poliomyelitis, postal communications in regard to malaria, framboesia, etc., and, lastly, annual information as to the development of certain diseases like leprosy. It was accordingly proposed regularly to notify the Commonwealth, acting as a centre of information, of the position in regard to almost all infectious diseases, without limiting that information to the diseases against which it was possible to take preventive measures and diseases covered by the Convention. He felt that the Committee would appreciate the progress represented by such an agreement. It was clear that the Department of Health in Australia would communicate the information to the League of Nations and the Office international d'Hygiène publique. He would state, in this connection, that his Government quite understood the respective positions of the organisations in Geneva and Paris, and that it was out of courtesy that the Administration had decided to communicate to the League of Nations the arrangements previously concluded by neighbouring countries.

Finally, he announced that the Government of the Commonwealth desired to thank the League of Nations for the interest which it had taken in the health situation in the Pacific. The Hermant Mission had just arrived at Canberra, where it had immediately got into touch with the Australian doctors in order to lay down the bases of a programme of collaboration which would reach its full development in the course of the next years.

M. VELGHE quite agreed with Dr. Park but had wished to observe that there was no necessity for mentioning an authorisation of the League of Nations. If the arrangements in question were in conformity with the Sanitary Convention of Paris, the situation was quite simple; if they were not in conformity with that Convention, notification should be sent to the Office international d'Hygiène publique.

The MEDICAL DIRECTOR was glad to note that the situation had been cleared up by the intervention of M. Velghe and the interpretation of Dr. Park. In virtue of the arrangements concluded, the Eastern Bureau at Singapore was acting for all countries in the Southern Pacific zone as agent of the Office international d'Hygiène publique, and any modification must be the subject of a new agreement. Dr. Park had nevertheless said that the information would relate to a great number of diseases which were not covered by the Convention. As the mandate entrusted to the Eastern Bureau at Singapore was of the same character, it was natural that the Commonwealth should expect from the League of Nations, not an authorisation, but means which would facilitate this direct exchange of information. The Commonwealth could be congratulated on its initiative, though its attention should be drawn to Article 9 of the Convention. Moreover, the covering letter drafted by the Secretariat clearly showed that it was for the Health Committee to formulate observations on this subject.

Dr. PARK said it was quite understood that the health administrations of the neighbouring countries had the right to conclude agreements for the exchange of information. The Medical Director had done well to interpret the letter of the Australian Ministry in a broad sense, without allowing his interpretation to stop short of the terms of that letter.

He would explain to the Australian Government the spirit in which the question had been examined and the points on which agreement had been reached.

He would submit the following draft resolution :

“ The Health Committee, having noted the letter of the Prime Minister of Australia and the replies of the Governments represented at the International Pacific Conference held at Melbourne in 1926 relative to the resolutions adopted by that Conference,

“ Expresses its satisfaction at the general agreement reached and at the establishment by the Australian Government of an information service for that zone of the Southern Pacific ;

“ Approves the evidence given by the Governments of that zone of their desire to collaborate with the Health Organisation of the League of Nations.”

Sir George BUCHANAN emphasised the desirability of publishing the Minutes ; otherwise it would be impossible to understand why the letter of the Prime Minister of Australia, asking for certain explanations and the approval of certain matters, had resulted in a resolution in which the Committee merely expressed its satisfaction at what had been done. It was essential that the accounts of the meeting should show in what circumstances that decision had been reached. He would like also to express the satisfaction of the Health Committee at the collaboration which had been inaugurated by the Pacific Mission.

Dr. GRAHAM observed that it would be well to await the practical results achieved by the Mission before the Committee expressed its satisfaction.

Sir George BUCHANAN wondered whether it was necessary, in the circumstances, to adopt a resolution.

The MEDICAL DIRECTOR replied that the Health Committee was officially asked to consider a letter from the Prime Minister of a country which was a Member of the League of Nations. International courtesy alone demanded that a reply should be made. Moreover, it would be seen from the Annex to that letter that the Secretary-General, in his reply to the Prime Minister of the Commonwealth, had announced that his letter would be communicated to the Health Committee.

M. VELGHE noted that there was a certain discordance between the terms of the letter and the spirit in which it had been conceived. An agreement had just been reached, but the misunderstanding would be prolonged if the Committee confined itself to indicating the point of departure, which was the letter itself, and the point finally reached, as represented by the decision. It was accordingly essential to attach to the resolution the relevant portion of the Minutes of the present meeting.

The MEDICAL DIRECTOR agreed.

Dr. ABT noted that it appeared, from the discussion which had just taken place, that the information received by the Melbourne Centre would be transmitted telegraphically to the Office international d'Hygiène publique through the Eastern Bureau at Singapore. He thought it advisable, however, to remind the Committee of the following extract from the letter of the Prime Minister of the Commonwealth :

“ It will be noted that the final clause of paragraph 4 of the resolutions leaves undecided the question whether the Intelligence Service now provided by the Commonwealth Department of Health could be utilised as the agent for the transmission of information to the Office international d'Hygiène publique under the terms of the International Sanitary Convention of 1926. Although no decision on this question has yet been arrived at, it is intended, as stated above, to transmit all information received to the Office international d'Hygiène publique through the Far Eastern Bureau of the Health Organisation of the League of Nations at Singapore, independently of the action of any of the Governments concerned in sending such information direct to the Office international d'Hygiène publique.”

The MEDICAL DIRECTOR reminded the Committee that, in execution of Article 7 of the International Sanitary Convention of June 21st, 1926, the Permanent Committee of the Office international and the Health Committee had agreed upon the following arrangement :

“ I. Governments may effect the notifications and communications provided for by the Convention and intended for the Office international d'Hygiène publique by means of one of the regional bureaux of the Health Organisation of the League of Nations, subject to a special agreement being made between the Office international d'Hygiène publique and the League of Nations for each particular bureau.

“ II. Governments which adopt the above procedure will be termed Governments associated with the regional bureaux. Regional bureaux will undertake the transmission of information addressed to them in conformity with rules which will be fixed in the particular agreement which relates to each bureau.

“ III. The Office international d'Hygiène publique will determine the official communications, according to the requirements of the case, which should be sent to Governments signatory to the Convention.”

In addition to this fundamental arrangement, a more detailed scheme had been concluded laying down the conditions under which the Eastern Bureau at Singapore would work as a regional bureau and the rules which it would have to follow in forwarding information. The agreements concluded were therefore absolutely complete and satisfactory; no misunderstanding was possible. The Eastern Bureau at Singapore forwarded the information covering a particular region and at the same time sent all the communications to the Office international d'Hygiène publique. There only remained certain points of detail to be settled as to the practical working of the arrangement.

Sir George BUCHANAN thought it would be necessary clearly to realise the exceptional position of the Bureau at Melbourne, which, as it had no international character and was not established under the Convention, had no monopoly of information relating to the Pacific. In any case, the essential point was that an important question had been settled practically to the satisfaction of the parties concerned.

The draft resolution submitted by Dr. Park and amended by M. Velghe was adopted.

411. Examination of the Draft Report to the Council on the Work of the Thirteenth Session of the Health Committee.

The draft report submitted by the Medical Director was read.

It was agreed, in the chapter on the Cancer Commission, upon the suggestion of Sir George BUCHANAN, that the Medical Director should insert in that passage of the report a summary of the resolutions of the Commission.

In reference to the chapter on the Smallpox and Vaccination Commission, the MEDICAL DIRECTOR said that the resolutions of that Commission had not been officially approved by the Health Committee.

He added, in reply to an observation of Professor Ottolenghi, that it was not proposed to discuss a new report of that Commission. The report in question was the report which had been distributed at the end of August.

The Committee approved the resolutions of the Commission on Smallpox and Vaccination.

The PRESIDENT thanked Professor Ricardo Jorge, Chairman of the Commission on Smallpox and Vaccination, for the work which he and his colleagues had done.

Referring to the chapter on Vaccination against Tuberculosis by BCG, Professor OTTOLENGHI observed that the Committee had formally adopted only the recommendations of the Committee of Clinicians and not those of the Committees of Bacteriologists and Veterinary Experts. It might happen, particularly in regard to the recommendations of the veterinary experts, that there were points of detail on which all the members of the Committee were not in agreement. It would be well to consider whether the Committee intended formally to adopt all the recommendations of the Committees of Bacteriologists and Veterinary Experts.

Finally, the draft report of the Medical Director stated that "the clinical enquiry would be entrusted", etc.; he would remind the Committee of his remarks during the previous meetings and would propose to amend the expression to read: "The enquiry into the efficacy of the vaccines", etc. The enquiry in question was not merely a clinical enquiry.

The MEDICAL DIRECTOR explained that the Committee had adopted all the recommendations of the experts relating to future enquiries. It was not necessary to adopt a special resolution on the recommendations of the bacteriologists and veterinary experts, since they were already contained in the final report. In respect of the Committee of Clinicians, on the contrary, it was understood, in accordance with the terms of the report of the Conference, that the Health Committee would make the necessary appointments. He proposed the following text:

"The duty of the Health Section of the Secretariat would be to assemble and compare the results of the enquiries which might be undertaken by the various bacteriological and veterinary institutes referred to in the recommendations of the Committee of Bacteriologists and the Committee of Veterinary Experts. As to the Committee of Clinicians, on the proposal of its Chairman, Professor Léon Bernard, the enquiry will be entrusted", etc.

Professor OTTOLENGHI approved these amendments. He would like to have the views of Professor Léon Bernard on his observation concerning the expression "clinical enquiry".

Sir George BUCHANAN wondered whether the Secretariat, in spite of its zeal, could really undertake, with its present staff, the apparently enormous task here entailed.

The MEDICAL DIRECTOR said that the task did not seem to him excessive. The list of institutes engaged in veterinary research included only five or six names, and the duty of the Secretariat would merely be to receive the reports with a view to the second Conference. It would be well, however, to amend the text with a view to providing for a possible increase in the list of such institutes, as perhaps, in addition to those included in the list and noted by the Committee, other institutes would also undertake enquiries.

Professor Léon BERNARD, referring to the request of Professor Ottolenghi, said that the word "clinical" was only inserted in this passage of the report in allusion to the Committee of Clinicians; it was clear that the investigations would deal with social factors. There could be no misunderstanding on the subject between him and his colleague.

Dr. CARRIÈRE, referring to the chapter on Opium, proposed a certain number of amendments of detail, which he asked the Committee to entrust to the Bureau and to the Health Section. Moreover, certain of his colleagues on the Opium Commission had thought it advisable to emphasise the desirability of asking the legal advisers of the League of Nations to consider the interpretation to be given to the text of Article 10, in order to determine whether that article could be applied to a whole group of substances.

The MEDICAL DIRECTOR said he did not think it desirable to introduce a passage in that sense. The Health Committee had been asked to formulate a technical opinion, and it had done so. The legal interpretation of the text of the Convention was no concern of the Health Committee. It would be for the President of the Advisory Opium Committee, if necessary, to submit the question to the Council.

The draft report to the Council was adopted with various amendments of detail.

412. Thirteenth International Conference of Red Cross Societies.

Dr. JITTA explained that he had had the honour of representing, with Dame Rachel Crowdy, the League of Nations at the Thirteenth International Conference of Red Cross Societies held at The Hague the previous week. Almost all the national societies of Europe, including those of the Soviet Republics, had been represented, as well as those of Japan, China, the United States, Mexico, Latin America, Australia, etc. In addition, a large number of Governments had sent special delegates.

The Conference had examined several questions, particularly the following:

The Conference had fixed the standardisation of war material in time of war; in other words, it had settled the form of transport material, surgical equipment, etc., so that such material, whatever might be its origin, could be immediately employed. It had also fixed the form and substance of the identity discs and medical forms.

The Conference had dealt with the methods of preservation against poisonous and toxic gases, without having succeeded in reaching a satisfactory solution.

It had decided to study the use of vessels to serve as international ambulances in the event of naval battles or in time of peace to bring help to a particular coast in the event of a catastrophe or epidemic. The scheme for this naval service — described as the "Bolem scheme" after the Director of the Medical Service at The Hague — had in principle been adopted, and a Commission representing the principal maritime nations would examine the possibilities of carrying it into effect. The most important resolution adopted related to the fusion of the International Committee at Geneva and the League of Red Cross Societies in Paris. An International Union of the Red Cross had been founded, whose statutes had been prepared by a Mixed Committee. This result, which had for so long been desired, had been achieved thanks to the good-will of all concerned. Dr. Max Huber, successor of M. Gustave Ador as President of the International Committee, and the President of the League, had both expressed their keen satisfaction at the new position of affairs. Senator Ciraolo had also noted that this solution might be regarded as a partial realisation of the plan which went under his name.

The PRESIDENT thanked Dr. Jitta for having represented the Health Committee at the Hague Conference.

413. Date of the Next Session.

It was decided that the next session would begin in Geneva on May 2nd, 1929.

414. Close of the Session.

The PRESIDENT congratulated his colleagues on the good work they had done in a limited number of days. He noted with satisfaction the result of the work in progress and the programme of new tasks which had been adopted.

Dr. CARRIÈRE, on behalf of all his colleagues, said the success of the work of the Committee was chiefly due to the high sense of duty, competence and geniality of the President.

ANNEXES.

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1. Medical Director's Report on the Activities of the Health Organisation since the Last Session of the Health Committee (May-October 1928) (C.H.747) . .	57
2. Proposal by Professor Léon Bernard concerning the Inclusion in the Committee's Agenda of the Question of Nutrition (C.H.765)	70

N.B. — The resolutions adopted at the session will be found in the Committee's Report to the Council on the Work of the Thirteenth Session (document C.555.M.175.1928.III). The same report contains as appendices the following documents (pages 9 *et seqq.*):

1. Report on the Conference of Health Experts on Infant Welfare held in London on July 3rd, 4th and 5th, 1928.
2. Statement of Progress made by the Cancer Commission and its Sub-Commissions by Sir George Buchanan, Chairman of the Cancer Commission.
3. Report of the Commission on Smallpox and Vaccination on its Session held at Geneva from August 22nd to 25th, 1928.
4. Report of the Technical Conference for the Study of Vaccination against Tuberculosis by means of BCG.
5. Report of the Opium Commission on its Session at Geneva on October 27th, 1928.
6. Report on the Meeting of Experts on Syphilis and Cognate Subjects held at Geneva October 8th to 10th, 1928.
7. Letter dated October 20th, 1928, from the Under-Secretary of State for Hygiene of the Greek Government to the Medical Director of the Health Organisation.

ANNEX 1.

C.H.747.

Geneva, October 2nd, 1928.

REPORT BY THE MEDICAL DIRECTOR ON THE ACTIVITIES OF THE HEALTH ORGANISATION SINCE THE LAST SESSION OF THE COMMITTEE (May-October 1928).

The work of the Health Organisation since the last session of the Committee has been fully reported upon by the various Commissions and Sub-Committees and in the Council's main and supplementary reports to the Assembly (documents A.6 and A.6a.1928).

The report of the Second Committee on the Health Organisation to the Assembly (document A.57(1).1928), adopted at the plenary meeting on September 18th, 1928, also gives a comprehensive survey of the work of the Health Organisation.

Further, the Section has prepared several notes on each of the items of the provisional agenda of the October session (documents C.H. 742 (a) to C.H. 742 (n)).

The notes indicate how the questions originated and in what form they come up for consideration at the present session of the Committee.

The reports from the Chairmen of the various Commissions will be distributed before the session. These show the actual state of the different investigations.

A few indications in this report will suffice to complete the picture.

DECISIONS OF THE COUNCIL AND OF THE ASSEMBLY.

1. As the Committee has already noted, on June 4th, 1928, the Council approved all the resolutions of the May session, and adopted the report presented by M. Adatci.

At the same session, the Council adopted the resolution proposed by the Advisory Committee on Traffic in Opium and other Dangerous Drugs in regard to benzoylmorphine and esters of morphine. This recommendation was made by the Council in anticipation of the advice to be given by the Health Committee in pursuance of the procedure instituted under Article 10 of the International Opium Convention.

The Committee will probably desire, when discussing the report of Dr. Carrière as Chairman of the Opium Commission, to consider how and in what manner the procedure under Articles 8 and 10 of the Opium Convention of 1925 may be expedited, in order to avoid the long delays which are caused by purely formal reasons (see Secretariat note on Opium, Item X of the agenda).

2. The representative of Spain has agreed to report to the Council on the work of the Health Organisation, which has been commented upon hitherto by the representative of Japan. This arrangement is the result of a redistribution of the reporting among the members of the Council upon its reconstitution (Spain, Persia and Venezuela having been elected on the retirement of China, the Netherlands and Colombia).

The Health Section may be permitted to place on record its gratitude to the representatives of Japan who, during the last five years, have given their support to our work, both in the Council and in the Assembly.

3. The debate on the work of the Committee occupied one meeting of the Second Committee, a report on which will soon be communicated to the members of the Committee. Successive speakers commented very favourably on our activities, special emphasis being laid on the universality of the work and your far-sighted policy in extending your studies and missions (and interchanges) to extra-European countries. The study on rural hygiene received special attention. During the discussions no new tasks were suggested by the Assembly.

The estimates for 1929 were approved without discussion.

4. The Assembly decided, however, to ask the Council to request the Health Organisation to collect full statistical information regarding alcoholism considered as a consequence of the abuse of alcohol, giving prominence, *inter alia*, according to the data available, to the deleterious effects of the bad quality of the alcohols consumed. The Assembly resolution ended by the statement: " It is understood that this resolution does not refer to wine, beer or cider " (document A.72.1928).

The Council, at its meeting on September 26th, 1928, referred this resolution of the Assembly to the Health Committee, adopting the following proposal of the Rapporteur (representative of Germany):

" I propose that the part of the resolution which concerns the Health Committee should be transmitted to it for its opinion and for a report on the scheme suggested " (document C.507.1928.II).

The Committee is thus called upon to report to the Council its opinion as to the kind of plan which it considers feasible on the basis of the resolution.

I.

CURRENT ACTIVITIES OF THE HEALTH SECTION.

CHAPTER I.—SERVICE OF EPIDEMIOLOGICAL INTELLIGENCE AND PUBLIC HEALTH STATISTICS.

1. Geneva Office.

(a) The *Weekly Record* is now issued on Thursday, as it was found possible to advance its publication by one day thanks to special arrangements made with the Office international d'Hygiène publique, the Sanitary Maritime and Quarantine Board of Egypt and our Singapore Bureau. The Office international d'Hygiène publique has since May 18th been communicating a weekly summary of the epidemiological information it has received, which is sent by air mail, reaching Geneva on Wednesday evenings. In conformity with the arrangement concluded with the Office international d'Hygiène publique, eight of its official *communiqués* have been published on the first page of the *Weekly Record* (dated June 21st, July 19th and 26th, August 2nd, 16th, 23rd and 30th).

Telegraphic information, sent direct to Geneva as well as received via Singapore, is increasing every month. It should be noted that the same information is often received from several sources. This satisfactory progress is an evidence of the foresight of the Provisional Health Committee, which, seven years ago, insisted on the necessity of instituting a centre of epidemiological intelligence without delay. It is clear, in fact, that rapid notification is becoming a routine procedure with an ever-increasing number of sanitary administrations.

The source and date of receipt is now shown in our publications against each individual return.

(b) The abundant intelligence reaching our central office prompted us, after consultation and in agreement with the President of the Committee, to issue advance information, in the form of detailed mimeographed reports, of which four or five have been circulated, each week since June 1st last, to the members of the Health Committee, the Office international d'Hygiène publique, regional bureaux and sanitary administrations.

(c) Owing to the epidemic of dengue in Greece, special telegrams were circulated to the health services of the Mediterranean area and other countries directly interested.

(d) Several special studies, based on the documentation accumulated in the archives of the service, have been included in the *Monthly Epidemiological Report*. Thus, a study on enteric-fever mortality was published in *R.E.* 113, statistical information on cerebro-spinal meningitis in *R.E.* 114, the mortality of encephalitis lethargica was analysed in *R.E.* 116, and a study on the natality and general mortality in Europe was given in *R.E.* 117.

(e) *Statistical Handbooks*. — The handbooks concerning the official vital statistics of Scotland and of the Free State of Ireland have been already prepared and are in course of printing.

Those relating to Germany and Canada are in preparation.

2. Eastern Bureau of Singapore.

(a) *Epidemiological Intelligence*. — Since the last session of the Health Committee, Pnom Penh has been added to the list of ports in regular telegraphic communication with the Bureau.

Weekly reports are also being received from Rangoon and Madras.

The Port Health Officer of Swatow has resumed the sending of regular returns by post, telegraphic transmission being at present impracticable.

The Director of the new Central Sanitary Bureau in Nankin has expressed his willingness to collaborate with the Eastern Bureau.

On the other hand, Vladivostok has been deleted from the list of ports in regular communication with the Bureau as, in spite of several attempts from Geneva and Singapore to re-establish communication, this port has been silent for more than a year.

On various occasions (cholera in Manila, plague in Saigon), the Bureau has been promptly informed of outbreaks occurring in important trading ports, and was able at once to inform adjacent countries by cable, as provided for under the International Sanitary Convention.

Information was supplied regarding cholera in Henjam and Jask, by the Chief Quarantine Medical Officer, Persian Gulf, who also notified the handing over of the administration of the quarantine station on the Persian side of the Gulf to the Persian Government. Arrangements have been made with the Persian authorities for the continued reciprocal service of intelligence.

Mutual exchange of information regarding pilgrims has been arranged with the Alexandria Bureau, which now broadcasts in clear from the Cairo station weekly epidemiological information received from its "associated" countries.

The Federated Malay States, India, the Netherlands East Indies and Straits Settlements have also agreed to supply intelligence during the next pilgrim season.

(b) "*Weekly Fasciculus*". — The contents of the *Weekly Fasciculus* have been entirely re-modelled, the information having been grouped according to disease and, for easier reference, uniform with the Geneva *Weekly Record*. Two main headings have been introduced, one grouping telegraphic information received from Eastern countries as well as cables addressed by the Geneva Bureau, the Office international and the new Alexandria Regional Bureau; the other including summaries of official reports received in Singapore during the current week. It was also found advisable to insert more detailed information on the spread of typhoid fever and the prevalence of cerebro-spinal meningitis in the East.

(c) *Wireless*. — The reception of the broadcast has been satisfactory; only one country having failed to catch the weekly message. Seychelles, Italian Somaliland and Eritrea have been informed of the Tananarive re-broadcast.

The health administration of Italian Somaliland has also been approached with the suggestion that the Mogadiscio wireless station should re-broadcast the résumé in clear.

Particulars regarding the weekly Saigon broadcast have been communicated, through the Health Section at Geneva, to the Pan-American Sanitary Bureau in Washington with a view to enabling the San Francisco Station to pick up the Saigon message.

The Shanghai and Sandakan Radio Stations have been requested to replace the full code message by a summarised broadcast in clear.

(d) *International Sanitary Convention of 1926*. — A communication received from the Office international d'Hygiène publique stated that the Convention would shortly be ratified, and asked the Bureau to enforce the arrangements concluded between the Permanent Committee of the Office international d'Hygiène publique and the Health Committee of the League.

The Convention is gradually being applied. Several notifications, as provided for in the Convention, have reached Singapore from Alexandria, Geneva and Paris, but Eastern countries have not as yet begun to inform the Eastern Bureau of the existence of plague or of cholera outbreaks, or of smallpox epidemics, in the whole of their territories.

(e) *Oral Vaccination*. — Studies are being made with the Besredka vaccine by Dr. Labernadie, head of the French-Indian Laboratory at Pondicherry in regard to cholera, and by the Director of the Health Service at Nova Goa in anti-typhoid experiments; they will communicate to the Bureau the results of their studies.

The Director of the Pathological Laboratory at Medan is undertaking certain anti-dysentery immunisation trials among coolies of the rubber and tobacco estates around Medan.

A fourth bibliographical list giving abstracts of twenty-eight recently published papers on the subject of oral vaccination has been circulated to the several institutes in the Eastern Area.

(f) *Resolutions of the Advisory Council*. — As soon as the resolutions adopted by the Advisory Council received formal approval, the following action was taken:

Resolution 1 (extract of Resolution).

"The Advisory Council . . . recommends that the Director take steps to obtain from the health administrations more accurate information on the places of capture of plague infected rats, this information being of great interest both from the epidemiological and quarantine points of view."

Various countries have been requested to commence reporting telegraphically on infected rats in their ports. India has already complied with this request, and includes in her weekly cable the number of plague-infected rats found in her ports.

Resolution 5 (extract of Resolution).

"The Advisory Council . . . suggests that the various countries in the Eastern Area now receiving epidemiological information be asked to assess the value of this information, and more especially of that contained in the résumé in clear to the various shipping companies now picking it up."

Members of the Advisory Council have received copies of replies from shipping companies regarding the utility of the weekly résumé in clear, in order to facilitate any direct action the members themselves may wish to take in the matter in their respective countries, as suggested at the last session of the Council.

Resolution 6 (extract of Resolution).

"The Advisory Council resolves . . . That the priority programme of plague research be circulated by the Bureau to all health administrations interested with the suggestion that they be invited to frame their plague research programme in conformity with the recommendations and to notify the lines of such research programmes to the Eastern Bureau."

The programme of plague research has been printed both in French and English, and sent with a covering letter to all health administrations which might collaborate in the proposed scheme. The Public Health Department of Siam has sent an affirmative reply, agreeing to participate in the work indicated in Nos. 1, 4, 5 and 7 of the plan of study.

Resolution 7 (extract).

“ The Advisory Council . . . is of opinion that a suitable line of work for the Eastern Bureau to undertake is the assembly of detailed information regarding the quarantine stations of the East and their value in the light of modern ideas of isolation and disinfection and of the principles embodied in the 1926 Sanitary Convention.”

A letter was sent to health administrations possessing quarantine stations in operation, asking for their views on the value of such stations from the local as well as the international point of view. A copy of this letter was communicated for information to certain other countries which anticipate establishing quarantine stations in the near future.

Resolution 8 (Constitution and Rules of Procedure of the Advisory Council).

The final text of the Constitution and Rules of Procedure of the Advisory Council was communicated to health administrations represented at its last session.

(g) *Plague.* — (Fifth Resolution of the Twelfth Session of the Health Committee.)

The Bureau has sent to the members of the Plague Expert Committee a copy of Dr. Fabian Hirst's memorandum on future lines of research into the parasitology of plague. This paper has also been communicated to the health administrations of certain colonies where rat and flea research has already been carried out (Kenya, Egypt, South Africa, etc.).

CHAPTER II. — SYSTEM OF LIAISON WITH PUBLIC HEALTH ADMINISTRATIONS.

1. *Collective Study Tour on Rural Hygiene.*

The Interchange for the Study of Rural Hygiene in six European countries began on May 27th at Ljubljana and the final conference terminated at Geneva on July 25th. The twenty participants, drawn from eighteen countries¹ and consisting of six sanitary engineers and thirteen medical officers of health, expressed their views in regard to the problems they had studied in a general report (document C.H./E.P.S./146), which has been distributed to the Health Committee. A very full documentation on rural hygiene in all the countries visited has been placed at the disposal of the Health Organisation by the health administrations concerned. The Committee will wish to express to the public health administrations of Belgium, France, Germany, Hungary, the Netherlands and the Kingdom of the Serbs, Croats and Slovenes its appreciation of the full opportunities afforded to the participants to examine all the important aspects of rural hygiene and to learn of the difficulties as well as the successes obtained in this field.

2. *Collective Tour in Italy.*

The interchange in Italy began on September 17th at Turin and will terminate at Geneva on November 10th. The printed programme of the study tour and the booklet prepared by the Italian health authorities describing the activities and institutions visited will furnish the Committee with full information on this interchange. The participants, drawn from seventeen countries² and numbering twenty-two, will form a veritable *corps d'élite*, and their studies in co-operation with the Italian health authorities give promise of resulting in that mutual benefit which may be expected from the collaboration of such experts. I have already expressed to the Italian health authorities the appreciation of the Committee for all they have done in preparing and directing the comprehensive programme of this interchange, on which the Committee will have a full report at its next session.

3. *Documentary Films.*

An attempt was made to illustrate the studies of rural hygiene in the several countries as well as the interchange in Italy by means of documentary films prepared under the effective direction of Signor Luciano de Feo, the inspirer of the L.U.C.E., on whom falls the responsibility for the organisation of the International Cinematographic Institute recently founded in Rome under the auspices of the League of Nations.

¹ Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, Estonia, Germany, Guatemala, Hungary, Irish Free State, Italy, Japan, Lithuania, Poland, Portugal, Roumania, Kingdom of the Serbs, Croats and Slovenes, Union of Socialist Soviet Republics.

² Austria, Belgium, Brazil, Denmark, Egypt, France, Germany, Great Britain, Japan, Netherlands, Paraguay, Poland, Kingdom of the Serbs, Croats and Slovenes, Sweden, Switzerland, United States, Uruguay.

A few of these films, in a provisional " edition ", will be shown to the Committee during its present session, when the complexity of the work involved in their preparation will probably be appreciated by the members.

On the same occasion, a few films prepared by sanitary administrations will be shown, notably a film on rural hygiene in the Kingdom of the Serbs, Croats and Slovenes, issued by the School of Hygiene and Public Health at Zagreb ; another, on rural sanitation in India, lent by the kindness of Colonel Graham ; and finally a series from the French Comité national de la Lutte contre la Tuberculose.

It may be possible to secure other film series of technical public health interest before the opening of the session.

The Health Section is making a detailed study of the whole question in close collaboration with the public health administrations concerned, notably of Belgium and Italy.

The Commission on Education in Hygiene and Preventive Medicine will no doubt be interested in the use of such films as a means of supplementing public health instruction by providing documentary evidence on the practice of public health in various countries.

4. Programme of Interchanges for 1929.

The Health Committee will wish to extend the study of rural hygiene to countries which were mentioned in the discussion of this subject during the last session, notably Denmark and Great Britain. In order to continue the practice which proved so successful in the interchange organised last year, regions and countries differing widely in development and organisation should be selected in order to provide the contrast necessary to stimulate the interest and increase the value of the study. Suitable rural districts for this purpose might be found in France, Switzerland and East Central Europe.

The collaboration of health officers and sanitary engineers proved so useful during the Interchange on Rural Hygiene held this year that, for the second interchange on this subject, it might be well to have an even more composite group, adding to the restricted number of health officers and sanitary engineers invited two or more permanent civil officials, who in many countries are chiefly responsible for the administration of public health. The collaboration of these three types of health official should add considerably to the scope and value of studies on problems of rural hygiene.

5. Study of Special Subjects.

The Health Committee has on various occasions discussed the possibility of organising interchanges devoted to the study of special subjects, such as sanitary engineering, certain aspects of housing, industrial hygiene, the protection of milk supplies and certain preventive aspects of the work of health insurance organisations¹. The Interchanges on Industrial Hygiene and Sanitary Engineering already held have given rise to much interest and requests for repetition.

Within the possibilities of the credits available, the following special interchanges might be organised during the coming year :

A. *Housing.* — The participants in the Interchange on Rural Hygiene held during the year emphasised in their report the need for comparison of the experience and results achieved in the various countries in the field of housing, and suggested this as a suitable subject with regard to the possibilities of international studies by the Health Organisation. While the study of housing is important to all public health officers, its special problems call for consideration by experts, and the proposed interchange should consist of from five to seven participants, including architects, administrators and specialised public health officers. The secretariat of such a collective study would consist of representatives of the International Labour Office, which has already published two volumes on housing (a third is in the press), and experts on behalf of the Health Section.

The programme of such an interchange would consist of visits to the chief urban areas of the different countries where constructive attempts have been made to solve the housing problem, and to present reports to their administrations and to the Health Committee containing the conclusions which emerge from their collective study. Housing plays such an important part in modern public health work that its solution may be considered as a means of solving some of the major public health problems of the day, and the study of the group should be directed to this end.

B. *Industrial Hygiene.* — The last interchange on this subject, arranged in collaboration with the competent services of the International Labour Office, was held in 1925. It is now proposed to organise an interchange, restricted to a small group of participants, from the public health and industrial hygiene services of countries which desire to organise or improve

¹ Further reference to the latter subject of study is made in the chapter concerning the Joint Commission of Experts for the Study of the Relationship between Public Health Services and Health Insurance Organisations (see page 63 *et seq.*).

their system of industrial medical inspection. The International Congress on Occupational Diseases meets at Lyons from April 3rd to 6th, 1929, and the French members of the Congress have decided to organise a session devoted to occupational disease from the point of view of legislation. This Congress might be utilised as the starting-point of the group, which, after attending the sessions, would visit a few selected districts in France, Germany, Italy and Switzerland in order to make detailed studies of the systems of industrial medical inspection in actual operation. The interchange would be organised in collaboration with the International Labour Office, and the final Conference held at Geneva would be the occasion for the preparation of a report to the health administrations concerned and to the Health Committee and International Labour Office.

C. *The Protection of Milk Supply.* — The Health Committee has already expressed its views on the utility of such an interchange. In the light of these views, it is proposed to invite a small composite group of experts to study the sanitary aspects of the collection and distribution of the milk supply in districts which have reached a high state of development in this regard, as well as others in which the conditions are more primitive. The group would consist of bacteriologists and chemists engaged in milk-control work, specialised medical and veterinary officers, milk and food inspectors — in fact, of those specialists who are engaged in work having to do with the control of milk supply in the different countries. The importance of this subject was emphasised in the report on the final Conference on Rural Hygiene, which also suggested the utility of an interchange of this type restricted to the study of the milk supply. The conclusions reached by these experts as a result of their study of varying conditions and methods in the different countries would be placed before the Committee in the form of a report which should contain suggestions of value to administrations desirous of organising or improving the control of the milk supply.

D. *Sanitary Engineering.* — The sanitary engineers who participated in the Interchange on Rural Hygiene found many problems of technical interest in the programme. Among these may be mentioned :

1. The best method of sewage disposal in villages, having regard to the conditions encountered — for instance, in the Hungarian plain, where the houses are so scattered as to render systems of sewerage prohibitively costly ;
2. The most economical and safest method of constructing public cisterns, where these must be utilised for the water supply on account of lack of ground water ;
3. The most effective method of preventing the pollution of wells ;
4. The best and cheapest plan for the construction of latrines, having regard to the widely varying conditions encountered during the tour ;
5. The possibilities of developing collective water supplies for several villages ;
6. The most economical and effective system of reclaiming marshy areas.

These and other problems of technical engineering interest require thorough study by specialists, and an interchange composed of a small group of engineers might be organised for the special study of these and like problems, as well as those which arise in the unorganised areas surrounding fast-growing modern cities. From the sanitary point of view, the worst conditions are often found on the outskirts of large, rapidly growing cities, and these react on the sanitary conditions in both urban and rural areas in the neighbourhood.

An interchange for the detailed study of the most important problems of sanitary engineering in rural districts should result in a report of great interest to public health administrations and to the Health Committee.

6. *Individual Missions.*

It is proposed to continue in 1929 the policy adopted from the beginning in regard to individual missions, namely, to utilise these for the purpose of collaborating with administrations which desire to improve or reform their health services and to solve health problems of interest to two or more Governments. For the first of these purposes, it is proposed to accord a few individual missions to health administrations which call upon the Health Organisation for assistance in this respect.

7. *General "Interchange".*

No general interchange, such as was held in Germany in 1927 and in Italy this year, is proposed for 1929. Experience has shown that these require long and careful preliminary preparation, and the omission of such a collective study tour in 1929 will furnish the opportunity for that careful selection of districts and the preparation of the programme and documents so essential to the success of any such interchange proposed for 1930.

II

TECHNICAL SECRETARIAT OF COMMISSIONS AND CONFERENCES.

As the reports of the several Commissions will be presented by their respective Chairmen during the session, we have limited ourselves as regards these reports to preparing the notes circulated under document C.H.742, which have been referred to in the preamble of this report.¹

The following must be mentioned :

I. SECOND INTERNATIONAL CONFERENCE ON SLEEPING-SICKNESS.

The Second International Conference on Sleeping-Sickness will be held in Paris on November 5th, 1928, and is expected to last three or four days. Delegations from Belgium, France, Great Britain, Italy, Portugal and Spain will attend.

The Chief Health Advisers of the Colonial Ministries of these countries, or their representatives, attended an unofficial meeting in Paris, in May last, to discuss arrangements to be made for the preparation of the International Conference.

The agenda is as follows :

The Control of Sleeping-Sickness.

1. The Final Report of the Sleeping-Sickness Commission, with Special Reference to the Conclusions of Practical Importance arising therefrom.
2. Reports or Statements by Delegations attending the Conference regarding Measures taken for the Eradication or Control of Sleeping-Sickness in their Respective Territories and the Results achieved.
3. Administrative Measures for the Control of Trypanosomiasis.
4. The Progress made and the Difficulties experienced by Administrations in giving effect to the Administrative Measures recommended by the First International Conference on Sleeping-Sickness, held in London in May 1925.
5. The International Co-ordination of Campaigns for the Eradication of Sleeping-Sickness.

Research.

6. Questions necessitating further Research and Investigation in the different National Laboratories and Research Centres in Territories in Africa where Sleeping-Sickness exists.
7. The Co-ordination of such Research.
8. Veterinary Problems connected with Animal Trypanosomiasis.
9. Miscellaneous.

* * *

Reports from the British and French Colonial Ministries have already been received and are in the press ; others are expected shortly.

2. JOINT COMMISSION OF EXPERTS FOR THE STUDY OF THE RELATIONSHIP BETWEEN PUBLIC HEALTH SERVICES AND HEALTH INSURANCE ORGANISATIONS.

The Committee will remember that, in view of the complexity of the problems under consideration, it was decided that the Commission during 1928 should limit its activities to the two following questions :

1. Preventive Measures against Tuberculosis.
2. Maternal Welfare and the Protection of Children from Birth to School Age.

Since the last session of the Health Committee, the Joint Secretariat has, on the one hand, continued its work on the documentation and, on the other hand, endeavoured to bring to a conclusion the enquiries and investigations on the two problems which it has been decided to consider during 1928.

¹ These reports are the following :

Report of the Malaria Commission.
Report of the Permanent Commission for the Standardisation of Sera, Serological Reactions and Biological Products.
Report of the Commission of Experts on Infant Welfare.
Report of the Smallpox and Vaccination Commission.
Report of the Cancer Commission.
Report of the Opium Commission.
Report of the President on the Meeting of Experts on Syphilis and Cognate Subjects.
Report of the President on the Meeting of Experts on Anti-tuberculosis Vaccination by BCG.
Report of the President of the Commission on Education in Hygiene and Preventive Medicine.

A uniform questionnaire was prepared for investigation on the prevention of tuberculosis. According to the resolution of the Joint Commission, this questionnaire was so written as not to bear upon the details of the various methods corresponding to the conditions of each individual country, but on the general principles and results. The work of the institutions for the prevention of tuberculosis was analysed and classified according to six main headings :

1. Education and Training of Public Health Staff in Matters regarding Tuberculosis.
2. The Discovery and Notification of Cases of Tuberculosis.
3. Measures concerning Non-contagious Cases.
4. Measures concerning Curable Patients, classified as to whether they could or could not be educated.
5. Measures concerning Non-curable Patients, classified as to whether they could or could not be educated.
6. Protection of the Non-tuberculous.

The investigators have determined in what way this preventive work was carried out by public services, health insurance institutions and private organisations in each of the selected districts. They also tried to show the co-ordinating relationship between :

- (1) The public administration and social insurance organisations ;
- (2) The public administration and private institutions ;
- (3) Health insurance organisations and private institutions.

The enquiries which have now been brought to an end have resulted in a series of reports, which deal with Germany, Austria and Belgium. These enquiries were conducted at the same time by representatives of sanitary administrations and of health insurance institutions.

Germany. — It will be remembered that President Hamel, in agreement with Dr. Grieser, prepared a joint memorandum on the co-operation of the public services, social insurance institutions and private organisations in the prevention of tuberculosis.

Dr. Seiffert has written a report on the prevention of tuberculosis in Bavaria, where he paid special attention to the districts of Upper Bavaria (including Munich), Upper Franconia and Middle Franconia (including Nuremberg), and particularly studying the direct or indirect participation of insurance institutions in the campaign against tuberculosis.

Dr. Coerper has written a report on the campaign against tuberculosis in Cologne, where interesting methods of co-operation between public health services and health insurance institutions are applied.

Dr. Thiele has written a report on the campaign against tuberculosis in the Free State of Saxony, where the mortality due to tuberculosis is particularly small.

Finally, Mr. Legat and Dr. Wilhelm May have written a well-informed memorandum on the campaign against tuberculosis in Silesia.

Austria. — Dr. Foramitti, in agreement with the chief medical adviser of the principal workers' insurance fund, has written a voluminous and most interesting report on the prevention of tuberculosis in Vienna, in which he emphasises new administrative methods of the anti-tuberculosis campaign, particularly so far as the protection of apprentices and pupils in professional schools is concerned.

Belgium. — M. Jauniaux and Dr. Timbal have written a remarkable report which elucidates the anti-tuberculosis campaign in Belgium, and more especially in the urban district of Charleroi and the rural district of Antwerp.

All the above reports are available for the members of the Health Committee, and it should be recalled that all of them are the outcome of the co-operation of representatives of public health services and health insurance institutions.

The Secretariat, after having analysed and co-ordinated these investigations, is at present preparing a joint report on the prevention of tuberculosis.

With regard to the protection of maternity, infancy and childhood, it will be remembered that Dr. Winter's conclusions were referred for the advice of the members of the Commission. Replies and interesting suggestions were made by M. Jauniaux (Belgium), M. Ollivier (France) and Dr. Potts (Great Britain).

The Secretariat is also collecting and analysing an abundant documentation on this question.

It is possible that, as was approved by the Chairman of the Joint Commission a special Sub-Commission, composed, on the one hand, of medical advisers from the Federation of Health Insurance Organisations of five or six countries and, on the other, of health officers, will meet in Geneva before the end of the year.

The programme of work of this Sub-Commission would be as follows : co-operation between health organisations and services and health insurance institutions for furthering the growth of social medicine and the development of medical practice in social institutions in the direction of hygiene and preventive measures.

The Secretariat of the Joint Commission will provide the Secretariat of the Sub-Commission, which will make its reports to the Commission.

It is proposed, moreover, to organise in 1929 an interchange for the members of this new Sub-Commission, in order to further the accomplishment of the purpose for which the Joint Commission was established. The medical officers of health would study the practice of health insurance organisations in the field of prevention, and the medical advisers of

health insurance organisations would examine the activities of most interest carried out by the health institutions. In both cases the studies would be held in a few selected districts, particular attention being paid to those in which valuable information had already been secured on behalf of the Joint Commission. The Secretariat of such an interchange would be assured by the Joint Secretariat of the Sub-Commission already referred to.

3. LEPROSY COMMISSION.

The Leprosy Commission met after the last session of the Health Committee, and its proceedings were circulated to the members of the Health Committee on May 25th, 1928.

In pursuance of the recommendation of the Committee to the Council (fiftieth session) that the public health services of interested countries should be asked if they would be prepared to collaborate in the studies on leprosy, a circular letter was addressed to the sanitary administrations of fifty-six countries. Replies have so far been received from the Argentine, Brazil, Costa Rica, France, Mexico, the Netherlands, Norway and Paraguay.

The technical Secretariat of the Commission has been entrusted to Dr. E. Burnet, of the Pasteur Institute, who has placed his services at the disposal of the Health Committee for a sufficiently long period to enable him to collect the necessary documentation, to organise the study and to report from time to time to the Committee.

III.

STUDIES AND INVESTIGATIONS IN COURSE OF PREPARATION: ACTION TAKEN ON THE RESOLUTIONS OF THE LAST SESSION OF THE HEALTH COMMITTEE.

1. COMMISSION OF EXPERT STATISTICIANS: STUDY OF THE INTERNATIONAL LIST OF CAUSES OF DEATH AND MORBIDITY STATISTICS.

(a) *Fourth Revision of the International List of Causes of Death.*

Since the last meeting of the Health Committee, further replies have been received regarding the proposals put forward by the Expert Statistical Committee regarding the Revision of the International List of Causes of Death.

The Government of *India* expresses itself in agreement with the views put forward by responsible departments with the Government of Great Britain, which are to be found in the Minutes of the eleventh session of the Health Committee (page 126).

The Government of the Commonwealth of *Australia* considers that the 90-rubrics list is abridged beyond the limits of full usefulness for public health and medical purposes and that it would regard the adoption of such a list as a retrograde step.

The *Greek* Government has forwarded the report of the Greek national committee specially nominated for the purpose, which considers the list containing 90 rubrics as too detailed; it suggests a list containing 37 rubrics.

The Government of *Siam* has no observations or criticisms to offer.

Hitherto eighteen countries have forwarded their observations concerning the proposals of the Expert Statisticians Committee. These replies are being collated and will be discussed by the above-mentioned Committee at its next meeting.

(b) *International Uniformity in the Classification of Dead-Births by Causes.*

With regard to the resolutions of the Expert Statisticians Committee concerning international uniformity in the classification of dead-births by causes, the Greek national committee has submitted a proposed list of causes of dead-birth consisting of 12 rubrics. It does not approve the definition of dead-birth.

(c) *Morbidity Statistics.*

With regard to the preparation of a nomenclature of diseases suitable for adoption for the purpose of securing accurate statistics of sickness, Dr. Berardinis, under the direction of Professor Gini, has studied the present position of morbidity statistics in *Italy*, and the results of his enquiry, together with more important nomenclatures in use in hospitals, lunatic asylums, social and sickness assurance organisations, railways and the armed forces, have already been received.

The *Greek* national committee has forwarded an abridged list of causes of sickness 44 in number, together with a detailed statement of the pathological conditions to be included in each item.

The Health Section is at present engaged in a study of the morbidity statistical records of *Switzerland*.

Dr. Roesle has completed a study of the frequency of morbidity by causes and by sex based on the records of the sickness insurance organisations of *Leipzig, Berlin, Hungary* and the Government of *Moscow*. This report is at present in the press and will be available shortly.

2. DANGERS RESULTING FROM THE USE OF X-RAYS.

A circular letter was addressed to public health services communicating the resolution adopted by the Health Committee and asking them for information concerning the laws and regulations on this subject in their countries, as well as the measures already in force or envisaged, to obviate the dangers referred to.

The health authorities of Australia, Canada, Denmark, England and Wales, Greece, Japan, Poland, Sweden and the Union of South Africa have replied that no special laws or regulations at present exist on this subject.

Special Commissions to study the subject have been instituted in *Australia, Denmark, Germany, Greece and Norway*. The industrial Hygiene Division of the Department of Public Health of *Australia* is also conducting an enquiry into the matter. The proposals of the Swedish X-Rays and Radium Protection Committee regarding protective measures in radiological work are also under consideration by the Directorate of Public Health and Medical Service of *Sweden*. Their recommendations and any action taken will be brought to the attention of the Health Committee in due course.

In addition, the public health authorities of *Norway* and *Germany* have transmitted regulations laid down in their respective countries regarding the use of X-rays, in order to obviate the dangers arising therefrom.

Information has been received from *England* that, although no statutory regulations on the matter are in force in that country, most of the hospitals and responsible institutions accept in practice the stipulations recommended by the X-Rays and Radium Protection Committee.

3. SURVEY OF HEALTH CONDITIONS IN THE ISLANDS OF THE PACIFIC.

This enquiry, which has been entrusted to Dr. Cilento and Dr. Hermant, whose services have been placed at our disposal by the kindness of the health administrations of the Commonwealth Government and of French Indo-China respectively, will commence at the end of October. Dr. Hermant sailed for Australia on September 21st. As stated in previous reports, the enquiry will be confined to Papua, New Guinea, the New Hebrides, New Caledonia, the Solomon Islands and Fiji.

4. ACTION TAKEN ON THE RECOMMENDATIONS OF THE INTERNATIONAL RABIES CONFERENCE, 1927.

Letters have been addressed to all anti-rabies institutes requesting them to be good enough to submit yearly reports on results of treatment, and enclosing for the purpose a schedule drawn up for us by Colonel A. G. McKendrick taking account of observations made at the International Conference regarding this matter. The response to this request has been very favourable, reports on results of treatment carried out during 1927 having already been received from institutes in Austria, Ceylon, Czechoslovakia, Finland, Hungary, India, Italy, Latvia, Morocco and the Kingdom of the Serbs, Croats and Slovenes.

All anti-rabies institutes represented at the Conference have been asked if they would be prepared to co-operate in an enquiry into the rabicidal action of the serum of man and animals during and after anti-rabies treatment, and in a preliminary enquiry into strains of fixed virus used in their respective institutes, this being the first step in the study of the plurality of strains of fixed virus and of the possibility of arranging for the supply to all anti-rabies institutes of a strain of fixed virus of high protective value.

5. YELLOW FEVER : LETTER FROM THE BELGIAN GOVERNMENT.

The chief health advisers of the Colonial Ministries of Belgium, France and Great Britain met on July 19th in Paris for a preliminary exchange of views with regard to the letter received by the Secretary-General of the League of Nations from the Belgian Minister of Foreign Affairs concerning the prevalence of yellow fever in Africa.

At this meeting, Dr. Lasnet explained the circumstances in which a Conference was convened at Dakar on May 1st, 1928, to discuss the yellow fever situation, and gave an interesting résumé of the work that had been done by that Conference and the resolutions adopted. It was agreed that it would be well to study in detail the resolutions and proceedings of that Conference before deciding upon the measures that might best be taken to comply with the Belgian Government's request. A further reason for delay was the promise given by recent research that we should have at our disposal in the near future a vaccine capable of conferring a high degree of immunity against the disease. It was hoped that the presence

of the chief health advisers of the Colonial Ministries interested at the forthcoming International Sleeping-Sickness Conference might be utilised for further informal discussion regarding this question.

6. EUCODAL AND DICODIDE.

Up to the present (September 13th, 1928), the twenty-four countries mentioned below have expressed their willingness to accept eucodal and dicodide as being subject to the International Opium Convention of February 19th, 1925 :

Portugal	Letter of February 9th, 1928
Sudan	" " 15th, "
Latvia.....	" March 1st, "
Austria	" " 3rd, "
Nicaragua	" " 10th, "
Netherlands	" " 12th, "
Belgium	" " 13th, "
Switzerland	" " 13th, "
Luxemburg	" " 14th, "
Bulgaria	" " 19th, "
Germany	" April 10th, "
British India	" " 17th, "
Poland	" " 18th, "
Great Britain	" May 5th, "
Canada	" " 8th, "
Czechoslovakia	" " 12th, "
Brazil	" " 23rd, "
Siam	" " 28th, "
New Zealand.....	" June 14th, "
South Africa	" " 16th, "
Australia	" " 18th, "
Dutch East Indies, Surinam and Curaçao	" " 19th, "
Japan	" July 11th, "
Danzig	" " 31st, "

Spain confined itself to acknowledging receipt of our circular letter (February 3rd, 1928). *Hungary* considers that eucodal and dicodide should not come under the provisions of the Convention.

7. PROTECTION OF THE BLIND.

Up to the present (September 13th, 1928), the nineteen countries mentioned below have sent us the documentation requested :

Australia	Hungary	New Zealand
Canada	Irish Free State	Norway
Costa Rica	Italy	Poland
Denmark	Latvia	Siam
France	Luxemburg	Sweden
Germany	Netherlands	United States of America
Greece		

Spain, *Japan*, the *Union of Socialist Soviet Republics*, the *Union of South Africa* and *Uruguay* have acknowledged our letter and are preparing for us the information requested.

IV.

PUBLICATIONS.

Commencing January 1st, 1928, a monthly bulletin of all documents distributed (either printed or roneoed) has been sent regularly to the members of the Health Committee.

In this chapter a list of printed publications¹ issued since the beginning of the year is given.

I. SERVICE OF EPIDEMIOLOGICAL INTELLIGENCE AND PUBLIC HEALTH STATISTICS.

Periodicals.

1. *Weekly Record* (bilingual), Nos. 97-139.
2. *Monthly Epidemiological Report* (bilingual), Nos. 110-119 (approximately 40 pages each).

¹ Unless otherwise stated, all the above documents have also a French edition.

3. *Annual Epidemiological Report* (E.I.12). Fifth Epidemiological Report of the Health Section for the year 1927. (In the press.)
4. *Weekly Fasciculus* (bilingual), Nos. 148-191. (Epidemiological intelligence received from the Singapore Bureau.)

Series.

1. *Statistical Handbooks*:
C.H. 669. — Official Vital Statistics of Switzerland, by Dr. Marcel Ney in collaboration with Dr. H. Carrière.
1 volume. Size: 18.5×24 cm. 88 pages. May 1928.
2. *Handbooks on the Organisation and Working of Public Health Services in Various Countries*:
C.H. 683. — Public Health Services in New Zealand. (Part II of this brochure gives information on the vital statistics of the Dominion of New Zealand, pages 43-84.)
1 volume. Size: 18.5×24 cm. 84 pages. July 1928.
3. *International Health Year-Book*.
C.H. 599. — International Health Year-book 1927 (Third Year). Reports on the public health progress of twenty-seven countries in 1926.
1 volume. Size: 18.5×24 cm. 801 pages. February 1928.
C.H. 733. — International Health Year-book 1928 (Fourth Year). Reports on the public health progress of various countries in 1927. (In preparation.)

II. SPECIAL STUDIES AND INVESTIGATIONS.

(a) *International Commission for the Study of Sleeping-Sickness.*

- C.H. 629. — Final Report of the League of Nations International Commission on Human Trypanosomiasis.
1 volume. Size: 19.5×25 cm. 392 pages. April 1928.
- C.H. 743. — Preliminary Reports for the Second International Conference for the Study of Sleeping-Sickness to be held in Paris on November 5th, 1928. (In proof form: Memoranda of the various Governments concerned.) (In preparation.)

(b) *Malaria Commission.*

- C.H./Malaria/100. — Programme of the Malaria Course for 1928 (Third Year).
1 booklet. Size: 16×23.5 cm. (31 pages.) (Mixed French-English-German-Italian.) March 1928.
- C.H./Malaria/121. — Report on the Work of the Malaria Commission at the Conference held in Geneva, June 25th to 29th, 1928.
1 brochure. Size: 18.5×24 cm. (22 pages.) July 1928.

(c) *Permanent Commission on Standardisation of Sera, Serological Reactions and Biological Products.*

- C.H. 717. — Report of the Permanent Commission on Standardisation of Sera, Serological Reactions and Biological Products on the Conference held in Frankfort-on-Main from April 25th to 28th, 1928.
1 fasciculus. Size: 21×33 cm. (8 pages.) May 1928.
- C.H. 726. — Report on the Work of the Laboratory Conference on the Sero-diagnosis of Syphilis held at Copenhagen, May 21st to June 4th, 1928.
(In proof form — Extract No. 1: Resolutions of the Conference: 1 fasciculus, 16×24.5 cm. 8 pages. June 1928.) Extract No. 2: Tables showing the results of the various serological methods. (In preparation.)
- C.H. 734. — Memoranda on Cardiac Drugs, Thyroid Preparations, Ergot Preparations, Filix mas, Suprarenal Preparations, Vitamins, Pituitary, Salvarsan, Oil of Chenopodium, Insulin, by Professor Knaffl-Lenz (Vienna).
1 volume. Size: 15.5×24 cm. (69 pages.) August 1928. (English only.)

(d) *Commission on Smallpox and Vaccination.*

- C.H. 739. — Report of the Commission on Smallpox and Vaccination on the Session held at Geneva from August 22nd to 25th, 1928.
1 fasciculus. Size: 21×33 cm. (12 pages.) September 1928.

(e) *International Rabies Conference.*

- C.H. 531 (1). — Reports on the Work of the International Rabies Conference held at the Pasteur Institute, Paris, from April 25th to 29th, 1927; organised by the Health Organisation of the League of Nations.
1 volume. Size: 16×24 cm. (171 pages.) January 1928.

(f) *Interchanges of Public Health Personnel.*

C.H. 691. — Health Organisation in British India.

1 volume. Size: 18.5×24.5 cm. (388 pages.) March 1928. (English edition only.)

C.H./E.P.S./136. — Collective Study Tour organised by the Health Organisation of the League of Nations in the Baltic and North Sea Ports from September 12th to October 13th, 1926.

1 volume. Size: 18.5×24 cm. (17 pages.) July 1928.

C.H./E.P.S./144. — L'Hygiène publique en Italie. — Forty-eight Lectures that will be given in Italy to the Public Health Officers of Nineteen Countries during the Public Health Interchange organised by the Health Organisation of the League of Nations from September 16th to November 10th, 1928.

1 volume. Size: 13×20 cm. (308 pages.) August 1928. (French only.)

(g) *Health Experts on Infant Welfare.*

C.H. 737. — Report on the Conference of Health Experts on Infant Welfare held in London on July 3rd, 4th and 5th, 1928.

1 fasciculus. Size: 21×33 cm. (6 pages.) September 1928.

(h) *Meeting of Experts for the Study of Vaccination Against Tuberculosis by the BCG Vaccine.*

C.H. 745. — Report of the Technical Conference for the Study of Vaccination against Tuberculosis by the BCG Vaccine, held at the Pasteur Institute, Paris, October 15th to 18th, 1928. (In course of preparation.)

III. SPECIAL STUDIES.

C.H. 681. — The Food of Japan, by Egerton Charles Grey.

1 volume. Size: 16×24 cm. (161 pages.) July 1928. (English only.)

IV. MINUTES OF SESSIONS OF HEALTH COMMITTEE, REPORTS AND CONSTITUTIONAL QUESTIONS.

(a) *Geneva Office.*

C.579.M.205.1927.III. — Minutes of the Eleventh Session of the Health Committee, held at Geneva from October 28th to November 3rd, 1927.

1 volume. Size: 21×33 cm. (181 pages.) January 1928.

C.254.M.79.1928.III. — Minutes of the Twelfth Session of the Health Committee, held at Geneva from April 30th to May 5th, 1928.

1 volume. Size: 21×33 cm. (125 pages.) July 1928.

A.10.1928.III (C.H.682). — Annual Report of the Health Organisation for 1927.

1 fasciculus. Size: 21×33 cm. (60 pages.) February 1928.

A.6 and A.6 (a). 1928 (Extract No. 2). — Secretary-General's Report to the Ninth Ordinary Session of the Assembly of the League of Nations on the Work of the Council, on the Work of the Health Organisation since the last Assembly and on the Measures taken to carry out the Decisions of the Assembly.

1 fasciculus. Size: 21×33 cm. (12 pages.) September 1928.

A. 57 (1). 1928. — Report of the Second Committee to the Assembly on the Work of the Health Organisation during the last twelve months (October 1927-September 1928). Rapporteur: Professor John M. O'Sullivan (Irish Free State).

1 fasciculus. Size: 21×33 cm. (4 pages.) September 1928.

A.72.1928. — Report of the Second Committee to the Assembly on the Question of Alcoholism. Rapporteur: M. de Porto Seguro (Chile).

1 leaflet (bilingual). Size: 21×33 cm. September 1928.

(b) *Eastern Bureau.*

C.179.M.55.1928.III (C.H. 705). — Annual Report for 1927 and Minutes of the Third Session of the Advisory Council, held in New Delhi from December 26th to 29th, 1927.

1 fasciculus. Size: 21×33 cm. (67 pages.) April 1928.

ANNEX 2.

C.H.765.

Geneva, October 1928.

**PROPOSAL BY PROFESSOR LÉON BERNARD CONCERNING THE INCLUSION
IN THE COMMITTEE AGENDA (IN ACCORDANCE WITH ARTICLE IV OF THE
RULES OF PROCEDURE) OF THE QUESTION OF NUTRITION.**

The question of nutrition is one of the foremost problems of the day, and is connected in so many ways with health problems that it seems essential for the League's Health Organisation to devote attention to it, more especially because, in so many of its aspects, this question deserves or requires to be considered from an international standpoint.

The problem of nutrition is a many-sided one, and its different aspects have engaged the attention of various competent authorities: the quantity of the world's food resources in relation to the world's population influences demographic theories; the utilisation and distribution of foodstuffs in accordance with the nations' requirements raise problems of an economic and even a political nature. But both these aspects of the question, which do not appear to be within the scope of our Organisation, should rest on a scientific basis and on social enquiries which, notwithstanding the investigations made by many institutions and authorities, have not yet led to any definite conclusions. Investigations of this kind would appear to be within the scope of our activities, and we could at all events endeavour to co-ordinate the results obtained in different countries.

The scientific data indispensable for the advance of our knowledge on this fundamental question, which is of capital importance for the progress and welfare of mankind, belong to the field of biochemistry. The determination of the standard food ration, of its essential composition, the nature and value of vitamins, the minimum limit as regards the quantity and quality of food indispensable for the preservation of health — these are all questions which are still keenly contested.

No doubt one of the reasons for these controversies which prevents this question from being settled lies in the fact that biochemical data are not identical either for the various social sections of a population or for the various peoples and races of the world. It is on this point that a social investigation should be undertaken among the various nations in the West as well as in the East and Far East. Such an enquiry should not only provide accurate data regarding the scientific aspect of the problem but should also help to establish certain principles which would be of the greatest value for the education of the peoples in matters of diet.

I do not pretend to deal with the substance of the problem. I only desire to draw attention to its highly interesting nature and indicate its main features. I do not know whether its study is likely to lead to definite and certain conclusions, but is the issue ever known when a new problem is being attacked?

The investigations undertaken by scientists during the war among the two groups of belligerents have shown sufficiently that at least some useful results may be anticipated. And the suggestion which I made just now that it would be for the Health Organisation of the League of Nations to collect the existing documentary information to establish contact between the various national centres of investigation which are dealing with this question, and perhaps to enlist the help, in a spirit of international co-ordination, of some of the Schools of Hygiene with which it is in touch, would appear to me to represent a minimum programme. Such a programme could not give rise to any difficulties and would have the advantage of demonstrating to the scientific world that we are not indifferent to this problem; it would for these various reasons appear to me to deserve your approval.

Indeed, to-day I am only asking you to approve in principle, that the Secretariat should be authorised to undertake a preliminary study of the problem on the general lines I have just indicated, the results of which would be embodied in a report to be submitted to us at a forthcoming session of the Committee.

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LEAGUE OF NATIONS.

ANNUAL REPORT

OF THE

HEALTH ORGANISATION

FOR 1928

The present report covers the work of the Health Organisation of the League of Nations during 1928, and is the fourth of a series prepared by the Health Section to give effect to a resolution adopted by the Health Committee in April 1925.

Series of League of Nations Publications

III. HEALTH ✓
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Chapter I.

I. INTRODUCTION.

A large number of international health studies and conferences took place in 1928. During January and February, a group of Far-Eastern Health Officers undertook a collective study of public health organisation and practice in India, following immediately on the session of the Advisory Council of the Singapore Bureau held in the closing days of 1927.

In April, a session of the Permanent Standards Commission and associated experts was held in Frankfurt. Important decisions defining international standards in the fields of serology and pharmacology were reached. The Health Committee also met in April and the beginning of May and this opportunity was taken to hold a session of the Cancer Commission.

During the May meeting of the Office international d'hygiène publique, two Commissions of the Health Committee of the League met in Paris—the Leprosy Commission and the Commission on the Fumigation of Ships.

The Second Laboratory Conference on the Serodiagnosis of Syphilis was held at Copenhagen in May and June for the purpose of comparing the various flocculation reactions, the use of which has become so widespread in recent years, and to compare their results with those of the Wassermann reaction.

In May, the first interchange for the study of rural hygiene problems began in Dalmatia. This took place in selected rural areas of six countries: Kingdom of the Serbs, Croats and Slovenes, Hungary, Germany, Netherlands, Belgium and France.

The malaria courses organised in Hamburg, Paris and Rome were held in May, June and July, and were followed by field work in July and August in Spain, Italy and the Kingdom of the Serbs, Croats and Slovenes.

An important Malaria Conference was held at Geneva in June for the purpose of securing general agreement among malariologists on the principles and methods of anti-malaria work. The Conference advised the inauguration of a series of international studies on malaria under the auspices of the Health Organisation of the League.

A general interchange of public health officers in Italy began on September 16th and ended on November 9th.

In October, a number of experts on syphilis met at Geneva and drew up a programme of international study designed to evaluate the results of treatment by means of a statistical analysis of dispensary records.

During the same month, a technical Conference was held in Paris for the study of vaccination against tuberculosis by means of BCG.

The thirteenth session of the Health Committee was held at Geneva during the closing days of October.

Early in November, the Second International Conference on Sleeping-Sickness was held in Paris. The first Conference, held in London, resulted in the despatch of an International Sleeping-Sickness Commission to Africa; the second was called to consider the report produced by that Commission. An informal Conference of medical advisers to the Colonial Ministries concerned had been held in Paris in May.

The first session of the Sub-Commission on Preventive Medicine was held in Geneva in December, to study the methods to be employed in preventive medicine, account being taken of the part played by the public health services, private health agencies and health insurance institutions.

In addition to the above, various committees met during the year: *i.e.*, the Sub-Committees for Radiotherapy of Cancer and Occupational Cancer, the Commissions for Opium, Smallpox and Vaccination, and the Health Experts on Infant Welfare.

The work of the Health Organisation was, as usual, reviewed by the Council and the Assembly.

II. COUNCIL DECISIONS ON THE WORK OF THE HEALTH ORGANISATION

The work done by the Health Committee and its Commissions is considered in the chapters relating to the different subjects which are being dealt with by the Health Committee.

Reports on the work of the Health Organisation were considered by the Council during its forty-ninth, fiftieth, fifty-first and fifty-third sessions.

During the forty-ninth session, the Council decided that 83,000 francs of the sum of 100,000 francs set aside by the Assembly for technical investigations to be undertaken in Latin America should be appropriated for technical co-operation with public health and medical authorities in Latin-American countries. For the continuation of the Infant Mortality Enquiry in co-operation with the Governments of the Argentine, Brazil, Chile and Uruguay, 65,000 francs were set aside, and 18,000 francs for the sending of foreign experts and for providing fellowships in 1928 in connection with the School of Public and Health the Leprosy Centre at Rio de Janeiro.

The Council accepted the generous proposal of the International Health Division of the Rockefeller Foundation to restore its previous grant of 50,000 dollars towards the Interchange of Public Health Personnel during 1928.

During its fiftieth session, the Council thanked the Rockefeller Foundation for an increase in its grant for the Epidemiological Intelligence Service and Public Health Statistics, this increase being set aside for a systematic collection of documents and archives.

M. Adatei, delegate of Japan, read a report on the work of the Health Committee, which, among other matters, mentioned the offer to the Bulgarian Health Administration of the services of a member of the Health Section for health work necessitated by the Bulgarian earthquake. The delegate of Italy thought that the help given to Bulgaria had been very effective and he thanked the Secretariat on behalf of those peoples who lived in parts of the world which were liable to similar catastrophes.

At the fifty-third session of the Council, a report was presented by M. Quiñones de León, representative of Spain, describing the action of the Health Organisation in placing at the disposal of the Greek Government, in connection with the recent dengue epidemic, the services of a member of the Health Section, and the request of the Greek Government to the Health Committee for assistance in reorganising the public health services of Greece.

After a discussion, in which the Greek representative explained the needs of his Government and the President and the Italian representative supported the Rapporteur's proposal, the Council agreed that the Health Organisation should co-operate in reorganising public health services in Greece.

III. DECISIONS OF THE ASSEMBLY ON THE WORK OF THE HEALTH ORGANISATION.

A report on the work of the Health Organisation was presented to the Assembly at its ninth ordinary session and discussed by the Second Committee.

The delegate of Italy, M. Alfieri, said that Italy had shown its interest in the work of the Health Organisation by sending its best experts to technical committees and conferences convened by that Organisation. Referring to the interchange of public health officials which would take place in Italy during September and October, he said that the programme prepared would allow the visitors to gain a general as well as a detailed idea of the public health progress which had been made in Italy.

The delegate of Japan thought that the Eastern Bureau at Singapore, by means of which the League was in constant contact with the Far East, had rendered signal service to the various administrations, not only in Oriental countries but throughout the world. He held the view that the interchanges of public health officials were particularly useful, in that they permitted experts from the East to meet their Western colleagues and extend their knowledge.

The delegate of Australia promised the members of the mission to investigate health conditions in the Pacific Islands every assistance from the Australian Government, believing that the results of the enquiry would be valuable and that it would lead to increased knowledge of many health problems with which no island group could cope single-handed. He congratulated the Health Organisation on the prompt action it had taken on the recommendations of the International Health Conference in Melbourne and on those of the Assembly at its eighth ordinary session.

The delegate of India pointed out the importance of rural hygiene to his country. He praised the work of the Eastern Bureau at Singapore, and stated that India attached great importance to the interchange of public health officials, in which health officials of India had participated. Malaria was the most serious disease in his country, affecting not only public health but also the economic conditions.¹ India came into real contact with the League of Nations through its Health Organisation, and the people of India were grateful for the work of that Organisation.

The delegate of Poland referred particularly to rural hygiene, and held that, contrary to popular opinion, mortality in many countries was higher in rural districts than in towns. After giving figures to show the importance of focusing attention on rural hygiene, he recommended that problems concerning health and repopulation should receive the special attention of the League; the Health Organisation already possessed useful material for work on these lines.

The delegate of Spain considered that the system of interchanges was one of the most effective means of strengthening the relations between the health services of different countries. He particularly recommended the study of problems concerning rural hygiene and hoped that such a study would be made in Spain.

Professor O'Sullivan hoped that no financial consideration would be allowed to hinder the work of the Health Organisation.

The Assembly adopted the report of the Second Committee (document A.57(1).1928.III) and the following resolution:

“The Assembly:

“Having taken note of the reports (documents A.6.1928 and A.6(a).1928) dealing with the work of the Health Organisation of the League during the past year,

“Is gratified at these evidences of its increasing utility as an agency for the promotion of international collaboration in matters affecting the public health;

“Expresses its appreciation to all the health administrations of the various Governments which have generously collaborated with the Health Organisation in the different branches of its work;

“Records its gratitude for the services rendered by the members and experts of all the commissions and conferences of the Health Organisation, as well as the specialists and experts who have carried out individual missions;

“Approves the work accomplished by the Health Organisation since the eighth ordinary session of the Assembly, and congratulates it on the increasing success of its far-sighted policy of practical collaboration with extra-European countries.”

With regard to the question of alcoholism raised by the Finnish, Polish and Swedish delegations, the Assembly adopted a resolution affecting the Health Organisation, to which reference is made in Chapter VIII of this report.

¹ The Malaria Commission of the Health Organisation, on the invitation of the Government of India, will visit India in 1929 to make a study of the malaria situation.

Chapter II.

I. THE SERVICE OF EPIDEMIOLOGICAL INTELLIGENCE AND PUBLIC HEALTH STATISTICS.

A. GENEVA.

The main developments in the Service of Epidemiological Intelligence and Public Health Statistics in 1928 may be summed up as follows :¹

1. From June 21st, the Health Organisation has published in its *Weekly Record* the official *communiqué* of the Office international d'hygiène publique, in accordance with the provisions of the International Sanitary Convention of 1926, and the agreement concluded by the Health Committee with the Permanent Committee of the Office.

2. There was a substantial increase in the amount and importance of the information submitted to Singapore and Geneva in telegraphic form. It is clear that such rapid notification is becoming a routine procedure with an ever-increasing number of sanitary administrations.

3. Since June 1st, the abundant intelligence reaching Geneva has warranted the publication of multigraphed bulletins several times a week to supplement the *Weekly Record* and thus supply still more recent information to the sanitary administrations. The epidemic of influenza in the United States late in 1928 was fully reported in the *Weekly Record* and daily bulletins, owing to the kindness of Surgeon-General H. S. Cumming, who arranged for the dispatch of frequent detailed cablegrams.

4. The improved method of presenting material in the Monthly Epidemiological Reports resulted in a considerable economy in space (nearly fifty per cent), which permitted the addition of special reports on syphilis, smallpox, mortality and natality in various countries, the movement of infected ships between ports in communication with the Singapore Bureau, typhoid fever mortality, mortality from *encephalitis lethargica* and geographical distribution of diphtheria and scarlet fever mortality in Europe.

5. The epidemic of dengue in Greece aroused much interest in neighbouring countries. Telegrams were sent to countries in the Mediterranean area, showing the progress of the disease in Greece and requesting information on any outbreak of the disease.

B. EASTERN BUREAU AT SINGAPORE.

In the Annual Report for 1927, reference was made to the fact that practically all important ports in the area (with the exception of Chinese ports) were in weekly telegraphic communication with the Eastern Bureau. Under these conditions, only a few additions could be anticipated in 1928. The new ports added to the list during the year were as follows : Pnom-Penh (Indo-China), Kenjam (Persian Gulf), Jask (Gulf of Oman).

Progress was also made in securing information from Chinese ports. The port health officer of Swatow resumed the despatch of a weekly return by post, as telegraphic communication was unreliable. The President of Amoy University agreed to supply information concerning the Chinese section of that city. The Commissioner of Customs of the port of

¹ For further details, see documents C.H.690, C.H.747, C.254.M.70.1928.III, C.555.M.175.1928.III, C.3.M.3.1929.III.

Hoihow was approached with a view to obtaining regular information, Hoihow being an important port of emigration. The port health officer of Tientsin agreed to supply information to the Bureau whenever smallpox is epidemic. The Bureau has communicated with the Bureau of Public Health created in Nanking by the Nationalist Government, and steps are being taken to establish contact with the Ministry of Health.

As the quarantine service of the Persian Gulf ports was taken over by the Persian Government on August 4th, the Bureau asked the Persian Health Department to exchange epidemiological information, and, since August 16th, the chief quarantine officer at Bushire has been despatching such information regularly by telegraph.

On several occasions requests for information addressed to health administrations in compliance with enquiries from other administrations in regard to a rumoured outbreak of an epidemic disease elicited prompt replies. Two plague outbreaks (at Amoy and Perim) not previously notified to the Bureau were disclosed by this means.

The presence of plague-infected rats was reported from twelve Eastern ports during the year. In its first resolution adopted last year, the Advisory Council suggested that more accurate information on the exact place of capture of such rats should be secured. Accordingly, the number of infected rats found in Indian ports and the place of their capture have been indicated since the beginning of July in the weekly cable despatched to the Bureau by the public health services of India. The sanitary administrations of Madagascar, Kenya, Ceylon and Indo-China have also made use of the symbols provided in the AA Code for this purpose (indicating whether caught on ships at the quay, on the quay itself, in the town, etc.) when reporting the presence of infected rats in the ports of Tamatave, Mombasa, Colombo and Saigon.

INFORMATION RECEIVED BY POST.

The following additions to the list of countries reporting regularly by post were made in 1928: Australia, Madras, Mozambique, Rangoon and Sumatra.

DISTRIBUTION OF EPIDEMIOLOGICAL INTELLIGENCE BY WIRELESS BROADCASTS.

The number of wireless stations broadcasting the weekly bulletins prepared by the Eastern Bureau has remained unchanged,¹ but 29 health administrations have picked up the message, as opposed to 25 in 1927. During the first half of the year, atmospheric (static) interfered to some extent with reception, necessitating the despatch of cables to certain administrations which ordinarily experienced no difficulty of this kind. The re-broadcasting of the message by the wireless station at Antananarivo enabled the Bureau to dispense with its weekly cables to Dar-es-Salaam (formerly re-transmitted from Zanzibar), Berbera, Zanzibar, Mogadiscio, and Asmara, along the East African coast.

The length of the wireless message was increased by 25 per cent, due to the larger number of ports in communication with the Bureau (24 in 1928, as against 16 in 1927), to the inclusion of information on quarantine measures, and to information of interest to the East received from ports outside the area of the Bureau and retransmitted by Geneva. Moreover, it was necessary to include the formal notifications received by Singapore acting as a regional bureau for the purposes of the International Sanitary Convention.

BROADCASTING IN CLEAR FOR THE BENEFIT OF SHIPPING.

A summary of the weekly message prepared by the Eastern Bureau is broadcast in clear by Bandoeng, Madras, Karachi and Tokio for the benefit of shipping. At the request of several shipping companies, which desired to have the message in clear repeated by stations along the China Sea, the wireless stations at Sandakan and Shanghai consented to broadcast in clear instead of in code as heretofore. The Director of Medical and Sanitary Services, Hong-Kong, has agreed to request his Government to allow the use of Gap Rock Station for broadcasting the weekly message. Italian Somaliland has also been asked to give similar facilities, in order to provide information for shipping along the East African Coast.

INFORMATION RECEIVED AND DISTRIBUTED.

The information distributed by the Eastern Bureau at Singapore in 1928 relates to 148 Far-Eastern ports. The number of weekly cables used for transmitting the weekly bulletin to administrations which could not pick up the wireless was 11 in 1928, as compared with 14 in 1927.

¹ Karachi (India), Malabar (at Bandoeng in Java), Saigon (Indo-China), Antananarivo (Madagascar), Nauen (Germany).

REPORTING OF SHIPS HAVING ON BOARD PATIENTS WITH INFECTIOUS DISEASES.

There were 160 ships reported as having on board patients suffering from one or other of the following infectious diseases : smallpox, plague, cholera, diphtheria, influenza, typhus, scarlet fever, pneumonia, and a few diseases of children. The Bureau notifies the next port of call by telegraph in cases of plague, cholera or smallpox. It may be of interest to mention the case of a ship whose officers failed to pick up the message in clear and allowed their emigrant passengers to land at a port infected with cholera. The disease broke out on board and caused a delay of 29 days in quarantine.

PUBLICATIONS OF THE EASTERN BUREAU.

The *Weekly Fasciculus* now contains similar material to that issued in the weekly and monthly publications of the Health Organisation at Geneva. Special reports of interest were published, such as seven reports on the plague epidemic in Aden received from the Public Health Commissioner with the Government of India, and on plague in Inner Mongolia from the North Manchurian Plague Prevention Service. Information received from the Australian Director-General of Health relating to the Austral Pacific Zone was also published, as well as accounts of the epidemic of dengue in Greece.

The *Weekly Fasciculus* is now the only periodical publication of the Eastern Bureau.

THE EASTERN BUREAU AS A REGIONAL BUREAU UNDER THE TERMS OF THE INTERNATIONAL SANITARY CONVENTION.

Since April 15th, 1928, the clauses of the Agreement reached between the Health Committee and the Permanent Committee of the Office international d'hygiène publique in regard to the use of the Eastern Bureau as a regional bureau for purposes of the International Sanitary Convention have been in force. An attempt is being made to complete the list of countries which desire to be associated with the Bureau for the purposes of the Convention, and to the list annexed to the agreement should be added the following, which have expressed their willingness to be included : Madagascar, Iraq, Tanganyika, Australia, Philippine Islands and Fiji. Negotiations with a number of other countries are still pending.

The enforcement of the Agreement at first added considerably to the expense of cabling, but now a less expensive system has been evolved, notifications provided for by the Convention being included in the weekly broadcast messages and in the *Fasciculus*. The associated health administrations have been asked to indicate the countries situated outside the Bureau's area whose notifications should be forwarded to them by cable or telegram as soon as received. A number of administrations have specified the area in regard to which they desired to be informed by wire, and others have left this to the discretion of the Bureau.

THE MOVEMENT OF PILGRIMS.

An understanding arrived at by the President of the Sanitary Council of Egypt and the Director of the Eastern Bureau provides for a rapid exchange of information concerning pilgrims, in accordance with sections 6 (§ 3), 12 and 16 of the Convention. The Eastern Bureau reports on the precautionary measures taken before the departure of pilgrims and makes a weekly statement on the health conditions of pilgrim ships returning to the Far East. In return, the Sanitary Council of Egypt at Alexandria forwards weekly to the Eastern Bureau by cable all information received from Hejaz during the pilgrimage. Should cholera break out, the Bureau is informed at once.

CO-ORDINATION OF MEDICAL RESEARCH WORK IN THE FAR EAST.

Oral Vaccination. — Experiments on the value of oral vaccination against cholera were begun in September 1928 by Professor de Mello, Director of the Sanitary Services in Portuguese India, and by Dr. Labernadie, the Chief of the Bacteriological Laboratory at Pondicherry. Professor K. Shiga has used the oral route in vaccinating dysentery contacts at Chosen and will report to the Bureau. Oral vaccination is also being tested in Siam.

Three lists of publications on oral vaccination, containing the complete texts or extracts of fifty-six recent papers on this subject, were distributed by the Eastern Bureau to those practising this vaccination in the Far East.

PLAGUE.

In 1927, the Plague Commission drew up a programme of research on plague, which was communicated to the several administrations. Replies have been received from Siam, Hong-Kong, Indo-China, Union of South Africa, Sanitary Maritime and Quarantine Council of Egypt, Australia, Ceylon and the Netherlands East Indies, indicating that the respective sanitary administrations have begun work on a number of the items in the programme, and that information on the progress of the studies will be communicated to the Bureau, which will co-ordinate the work. The competent services in North Borneo, Iraq, the Sudan and Tanganyika have not considered it possible to take part in this work on account of the relative insignificance of plague in their territories and their lack of facilities.

ENQUIRY INTO THE VALUE OF QUARANTINE STATIONS.

In compliance with a resolution of the third session of the Advisory Council (document C.179.M.55.1928.III, Resolution 7, page 51) a letter was addressed in July 1928 to various Far-Eastern Health Administrations requesting their co-operation in the enquiry on the value of quarantine stations. Only a few replies have so far been received.

LIAISON BETWEEN FAR-EASTERN MEDICAL LABORATORIES.

The Eastern Bureau has endeavoured to act as a link between Eastern laboratories engaged in similar work. It has arranged for the exchange and comparison of dried vaccinal lymph between the Pasteur Institutes of Saigon and Bandoeng; cultures of *B. pestis* were collected from the Municipal Laboratory of Singapore and the Institute for Medical Research, Federated Malay States, and despatched to the Bacteriological Laboratory of the Commonwealth of Australia. The bureau arranged for the Institutes at Saigon and Bandoeng to supply strains of *B. anthracis* to the Federated Malay States Institute, and also distributed anti-cholera bacteriophage.

ACTION OF THE HEALTH COMMITTEE.

During its twelfth session, the Health Committee approved the report on the work of the third session of the Advisory Council, held at New Delhi from December 26th to 29th, 1927, and the annual report of the Eastern Bureau for 1927 (document C.179.M.55.1928.III) and they were referred to a Commission, which presented a number of resolutions for approval. These were adopted by the Committee and later approved by the Council (document C.254.M.79.1928.III, Resolutions 4 and 5, and document C./50th Session/P.V.I(1)2174).

The Committee desired to place on record its appreciation of the continual growth of the Bureau's activities, and its thanks to Colonel Graham, the Chairman, and all members of the Advisory Council for the work they had done on behalf of the Health Organisation.

The Committee expressed its gratitude to the administrations which had contributed financially to the upkeep of the Bureau, and to those which had provided wireless facilities for the distribution of epidemiological intelligence.

With regard to the resolutions adopted by the Advisory Council concerning co-ordinated research, the Committee attached special importance to the recommendations dealing with :

1. Information on the value of the quarantine stations of the East.
2. The enquiry into the efficiency of oral vaccination.
3. The investigation of rat and flea conditions in ports.

The Committee also recommended that the Bureau should collect statistical information on the seasonal prevalence of cholera and plague in all countries within its sphere of activity.

The Health Committee endorsed the hope expressed by the Advisory Council that administrations which are not now reporting by telegram information regarding infected ships should do so.

In regard to Article 13 of the draft Constitution and Rules of the Eastern Bureau, the Health Committee suggested a new draft providing that, after consulting the Advisory Council, these may be amended during any session of the Health Committee of the League of Nations by a majority of members present.

The proposed budget of the Eastern Bureau for 1929 was adopted by the Health Committee (see Annex IV.).

The Health Committee received a memorandum on plague (document C.H.716) prepared by Dr. Fabian Hirst, which it referred to the Expert Plague Commission through the Advisory Council, and asked the Medical Director, after the necessary expert consultation, to prepare a scheme for future consideration.

II. PUBLIC HEALTH STATISTICS.

In October 1926, the Health Committee appointed a Commission of Expert Statisticians to advise in regard to the forthcoming revision of the International List of Causes of Death. The expert statisticians adopted a report in March 1927 setting out two draft lists of causes of death — one of intermediate length (less than 100 rubrics) with provision for subsequent subdivision of the items, and a short list (27 rubrics) for local or provincial use. The Commission made certain recommendations in regard to the classification and definition of dead-birth, and asked that lists of causes of sickness and of morbidity data given in these lists should be collected. Proposals were also made in regard to a standard death certificate, classification of joint causes of death, and tabulation of deaths by age and sex (document C.H.576).

These recommendations were forwarded to Governments and to the competent authorities, and the Health Section received a number of replies, which are dealt with below.

In October 1926, the Health Committee decided to keep the International Institute of Statistics informed in regard to the work of the Commission of Expert Statisticians and to convene at an opportune moment a joint preparatory session of that Commission and of the Committee of the International Institute of Statistics.

Subsequently, on the proposal of the French Minister for Foreign Affairs, and after noting a letter from the President of the International Institute of Statistics forwarding a resolution of its Cairo Conference, the Health Committee decided to adopt the procedure recommended by the French Government to assure co-operation between the two organisations in the preparatory work in view of the forthcoming revision of the International List of Causes of Death (document C.193.1928.III, Resolution 13).

Accordingly, after further correspondence with the President of the International Institute of Statistics, the Health Committee approved the formation of a Joint Committee consisting of four members nominated by the Institute and four by the Health Committee, together with the President and Secretary-General of the Institute and the President and Medical Director of the Health Committee (document C.555.M.175.1928. III).

The Commission of Expert Statisticians will meet in Berlin on April 3rd, 1929, and the session of the Joint Committee will follow in Paris, beginning April 9th, 1929. The French Government has convened the International Conference for the Revision of the International List of Causes of Death in Paris in October 1929.

OBSERVATIONS ON THE PROPOSALS MADE BY THE COMMISSION OF EXPERT STATISTICIANS.

In the annual report of the Health Organisation for 1927 (document A.10.1928.III), a summary was given of the replies received during 1928 from the various Governments and competent authorities.¹ The following replies have been received since that date :

The Governments of the Argentine, Canada, Colombia, Cuba, Finland, Guatemala, Honduras, Mexico, San Salvador and Uruguay have referred the resolutions to their competent authorities for study.

The Government of Denmark referred to the work of the Special Committee that had studied the problem of the introduction of a uniform list of causes of death in the Scandinavian countries and has promised to keep the League informed of any further developments.

The Government of India is in agreement with the views of responsible departments of the British Government, which are to be found in the minutes of the eleventh session of the Health Committee.

The Australian Government considers that the list of 90 rubrics is abridged beyond the limits of full usefulness for public health and medical purposes, and would regard the adoption of such a list as a retrograde step.

The Greek Government has forwarded the report of the Greek National Committee nominated for the purpose of considering the Commission's resolutions ; it considers the list of 90 rubrics as too detailed and suggests a list containing 37 titles.

The Government of Siam has no criticisms to offer.

The Government of Roumania considers the list of 90 rubrics suitable, with some subdivision of the headings, particularly tuberculosis, other infectious diseases, carcinoma and other general diseases.

The Government of Czechoslovakia agrees in principle to the use of the list of 90 rubrics, but suggests certain modifications of detail, such as the inclusion of infanticide, arterio-sclerosis, diarrhoea and enteritis of children under two years, peritonitis not specified, subdivisions of suicide and the inclusion of puerperal septicaemia in the group of infectious diseases.

The Scandinavian countries, Denmark, Norway and Sweden, have agreed upon a common list of diseases, using the new decimal system of classification.

¹ Australia, Austria, China, Czechoslovakia, Estonia, Germany, Great Britain, Greece, Hungary, Irish Free State, the Netherlands, New Zealand, Poland, Spain and Switzerland.

INTERNATIONAL UNIFORMITY OF DEFINITION OF DEAD-BIRTHS AND LIST OF CAUSES OF DEAD-BIRTH.

The Government of Estonia considers that uniformity in the reporting of dead-births by causes is desirable.

The Government of Austria communicates its official definition of dead-birth and a list of causes of dead-birth.

The Government of Greece does not accept the definition of dead-birth proposed by the Health Organisation, and communicates a list of twelve causes of dead-birth.

The Committee on Still-births of the American Public Health Association (U.S.A.) does not accept the proposed definition of dead-birth.

The Government of Czechoslovakia agrees to the proposed definition.

The Government of Australia forwards the resolutions adopted by the Conference of Statisticians of Australia and New Zealand, which were endorsed by the Australian Federal Health Council. An advance in the registration and classification of causes of death by still-births is being effected which will serve to bring Australian practice into line with the proposed uniform international scheme.

A sub-committee of the Commission of Expert Statisticians was set up by that body to consider the Governments' observations, and certain recommendations were made to reconcile the differences between the definition and the views of the various Governments (document C.H./Exp.Stat./70).

THE STANDARD DEATH CERTIFICATE: CLASSIFICATION OF JOINT CAUSES OF DEATH AND TABULATION OF DEATHS BY AGE AND SEX.

Observations were received on this subject from various Governments.

The Government of Estonia considered that the adoption of a standard death certificate would be acceptable and very desirable.

The Government of the Netherlands forwarded a description of the method it employs for the classification of multiple causes of death, and recommended the use of the death certificate adopted in the Netherlands on January 1st, 1927.

The Government of Australia thinks uniform and comparable vital statistics desirable, and considers that the standard death certificate would be a forward move provided that the system is raised to a uniform high standard and not reduced to a common mean.

The competent committee of the American Public Health Association suggests that every country should publish manuals of causes of death similar to those issued by England and Wales and the United States of America. Every country should also publish a manual showing how joint causes of death are to be classified. Every country should publish tables of contributory causes showing the relation of the contributory to the principal causes of death.

LISTS OF CAUSES OF SICKNESS.

Dr. E. Roesle, of the German Reichsgesundheitsamt, prepared a memorandum on the basis of the replies received from Governments and experts on this question (document C.H./Exp.Stat./69). This memorandum relates to replies from the following countries: Australia, Austria, Estonia, Germany, Great Britain, Greece, New Zealand, Poland, Roumania, Switzerland. In addition, his memorandum deals with twelve reports on this subject submitted by experts. These latter reports are of two classes:

1. Those showing the importance of morbidity statistics in forming an estimate of the health conditions of the populations.
2. Those demonstrating the necessity for the use of a uniform nomenclature of diseases if the statistics are to achieve their purpose.

Dr. Roesle concludes that co-operation through the instrumentality of an international organisation is necessary to success. The first aim of such co-operation should be to secure the adoption of a uniform method for the tabulation of causes of morbidity.

"The present enquiry has shown what morbidity statistics can be taken into consideration in this respect. If we succeed in replacing the lists of diseases at present in use, of which there are obviously too many, by a uniform list which could be used for all morbidity statistics of the same nature, and would meet the particular needs of these statistics, the enquiry will have fully attained its object."

Dr. Roesle also prepared for the Commission of Expert Statisticians a detailed memorandum entitled *Essai d'une Statistique comparative de la Morbidité devant servir à établir les Listes spéciales des causes de Morbidité* (document C.H.730). This memorandum is divided into three parts, the first dealing with the preparation of the statistical information; the

second with the lessons which emerge from the statistical comparison of causes of morbidity in so far as the establishment of uniform lists of sickness is concerned; the third with the results of the statistical study of causes of sickness applied to the establishment of lists of sickness. A proposed list for the adult population is set out and examined at some length. It is based on the proposed International List of Causes of Death prepared for the forthcoming decennial session.

In accordance with the wish expressed by the Commission of Expert Statisticians, the Health Section collected material of interest in connection with lists of causes of sickness from the following countries: Australia, Austria, China, Estonia, France, Germany, Greece, Italy, Norway, Switzerland and the United States of America.

A special report on morbidity and morbidity lists among the Rhineland insurance funds, about fifty of which have adopted a uniform list, was prepared for the Commission of Expert Statisticians by Dr. Teleky, District Inspector of Industrial Hygiene at Düsseldorf.

Dr. Berardinis, under the direction of Professor Gini, has studied the present position of morbidity statistics in Italy, and the results of his enquiry, together with the more important nomenclatures in use in hospitals, asylums, social and sickness insurance institutions and the armed forces, have already been received.

These and other reports and observations will be considered by the Commission of Expert Statisticians at its session in April 1929.

III. STATISTICAL PUBLICATIONS.

The *International Health Year-Book* (1927) contains reports on the progress of hygiene in twenty-seven countries during 1926 (document C.H.599). This volume is the third of a series of the same character, so that data from these countries may now be compared for a period of three years. In addition to the reports on the twenty-seven countries, this volume contains chapters on industrial hygiene (Belgium, Germany, Great Britain), the International Health Division of the Rockefeller Foundation, the League of Red Cross Societies, the Office internationale d'hygiène publique and the Health Organisation of the League. There is also a list of the Directors of Hygiene in the principal countries.

The series of handbooks on the organisation and working of public health services in various countries, to which attention was directed in previous annual reports, received an addition in the volume on *Public Health Services in New Zealand* (document C.H.683). This volume is divided into two parts, the first dealing with the public health services, the second with the official vital statistics (pages 43-84), so that it represents an addition to the list of manuals of vital statistics referred to previously.

One other volume — *Official Vital Statistics of Switzerland*, by Dr. Marcel NEY, Director of the Federal Statistical Bureau, assisted by Dr. H. CARRIÈRE, Director of the Federal Health Department at Berne (document C.H.669) — has been added during 1928 to the series of Statistical Handbooks.

The 1928 *International Health Year-Book* is now being printed.

Chapter III.

INTERNATIONAL CONFERENCES.

I. THE CONFERENCE ON MALARIA.

A Conference was held at Geneva in June of all members and corresponding members of the Malaria Commission, together with certain specially invited malariologists from the United States of America and other countries. The full report of the Conference is found in document C.H./Malaria/121.

The object of the Conference was to discuss the principles set out in the second general report of the Malaria Commission, as well as in other reports on the various countries visited by its members, and to secure agreement on the principles and methods of control suitable for recommendation to Governments engaged in anti-malaria work.

The principles discussed (document C.H./Malaria/73) were :

1. In Europe, having regard to the present state of knowledge, the correct anti-malarial practice is an endeavour to reduce the incidence and severity of the disease. Measures designed to accomplish more than that (particularly measures aiming at "eradication") are not a wise proposition and can be justified only in very exceptional circumstances.
2. It is not always necessary to deal with malaria by a method arising directly out of the knowledge that the disease is transmitted by mosquitoes.
3. In every country, and very largely in every area, there must be preliminary examination to ascertain what method is best suited to the local conditions.
4. At present, it cannot be said that for malaria control there is a method of choice superior to all others.

METHOD OF WORK.

Three Sub-Commissions were set up to deal with the three different subjects under discussion: the methods, epidemiology, and the use of quinine.

The three Sub-Commissions presented reports which were adopted by the Conference as a whole.

In regard to anti-malaria methods, certain principles were enunciated which are quoted in full below and which represent the agreement reached by malariologists from the old and new worlds. The explanatory paragraphs leading up to the adoption of these principles may be found in document C.H./Malaria/121.

1. Each Government should establish a central permanent organisation, either independent or attached to an institute, composed of several selected workers who would devote their whole time to malaria research and would act as scientific advisers.

2. The Sub-Commission is not in favour of utilising all available methods of control in the same locality at the same time. It considers it preferable to employ only the method or methods which, with the means available, can be brought above the standard called "minimum effective degree of perfection".

3. Subject to certain defined limitations, determined by a knowledge of local conditions, there should be considerable freedom of choice as regards the particular methods of malaria control to be adopted. The Sub-Commission deprecates the use of measures in one region solely on the ground that they have been successful in another, where, perhaps, circumstances and conditions are quite different.

4. Whatever other means may be employed in malarial localities, the Sub-Commission considers that it is essential in the first place to treat the sick.

5. The good result of early diagnosis and efficient treatment are more apparent in the reduction of the severity of the disease than in the reduction of its incidence.

6. The execution of the measures must reach a sufficiently high degree of efficiency ("minimum effective degree of perfection") before its effect on incidence becomes appreciable.

7. The improvement of the conditions of the inhabitants which results from the development of widespread "bonification" is one of the determining factors in the regression of malaria. The work done is only efficacious in so far as it leads to intensive cultivation of the ground.

It is certain, however, that the use of anti-larval measures, whilst more extensive works are being carried out, is of great value, inasmuch as it reduces the anopheline density and serves to bridge the dangerous period which accompanies and follows such undertakings.

8. The Commission considers that the first duty of administrations which have to organise anti-malaria measures is to provide for the treatment of the malarious sick with the additional object of reducing sources of infection.

Simultaneously, or subsequently, according to the circumstances and conditions of the various regions, a study of the causes of endemicity should be undertaken with the object of choosing and carrying out the most efficacious, the cheapest and best adapted method or methods in the solution of the local problem. Provision should also be made either for radical measures (large bonification, drainage) or for other temporary measures (anti-larval work).

The Commission is of the opinion that in all cases the use of mechanical protection and measures against the adult insects are desirable.

The Second Sub-Commission (epidemiology) discussed the following points :

1. Utilisation of historical data for the epidemiology of malaria ; criteria of reliability of these data ; spontaneous decline of malaria in various countries of Europe.
2. Criteria for the declaration of "malarious" zones.
3. Habits of anopheles and their influence on the transmission of malaria : anophelism without malaria.
4. Influence of the mode of construction of the human dwelling on malaria prevalence.

1. On the first point, the Conference shared the view expressed by the Malaria Commission (document C.H./Malaria/73, page 52) that, in general, historical records of mortality statistics do not provide a good method of ascertaining the distribution and character of malaria, and that the results of their use as an indication of success in anti-malaria measures might be very misleading.

2. The Conference was in agreement with the views of the Malaria Commission on the declaration of malarious zones as set forth in document C.H./Malaria/73, page 49.

3 and 4. The Conference established a list of subjects for study, which included the biology of anopheles, malaria in man, anti-malaria measures and house construction in relation to anophelism and malaria, and decided to invite malariologists to give individual consideration to these subjects.

It also directed attention to the value of legislation compelling contractors to build houses in such a way as to render them easily screened.

The Conference further selected from this list a certain number of points for international study on parallel lines in different countries with the co-operation of the Health Organisation. For this international study the following plan was adopted :

1. Housing in Relation to Malaria.

After a sufficient amount of information has been collected by the Secretariat with particular reference to tropical, subtropical and southern countries, a plan for a further systematic study is to be drawn up on this basis by Mr. Evans and M. Bonamico. The suggestion of Dr. Hackett that an investigation of the degree of contact between anopheles and man in areas of different malarious intensity should be made was approved and the following method selected :

1. Ratio of anopheles in stables to those in bedrooms.
2. Proportion of anopheles that bite human beings (precipitin test).

These studies were entrusted to four groups, as follows :

Professors BRUMPT and Carlos CHAGAS ; Colónel CHRISTOPHERS and Dr. KLIGLER ; Dr. MACY and Dr. SPARCIC ; *Stazione Sperimentale*, Rome, and Dr. DE BUEN.

2. Systematic and Biological Study in Europe and in America of *A. maculipennis* and of *A. quadrimaculatus* in their relation to Malaria Transmission and Prevention.

This study is to be entrusted in the first place to a group of laboratories in the United States of America designated by the United States Public Health Service and the International Health Division of the Rockefeller Foundation, on the one hand, and to the Institute of Tropical Medicine, Amsterdam, and Colonel James's laboratory in England, on the other.

When sufficient progress has been made, the assistance of further laboratories is to be invited on the basis of the first provisional report. In the meantime, the Commission suggested that those members who would be willing to engage in the experimental studies of this subject might forward their observations to the Secretariat for communication to the laboratories mentioned above.

USE OF QUININE IN MALARIA.

The following conclusions of the Third Sub-Commission were adopted by the Conference :

1. *Dosage of Quinine and Duration of Treatment.*

In considering this matter, the Sub-Commission paid special attention to the distribution of quinine as a social problem. With regard to dosage, the Sub-Commission associated itself with the opinion put forward by the Malaria Commission in its second general report (document C.H./Malaria/78, pages 72 and 78), and expressed the opinion that due regard should be paid to the form of the parasite, the nature of the disease and the character of the epidemic.

It is essential to continue treatment after the attack has been cured, but treatment should not be continued for more than four to six weeks, and large doses of the drug are unnecessary. The Sub-Commission thinks that a daily dose of 1 gramme of quinine for an adult should be sufficient for consecutive treatment, and that the latter half of this treatment should be interrupted for three or four days each week, during which no quinine should be given.

2. *Experiments with other Cinchona Alkaloids.*

The Third Sub-Commission considers that experiments should be continued with various samples of kinetum extracted from different varieties of bark, more or less rich in quinine, and with the various secondary alkaloids. The scope of these investigations should be enlarged so as to include a trial of these drugs for intensive treatment.

3. *Use of Drugs other than Quinine, with special reference to Plasmochin.*

The Third Sub-Commission has taken note of the results of work done in connection with the parasitical action of other substances, notably plasmochin and quiniostovarsol.

It recommends that the Malaria Commission should include in its programme a study of the value of plasmochin and quiniostovarsol in the treatment of malaria, the enquiry being carried out in hospitals or in circumstances permitting of direct daily medical supervision.

This study was entrusted to :

Professor ASCOLI	Italy.
Professor NOCHT	Germany.
Colonel CHRISTOPHERS	India.
Professor CIUCA	Roumania.
Professor DE LANGEN	Netherlands East Indies.
Anti-Malaria Service of Madagascar.	
Dr. BARBER	United States of America.
Professor PITALUGA	Spain.
United Fruit Company	Central America.

4. *"The First and Most Important Thing to do in Malarious Localities is to arrange for the Treatment of the Disease by Quinine."*

The Third Sub-Commission endorses the opinion expressed by the Malaria Commission as set forth above. It further recommends that investigations be carried out in different countries to ascertain the practical importance of the intensive treatment by quinine of patients suffering from malaria, as a general prophylactic measure against this disease.

The Third Sub-Commission also presented to the Conference a plan for the study of intensive quinine treatment of malarious persons, considered as a preventive measure in a malaria campaign. This plan, which was adopted, includes :

1. A critical study of the data available up to the present.
2. Epidemiological and statistical study of the frequency of pre-epidemic relapse in individuals who have undergone an intensive quinine treatment.

These two studies are to be undertaken by the Secretariat, which will obtain such advice and invite such expert assistance as it requires.

5. *Experimental study of the effects of treatment on :*

- (1) The time of appearance, the persistence, the rhythm of reappearance and the number of gametocytes ;
- (2) The possible loss of evolutionary capacity of the gametes found in treated persons.

This experimental study can obviously only be undertaken by laboratories in intimate and constant contact with hospitals able to supply sufficient clinical material. This work was entrusted to the following three groups of workers :

- | | | |
|-----|--|---|
| (1) | Professor NOCHT,
Professor ASCOLI
Professor OTTOLENGHI } | for the Hamburg Institute of Tropical Hygiene.
for the clinics and hospitals in Italy. |
| (2) | Colonel CHRISTOPHERS,
Dr. KINGSBURY, | for the institutes of British India.
for the institutes of the Federated Malay States. |
| (3) | Professor PITTALUGA,
Dr. SERGENT, | for the hospitals and clinics in Spain.
for the institutes in Algeria. |

RESULTS OF THE CONFERENCE.

The results of the general Conference are agreement on certain principles and methods of anti-malaria work to be recommended to Governments engaged in this campaign as the authoritative opinion of malariologists from the principal countries where this disease is a problem, and a plan of international study under the auspices of the Health Organisation to throw light on many points which still remain obscure.

ACTION OF THE HEALTH COMMITTEE ON THE RESOLUTIONS OF THE CONFERENCE.

The Health Committee, at its thirteenth session, in October 1928, approved the Report of the Conference, and it was left to the President and Bureau of the Committee to arrange for the international studies within the limits of the resources available.

Ia. MALARIA COURSES.

Malaria courses were arranged on behalf of the Health Organisation at the Laboratory of Parasitology, Faculty of Medicine, University of Paris; the Institute for Tropical Diseases, Hamburg, and the Superior School of Malariology at Rome, the latter for the first time. These courses each lasted about one month and were followed by field work under the direction of experienced malariologists in Italy, Spain and the Kingdom of the Serbs, Croats and Slovenes.

A certain number of scholarships for these theoretical and practical studies were offered by the Health Organisation to health administrations whose personnel was in need of additional training. The Rockefeller Foundation also offered a number of scholarships, and certain health administrations sent members of their staff to these courses, while some physicians attended at their own expense.

The attendance in 1928 was as follows :

Students awarded scholarships by the Health Organisation of the League . .	17
Students awarded scholarships by the Rockefeller Foundation	8
Students attending at expense of health administrations or other health agencies (e.g., Italian Red Cross)	15
Students attending at their own expense	67
Total	107

This is the largest attendance since the courses were first organised.

Ib. THE DARLING MEDAL AND PRIZE.

During its thirteenth session, the Health Committee approved statutes for the periodic award of a prize and of a medal to perpetuate the memory of the late Dr. S. T. Darling.

The statutes provide for the Darling Foundation, with capital funds of not less than 10,000 Swiss francs, established for the purpose of awarding a prize at varying dates to the author of an original work on the pathology, aetiology or prophylaxis of malaria, the prize to consist of a bronze medal and a sum of 1,000 Swiss francs.

The Medical Director is the administrator of the Foundation, and he is to execute the decisions of the Darling Committee under the direction of the Health Committee.

A trustee of the funds is also to be appointed.

The Darling Foundation Committee is to consist of the President and the three Vice-Presidents of the Health Committee, the Chairman of the Malaria Commission and the Medical Director, acting as secretary.

The prize will be awarded by this Committee at varying dates, according to the amount of accumulated interest, beginning in 1932.

Any member of the Health Committee or of the Malaria Commission and any national Department of Health may put forward the name of any person whose candidature is thought worthy of examination with a view to the award of the prize. The nomination must be accompanied by a written statement of the reasons on which it is based.

The candidature must be in respect of a work either published within five years preceding the award of the prize or submitted in manuscript to the Health Organisation.

No condition is laid down as to the age, sex, profession or nationality of the author.

Lothian Scholarships. — In memory of the late Dr. Lothian, who lost his life in the accident which also proved fatal to Dr. Darling, a system of Lothian Scholarships has been established. Two of the students attending the malaria courses were awarded these scholarships in 1928.

II. THE SECOND INTERNATIONAL CONFERENCE ON SLEEPING-SICKNESS.

In the previous reports of this series (documents A.17.1926.III, A.9.1927.III, and A.10.1928.III) the work of the Health Organisation on sleeping-sickness was fully described. The Commission of Experts on Sleeping-Sickness and Tuberculosis in Equatorial Africa, meeting in London in September 1924, emphasised the importance of sending a special mission to some district in which sleeping-sickness prevailed, for the purpose of studying certain problems which are of capital importance for the prevention and treatment of the disease. After approval of this suggestion by the Health Committee and the Council, the Governments of Belgium, France, Great Britain, Italy, Portugal and Spain were asked whether they would agree to hold a conference of representatives of their Colonial Ministries to discuss from the administrative and financial points of view the desirability of sending such a mission to Africa.

Such agreement being secured, the Conference was held in London in May 1925. Its recommendation in regard to the despatch of a mission to Africa was acted upon, and the mission spent eighteen months in Africa, with headquarters at Entebbe, on Lake Victoria, in Uganda. A report was produced by the mission which was reviewed in the annual report of the Health Organisation for 1927. It contains contributions from the members of the mission and an annex signed by three of the members dealing with certain administrative recommendations for the control of sleeping-sickness.

In order to act on the report (document C.H.629) and its recommendations, a second international Conference was held in Paris in November 1928. Delegations from Belgium, France, Great Britain, Italy, Portugal and Spain, with a total of 27 members, attended, and the Conference was presided over by the Right Hon. W. Ormsby-Gore, M.P., the British Parliamentary Under-Secretary of State for the Colonies, and Professor Mesnil, of the Pasteur Institute at Paris.

The following agenda was adopted :

I. *The Control of Sleeping-Sickness.*

1. The final report of the Sleeping-Sickness Commission, with special reference to the conclusions of practical importance arising therefrom.
2. Reports or statements by delegations attending the Conference regarding measures taken for the eradication or control of sleeping-sickness in their respective territories and the results achieved.
3. Administrative measures for the control of trypanosomiasis.
4. The progress made and the difficulties experienced by administrations in giving effect to the administrative measures recommended by the First International Conference on Sleeping-Sickness, held in London in May 1925.
5. The international co-ordination of campaigns for the eradication of sleeping-sickness.

II. *Research.*

6. Questions necessitating further research and investigation in the different national laboratories and research centres in territories in Africa where sleeping-sickness exists.
7. The co-ordination of such research.
8. Veterinary problems connected with animal trypanosomiasis.
9. Miscellaneous.

Reports were presented to the Conference dealing with the present prevalence of sleeping-sickness in various African dependencies and the measures employed for its control or eradication, with special reference to the recommendations adopted by the First International Conference in London.

The contents of the report of the Second International Conference on Sleeping-Sickness (document C.H.748) are :

- Address on sleeping-sickness by the Right Hon. W. Ormsby Gore, M.P.
- Report submitted by the Belgian Ministry of the Colonies : Trypanosomiasis in the Belgian Congo.
- Memorandum submitted by the British Colonial Office.
- Sleeping-Sickness in the Sudan.
- Report submitted by the Inspector-General's Office of the Public Health Service of the Ministry of the Colonies of the French Republic : Campaign against Sleeping-Sickness in French Colonies and Mandated Territories (Togoland and the Cameroons).
- Report submitted by the Directorate-General for Morocco and the Colonies of Spain (Spanish Guinea and Fernando Po).

The Conference formed two Commissions, one to consider questions of research, the other administrative measures.

A tribute was paid by the Conference to the mission on sleeping-sickness and its Chairman, Dr. Lyndhurst Duke, and appreciation for the high scientific value and interest of the work accomplished was expressed.

The Conference did not consider it necessary to create another international Commission of Research, but deemed it the better policy to prepare a programme of further research and investigation which should be carried out in the different national laboratories in countries in which diseases transmitted by tsetse-flies prevail. A series of recommendations to the Council was adopted regarding the manner in which the Health Organisation of the League might assist in co-ordinating such investigations.

Attention was directed to animal trypanosomiasis in Africa, and, in view of the economic and public health importance of this disease, the Conference recommended the establishment of close and continuous contact between medical and veterinary research, and that future international conferences should consider both human and animal trypanosomiasis as a whole.

On the basis of the general recommendations for the control of sleeping-sickness contained in the final report of the International Commission on Sleeping-Sickness, a number of measures were approved as suitable for recommendation to Governments for adoption in places where measures of strict control are necessary or possible.

While recognising the value of the draft agreement presented by the Belgian delegation, the Conference considered that a general agreement between the States concerned would be difficult to achieve at present in view of varying conditions, and recorded its preference for the conclusion of bilateral agreements, on the basis of the principles of the Belgian draft agreement and the report of the 1925 Conference, with the modifications necessary to suit local conditions.

It was recommended that the Health Organisation of the League should collect and analyse the facts obtainable in regard to the incidence of trypanosomiasis, its importance in relation to other causes of morbidity and the results of the medical and administrative measures which are applied to combat the disease in different parts of Africa.

RESEARCH.

The following are some of the subjects recommended for further study in national laboratories in countries where diseases transmitted by tsetse-flies prevail.

1. The questions of natural immunity, spontaneous cure and of acquired immunity in man.
2. The natural immunity of *Cynocephalus* and *Cercocebes* (mangabeys).
3. Natural reservoirs other than man of *T. gambiense*.
4. The origin of *T. rhodesiense* and its relationship to *T. gambiense* and *T. brucei*.
5. Whether the characteristics acquired by trypanosomes are preserved during their cyclic evolution in the body of the tsetse (resistance to therapeutic agents, exalted virulence, etc.).
6. The evolution of different polymorphic trypanosomes in the body of the tsetse.
7. Anatomico-pathological investigations in man and animals.
8. Biological studies of tsetse-flies carried on concurrently with epidemiological and epizootic investigations.
9. Infectivity of the trypanosome in relation to cyclic transmissibility.
10. Rôle of animals in the biology of *Glossina*, with particular attention to animals which act as reservoirs.
11. Morphological studies of all members of the polymorphic trypanosome group.
12. Study of chemotherapy should continue in the attempt to find a cheap and effective remedy for oral administration.

CO-ORDINATION OF TRYPANOSOMIASIS INVESTIGATIONS.

The Conference considered that the Health Organisation of the League of Nations might render useful service by keeping the workers in the different national laboratories in touch with one another.

The following means were recommended :

A small Committee of experts, appointed by the Health Organisation of the League for the purpose, would receive annually an account of the work done and the publications issued by laboratories and research centres in Africa engaged in research work on trypanosomiasis. It would be the duty of this Committee to circulate the collected papers, together with a short general review of the progress made in such research, to the institutes and centres referred to as well as to interested administrations.

The Committee would recommend annually to the Health Committee the award of an individual *bourse* to enable a member of the staff of one of these institutes to visit some other country where work of special interest to the laboratory selected was being carried out.

The Conference also recommended individual interchanges to enable research workers in African laboratories to become acquainted with trypanosomiasis investigations being carried on in other laboratories.

The report also contains the text of the draft international agreement concerning measures against sleeping-sickness presented to the Conference by the Belgian delegation.

During the thirteenth session, held in Geneva before the Conference on Sleeping-Sickness in Paris, the Health Committee authorised its Bureau, in consultation with such members of the Committee as would attend the Conference, to consider and, if necessary, to take action upon any proposals emanating from the International Conference before the next session of the Committee (document C.555.M.175.1928.III, Resolution VI).

During the fifty-third session of the Council of the League of Nations, held at Lugano, the representative of Spain presented a report to the Council on the work of this Conference, setting out the results of its work and the proposals contained in its report. He concluded his report with the following remarks :

“ I believe that the work of the Conference has fully justified the interest that the Council decided to take in the study of this question, which is of such importance for the development of African countries, and the Council will certainly desire to note that the Conference, in view of the interest and importance of international gatherings of this kind, expressed the hope that our Health Organisation would recommend to us at some future date the convocation of a third international Conference.”

The Council thereupon approved the recommendations of the Conference and the observations contained in the report of the representative of Spain (document C./53rd Session/P.V.2 (1), 2312).

III. THE TECHNICAL CONFERENCE ON VACCINATION AGAINST TUBERCULOSIS BY MEANS OF BCG (BACILLUS CALMETTE-GUÉRIN).

(Document C.H.745, No. 4).

On the proposal of Professor Calmette, of the Pasteur Institute in Paris, the Health Committee, during its twelfth session, decided to convene a group of experts to draw up a programme of studies for the purpose of judging the immediate as well as the more remote results of vaccination with BCG in laboratory animals, cattle and man.

The Conference was held at the Pasteur Institute in Paris from October 15th to 18th, 1928. Professor Roux, Director of the Institute, presided over the plenary sessions, and the Bureau was composed of the Chairman, the President of the Health Committee and the Medical Director.¹

The Conference was divided into three Commissions, composed of bacteriologists, clinicians and veterinary surgeons respectively. Professor Bordet, Director of the Pasteur Institute at Brussels, presided over the first ; Professor Léon Bernard, member of the Health Committee, over the second ; and Professor J. Nowak, Director of the Institute of Research in Human and Veterinary Medicine at Cracow, over the third. There was an attendance of thirty-two persons, several being invited to relate to the various Commissions their experience with BCG vaccination.

¹ See list of those in attendance in Annex II.

The summarised conclusions of the three Commissions follow :

1. BACTERIOLOGICAL COMMISSION.

In the opinion of the bacteriologists, present experimental results justified the conclusion that BCG was a harmless vaccine.¹

They also agreed that the data already published on experimental work with laboratory animals clearly justify the conclusion that BCG does not give rise to progressive tuberculosis.

A number of institutes in various parts of the world are working on BCG, and the Commission drew up a list of questions for investigation which would render the studies carried out in these institutes comparable and furnishing material for definite conclusions to be taken at a subsequent meeting. The questions are the following :

1. Methods of maintaining the fixed properties recognised as characteristic of BCG.
2. Methods to be followed in studying the influence on BCG of passage through animals.
3. Methods to be adopted in carrying out immunising experiments ; determination of the dosage of BCG and of virulent bacilli to be used in such experiments ; the adoption of strains of known virulence for the test inoculation.
4. Methods to be adopted in the studies on variability and dissociability of BCG.
5. Methods to be adopted for the comparative study of the histological changes produced by inoculation of BCG and of virulent tubercle bacilli.
6. The necessity of limiting the preparation of BCG to institutes of recognised scientific standing. This refers to the culture, preparation and distribution of the vaccine emulsions.

Annex II of the report contains suggestions for carrying out the experiments referred to in Nos. 2 and 4 above.

2. CLINICAL COMMISSION.

I. The documents furnished to the Commission supplied the evidence from which the following conclusions were drawn :

1. BCG administered by mouth to infants within the first ten days of life and by subcutaneous inoculation in older children and in adults is incapable of producing virulent tuberculosis.
2. Vaccination by BCG produces a certain degree of immunity against tuberculosis.

However, further research over a longer period and carried out in a uniform manner, with special regard to the morbidity and mortality from tuberculosis among persons of different ages and in different environments, is necessary to enable the Commission to pass final judgment on the value of anti-tuberculosis vaccination with BCG.

II. To this end, the Commission requested the Commission of Expert Statisticians of the League of Nations to indicate the best methods for collecting and analysing data concerning the morbidity and mortality of vaccinated and unvaccinated infants.²

III. With the object of obtaining uniform and impartial information, the Commission prepared a draft individual form to be used by the organisations carrying out these studies, and asked the Commission of Expert Statisticians to give its opinion concerning the form.

The Commission also prepared a draft of a clinical case record form for use in recording observations on vaccinated persons.

The Commission was of the opinion that such studies should be entrusted to a limited number of dispensaries and hospital clinics. The data collected by such institutions, in the form approved by the Commission of Expert Statisticians and by means of the case record and protocol suggested, will be collected and analysed by the Health Section of the League Secretariat, for consideration at a later Conference.

The Commission requested the Health Committee to invite such organisations as it might suggest to undertake this work.

3. COMMISSION OF VETERINARY SURGEONS ON THE PROPHYLAXIS OF BOVINE TUBERCULOSIS.

I. The experimental facts published and the unanimous opinion of the practitioners who have used BCG on cattle justify the conclusion that vaccination of bovines carried out according to the technique of Calmette and Guérin is a perfectly harmless procedure.

II. Similar experimental data and published observations with regard to the use of BCG among bovines demonstrate that this strain of bacteria confers definite immunity against both experimental and natural tuberculosis infection. These recognised pre-immunising qualities justify and encourage the extension of the experimental use of BCG in the prevention of bovine tuberculosis. Such work should be carried out in different countries according to the international experimental protocol (annexed).

¹ Professor Nobel, a member of the Clinical Commission, maintains that in exceptional circumstances BCG is capable of producing fatal tuberculosis in laboratory animals.

² This question appears on the agenda of the Commission of Expert Statisticians which will meet in Berlin on April 3rd, 1929.

to the report) under the control of the official veterinary services and of competent bacteriological and pathological authorities in close touch with the Commission set up for the study of this problem by the Health Organisation. Wherever possible, a strictly experimental method should be adopted (protocol annexed to report).

On the other hand, a less exacting method may be used to suit the requirements of cattle-breeding, providing the work is carried out under official and constant control (protocol annexed to report).

Annex I to the report contains a list of more than seventeen institutes and laboratories in fourteen countries where experimental work on BCG is being carried on.

Annex II is a description of methods to be adopted in investigating questions (2) and (4) raised by the Commission of Bacteriologists.

Annex III is a proposed case record for a child living in a tuberculous environment.

Annex IV is a standard clinical case record for children vaccinated by BCG and deceased, proposed by Professor Léon Bernard.

Annex V consists of a protocol dealing with BCG vaccinations performed (on cattle) under strictly experimental conditions.

Annex VI is the second protocol for use in connection with BCG prophylaxis adapted to the immediate needs of the cattle-breeder and carried out under the supervision of the veterinary services.

ACTION TAKEN BY THE HEALTH COMMITTEE IN OCTOBER 1928.

The Health Committee did not discuss the technical findings of the three Commissions in so far as these were concerned with the prophylactic value and innocuity of BCG, but confined itself to the proposals that had been made for future study. The discussion was chiefly concerned with the recommendations of the Clinical Commission on enquiries to be carried out in various countries with the object of obtaining further information as to the innocuity and efficacy of BCG vaccine.

The rôle of the Health Section of the Secretariat will be to collect and collate the results of enquiries undertaken by the different institutes recommended for this purpose for submission to a second conference of experts to be convened at a date to be determined hereafter by the Health Committee.

The resolution of the Health Committee on this subject reads as follows :

“The Health Committee adopts the recommendations for further study contained in the report of the Conference of Experts for the Study of Anti-Tuberculosis Vaccination by means of BCG, and expresses its thanks and appreciation to the Directors of the Pasteur Institute, at which the Conference was held, as well as to the experts who took part in it.”
— (Document C.555.M.175.1928.III, Resolution X.)

Note. — The material prepared for the Conference (document C.H.745) consists of a bibliography on BCG and of vaccination against tuberculosis by Calmette's method, divided into three sections as follows : studies on the innocuity of BCG, prophylactic value of BCG and a bibliography. There is also a memorandum on the innocuity of BCG vaccine in cattle. Professor Calmette prepared for the Conference “A Preliminary Study of the BCG Method of Vaccination against Tuberculosis”, which appears in the December 1928 number of the *Annales de l'Institut Pasteur*.

IV. THE SECOND LABORATORY CONFERENCE ON THE SERODIAGNOSIS OF SYPHILIS, HELD IN COPENHAGEN FROM MAY 21ST TO JUNE 4TH, 1928¹

Since the first serological Laboratory Conference, held at Copenhagen from November 19th to December 3rd, 1923, several of the methods employed for the serodiagnosis of syphilis have improved considerably, and a number of new tests have been prepared and are being generally used—in particular, those depending on directly visible changes in mixtures of syphilitic serum and extract, known as flocculation tests. Numerous requests from different institutes and individuals particularly interested in these problems have been addressed to the Health Organisation of the League, suggesting the convocation of a second Laboratory Conference for the further comparative examination of the methods of serodiagnosis of syphilis. On the proposal of its President, the Health Committee, in October 1927, approved the suggestion, and the Conference was held in Copenhagen from May 21st to June 4th, with an attendance of experts from twenty-two institutes or health administrations. These experts, numbering forty, came from sixteen countries (see Annex II).

The various methods of serodiagnosis which were compared during the Conference were the following :

¹ Other work carried out by the Permanent Standards Commission will be found at the beginning of the next chapter.

1. The Bordet-Wassermann reaction in several modifications (7).

2. Flocculation Tests :

(a) Kahn Test ; (b) Meinicke's Turbidity Test ; (c) Müller's Clotting Test ; (d) Murata Reaction ; (e) Sachs-Georgi Cito- and Lentocholesterol Reaction ; (f) Sigma Reaction (Modified) ; (g) Vernes Syphilimetric Reaction.

1. PREPARATORY WORK.

Some months before the Conference was held, an exact description of the technique of each test was secured from the author and distributed to the participants, so that each might familiarise himself with the methods to be compared. In addition, reagents and apparatus were also distributed in case these were needed in connection with any particular test. Thus the participants arrived at Copenhagen after having carried out a large amount of preparatory work in their own laboratories, and armed with a complete knowledge of the tests they were to compare.

2. MATERIAL USED IN THE CONFERENCE.

The samples of blood and spinal fluid used in these comparisons were placed at the disposal of the Conference by a number of Danish hospitals and dispensaries, as well as by clinics in Berlin, Hamburg, London, Vienna and Paris. In view of the methods of collecting these samples, the material placed before the Conference consisted (as is usually the case in the routine work of large diagnostic centres) of both old and fresh sera.

The clinical diagnoses of the patients from which the sera were derived were not published until the participants in the Conference had submitted their reports on the results obtained, the sera and spinal fluids being distributed without any indication as to their origin, so that the participants were in fact working with (to them) unknown sera. An expert made a thorough examination of numerous cases in which the clinical diagnosis was uncertain, and where discrepancies occurred between the serological finding and the clinical diagnosis.

During the Conference, 944 sera were tested comparatively by the various methods, and 13 more were examined by a limited number of participants after the actual close of the Conference. Of these, 502 were derived from known cases of syphilis in all stages of the disease, both treated and untreated ; 7 were derived from cases with no definite history of syphilis, but where there was nevertheless some evidence of the disease ; and 435 sera were derived from patients suffering from various other diseases (tuberculosis, cancer, scarlet fever, gonorrhœa, etc.), but with no clinical signs of syphilis. Experience shows, however, that a certain number of these may be syphilitic.

It was not the purpose of the Conference to recommend any special method, but only to compare the various tests as to sensitiveness and specificity. In the choice of a method, such matters as local conditions, time required and cost must also be taken into consideration.

The results of these comparative tests, which appear in tabular form in document C.H.726, led the participants to the following general conclusions in regard to the serodiagnosis of syphilis.

Resolutions.

I.

" The Conference,

" Having considered the results of the blood-serum ¹ tests for syphilis according to the methods under review :

" Notes that those which depend on directly visible changes in mixtures of extract and serum, hereinafter referred to as flocculation ² tests, have improved considerably since the last Conference in 1923 ;

" And is of opinion that the best of them may be regarded as (substantially) equal in value to the best of those which depend on fixation of complement (Bordet-Wassermann).

¹ The material available at this Conference has not been sufficient to permit of a conclusive comparison between the Bordet-Wassermann and the flocculation tests in the examination of cerebro-spinal fluid.

² The term " flocculation " is employed here for convenience without prejudice to opinions as to whether any given reaction is one of flocculation, increase of turbidity, precipitation, or clotting. It is applied here to the following tests : Kahn, Meinicke (M.T.R. and M.M.R.), Müller (M.B.R.), Murata, Sachs-Georgi, Sigma and Vernes.

"It desires nevertheless to emphasise the fact that, no less than the complement-fixing tests, these flocculation methods are, despite their apparent simplicity, extremely sensitive to the slightest differences in experimental conditions and subject to so many sources of error, in connection both with the execution of the test and the reading and interpretation of the results, that they must be placed only in the hands of specially trained serologists."

II.

"The Conference,

"Being of opinion that some serological tests may have the advantage of greater sensitiveness without being absolutely specific, and vice versa, and that concordance of reaction to two or more tests has greater diagnostic value than has a single reaction :

"Recommends that, in order to secure the most reliable information to the clinician, at least two different serodiagnostic methods should be used.¹

III.

"The Conference,

"Having in view the necessity for constantly readjusting serodiagnostic methods in order to obtain the highest degree of specificity :

"Recommends that the serologist should check the accuracy of his tests by regular and very frequent reference to clinical data, in consultation with the clinician, whose assistance in supplying adequate information as to the history of syphilis and the clinical particulars of the case is of great value for the interpretation of the results.

IV.

"The Conference,

"Having in view the fact that serological tests for syphilis are primarily for the purpose of assisting clinicians in diagnosis, in observing progress under treatment and in tests for cure ;

"And having in view also the fact that patients frequently pass from the care of one clinician to that of another, the serum of one patient being tested from time to time in different laboratories :

"Is of opinion that a method of uniform notation of serological results bearing approximately the same clinical interpretations would be of great value to clinicians and proposes the following general rules :

"(1) That a negative reaction should be reported as '—' or 'negative' ;

"(2) That a reaction which is just positive to a degree which in the hands of the serologist has been afforded practically only by sera from cases of syphilis (and of a few well-defined pathological conditions) should be reported as '+' or 'positive' .

"It is recommended, in this connection, that serologists should so adjust their tests that practically only sera from cases of syphilis afford reactions which they report as '+' or 'positive' ² ;

"In making these recommendations, the Conference would remark that there is nothing in them which would prevent the serologist adding to his report any amplifying or explanatory note which may be considered desirable.

"(3) That a reaction which is neither negative nor positive as defined in (2) should be reported as '±' .

"The Conference would suggest that the gist of the remarks in sub-sections (1) to (3) might be printed on the backs of the reports on serum tests for syphilis which are rendered by pathologists to clinicians.

V.

"The Conference wishes to reiterate with particular emphasis :

"(1) That, in spite of the increased sensitiveness which the various serodiagnostic methods have shown at the present Conference, serological results may, notwithstanding the presence of a syphilitic infection, be negative in certain cases ;

¹ The following, namely : Dr. de Blasi, Dr. Debains, Dr. Demanche, Dr. Dold, Dr. Harrison, Dr. Hirzfeld, Dr. Jacobsthal, Dr. Kingsbury, Dr. Meinicke, Dr. Muckerji, Dr. Müller, Dr. Nagayo, Dr. Otto, Dr. Pavlovitch, Dr. Sachs, Dr. Scaltritti and Dr. Zabolotny, considering :

(a) That, as theoretical considerations give reason to expect, some sera react to the Bordet-Wassermann but not to the flocculation tests and vice-versa, and that the Bordet-Wassermann and the flocculation tests supplement each other ;

(b) That strong confirmation of a weak or ± flocculation test is afforded by a positive Bordet-Wassermann test, and vice-versa,

Would for the present prefer that one of the methods should be a Bordet-Wassermann test.

² Stronger reactions than those mentioned in (2) could be reported as "++".

"(2) That a positive reaction in the absence of a clear history or of signs of syphilis should, if only to exclude all possibility of error, never be accepted until a test of at least one more specimen has afforded the same result ;

"(3) That, except in the case of a few well-defined pathological conditions, where several tests performed according to different methods give a positive result, syphilis is indicated with a degree of probability which closely approaches certainty.

VI.

"The Conference,

"Having in view the special importance of serodiagnosis for the diagnosis, treatment and prevention of syphilis :

"Desires to record its view that considerable misunderstanding would be avoided and reports on tests of sera would be greatly enhanced in value if clinicians would study closely the diagnostic and therapeutic implications of such reports.

VII.

"The Conference,

"Considering that the work in common and the discussions among participants have contributed greatly to a fuller knowledge and better understanding of the subject ;

"Bearing in mind, however, that the methods for the serodiagnosis of syphilis are constantly improving and that they are of capital importance for public health, and in order to stamp out a social scourge :

"Considers it extremely desirable that the Health Organisation of the League of Nations should keep this question on the programme and should take steps to secure further comparisons of this kind in the future.

VIII.

"The Conference,

"Being of opinion that the special value of its work lies in the fact that the authors have themselves been able to compare, on the same test material, the results of their own methods with those of others, and contemplating the possibility of ultimately securing uniformity in the serodiagnosis of syphilis ;

"Holds it to be desirable that the Danish State Serum Institute, acting as the central laboratory of the Health Organisation of the League of Nations, should, in continuation of the work of the Conference, undertake the distribution of a series of serum samples for comparative tests in the different laboratories ;

"Itself test, at request, any other serum samples which it may receive, or distribute them for purpose of comparative re-testing ;

"And undertake to arrange in the same way an exchange of extracts, thus initiating a co-ordination of work which might be further developed in due course."

3. TECHNICAL RESULTS OF THE CONFERENCE.

No general statement can be made on the technical results of the Conference, in view of the many complicated factors involved and the danger of misrepresentation inherent in any summary, but it may be said that the tests afforded an opportunity of estimating the sensitiveness and specificity of each method in relation to every other method tested.

The full report (document C.H.726, French and English texts) contains an introductory statement explaining in general the aims of the Conference and the methods of work, a full list of the participants, the resolutions adopted, complete tabular analyses of the results, a detailed description of each method employed, a list of the institutions which furnished blood and spinal fluid samples, and a description of the comparative results obtained by the Kahn test and Bordet-Wassermann reaction employed in the examination of spinal fluids in London following the Conference. The observations of the participants on the results obtained are also included.

Chapter IV.

WORK OF THE COMMISSIONS OF THE HEALTH COMMITTEE

I. THE PERMANENT COMMISSION ON STANDARDISATION OF SERA, SEROLOGICAL REACTIONS AND BIOLOGICAL PRODUCTS.

During 1928, there were two important international Conferences on subjects of interest to this Commission—the session of the Commission and associated experts at Frankfort in April, and the Laboratory Conference on the Serological Diagnosis of Syphilis, the second of this series, held at Copenhagen in May and June.¹ In addition, an informal consultation of experts on the treatment of syphilis and cognate subjects took place at Copenhagen during the Laboratory Conference, in order to prepare a programme for the experts on the treatment of syphilis who met at Geneva later in the year.

REPORT OF THE FRANKFORT SESSION.

In addition to the members of the Permanent Commission, the members of the Sub-Commission for Anti-Dysentery Serum were also present and a number of experts were invited to discuss anti-scarlet-fever serum, tuberculin, blood-groups, anti-rabies treatment, salvarsan, insulin, pituitary extract and digitalis.

A. *Standardisation of Antigens and Anti-bodies.*

The Commission dealt with anti-diphtheritic serum, vaccination against diphtheria by means of derivatives of toxin, anti-tetanus serum, anti-dysentery serum (Shiga), anti-scarlet-fever serum, anti-gas-gangrene sera, tuberculin, blood-groups and the treatment of rabies.

The following is a summary of the decisions reached :

1. *Anti-diphtheritic Serum.* — In accordance with a resolution adopted at the Conference held in Paris in 1922, further comparison of the standard sera of Copenhagen, Frankfort, London, Paris and Washington carried out at the Danish State Serum Institute had shown these sera to be identical in titre.

In view of new facts brought to light by the phenomenon of flocculation occurring in the mixture of specific toxin and anti-diphtheritic serum, the Commission decided to study the evaluation of anti-diphtheritic serum and of diphtheritic antigen (toxin and derivatives) by the flocculation method.

To facilitate this study, the Pasteur Institute agreed to place at the disposal of the Health Organisation samples of serum and of antigen, the latter in the form of previously standardised anatoxin.

2. *Anti-diphtheritic Vaccination by means of Derivatives of Toxin.* — In view of the increasing importance of this method of vaccination (by anatoxin, etc.), its study was proposed.

It was deemed desirable that investigations should be begun to determine the value of the preparations in use and of the method of vaccination. Samples of the anatoxin prepared in the Pasteur Institute will be placed at the disposal of the Health Organisation of the League in order to facilitate the investigation.

3. *Anti-tetanus Serum.* — During the session of the Commission held at Geneva in October 1926, the following resolution was adopted :

“ The unit is to be determined with a standard serum in such a way that its relation to the American unit is exactly two international to one American unit.

¹ See Chapter III, part IV.

“ This resolution is the consequence of the proposals made to the Second International Serological Conference of 1922 by Professors Louis Martin and W. Kolle, and of the investigations carried out in the several laboratories since that date. ”

Accordingly, the standard sera of the different laboratories were compared at the Danish State Serum Institute and found to be identical in titre by the various methods in use.

On the basis of these comparative tests, the Commission adopted the anti-tetanus unit as defined in the above resolution.

4. *Anti-dysentery Serum (Shiga)*. — The Commission adopted the following resolution at Geneva in October 1926 :

“ The method of assay for anti-dysentery serum proposed by the State Serum Institute at Copenhagen, on the basis of the work carried out by the Committee for Investigation of Anti-dysentery Serum (President: Professor Shiga), constitutes a real advance on former methods.

“ It is desirable to continue the trials by taking as standard the serum of the Copenhagen Institute. The Copenhagen Institute will send to each laboratory every two months for a year the standard serum, with an exact indication of the method of using this provisional unit.

“ The laboratories concerned will send every two months for a year to Copenhagen anti-dysentery serum exactly assayed according to this method, with a view to confirmation of the results obtained.

“ If all the results are in agreement, it will be possible to adopt a definite international unit, in terms of the standard serum at Copenhagen. Only then will it be possible to make a clinical investigation of the therapeutic potency of sera of different origins. ”

The Danish State Serum Institute and the participating laboratories carried out the tests provided for in the resolution and obtained concordant results.

The Commission thereupon adopted a standard serum prepared and distributed by the Danish State Serum Institute to establish the international antitoxic unit.

The serum is prepared for distribution in such a way that one unit is contained in 1/200 of 1 c.c., and that a dilution in the proportion of 1 : 200 contains 1 unit in 1 c.c.

A test dose of a dysentery toxin was defined as such a quantity that, when 1 c.c. of this serum dilution is mixed with it, the mixture shall cause death in one-third of the mice receiving it by intravenous injection.

When a toxin is standardised in this way, it may be used in titrating the sera.

5. *Scarlet Fever*. — Without expressing an opinion on the ætiology of scarlet fever or on the methods of testing sera prepared with the products of culture of hæmolytic streptococci isolated from cases of scarlet fever, the Commission considered that it would be useful to render future researches along this line more readily comparable. To this end, the standard serum adopted by the Federal Government of the United States was selected as the basis for study, the Hygienic Laboratory (Washington, D.C.) having agreed to place at the disposition of the Health Organisation of the League of Nations a sufficient quantity of the standard serum.

6. *Anti-gas-gangrene Sera*. — In view of recent work on this subject, the Commission considered the possibility of standardising different anti-gas-gangrene sera, and decided to institute comparisons of the standards in the countries concerned, and to place this item on the agenda of the next session.

7. *Tuberculin*. — In pursuance of the recommendation in regard to tuberculin adopted by the Commission at Geneva in October 1926, comparative studies of the standards at the National Institute for Medical Research, London, and the Institute of Experimental Therapy, Frankfurt, have shown that these standards are identical in potency.

A large amount of this standard has been prepared at the National Institute for Medical Research and placed at the disposal of the Health Organisation.

The Commission decided to continue the comparison of standards existing in various countries with the standard in question, the Danish State Serum Institute to act as the central laboratory of the Health Organisation for this purpose.

In view of the encouraging results already obtained, the Commission considered that agreement in regard to an international standard may shortly be reached.

8. *Blood-groups*. — The Commission learned with satisfaction that, on the initiative of the Health Organisation, the nomenclature proposed by von Dungern and Hirzfeld for the classification of blood-groups has been generally accepted, and recommended that this nomenclature be adopted for international use as follows :

O A B AB

To facilitate the change from the nomenclature 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 Commission recommended the adoption of the following method of designating test-sera :

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

It also 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 Commission considered that the standard sera in use in various countries should be compared by the Danish State Serum Institute, acting as the central laboratory of the Health Organisation,

with a view to the ultimate adoption of international standards. For this purpose, comparative experiments should also be made in regard to the preparation, conservation and titration of test-sera, and also in regard to the methods of determining blood-groups.

9. *Rabies*. — The Commission considered that the proposals presented by Dr. Remlinger provided useful methods of giving effect to the recommendations of the International Conference on Rabies, in view of the ultimate possibility of standardising the material used for anti-rabies treatment.

B. *Therapeutic Substances*.¹

International Conferences on these subjects were held in July 1923 at Edinburgh, in September 1925 at Geneva and in Frankfort in May 1928. The Conference in Frankfort was held for the purpose of reviewing the experience that had accumulated and for recommending to the Permanent Standards Commission the adoption of definite standards for remedies for which provisional standards had been set up and tested for long periods.

When the Health Committee of the League of Nations decided to summon the Conference which met at Edinburgh in 1923, it acted on experience already gained as to the possibility and value of international agreement with regard to the standardisation by biological methods of certain sera and bacteriological reagents. The success and the general acceptance of such methods, for the assay of the diphtheria and tetanus antitoxins in particular, had naturally given rise to the suggestion that certain potent drugs and organic extracts, of which the active principles, for one reason or another, were not accessible to chemical determination, should similarly be assayed by biological tests. Practical effect had been given to this suggestion in many different directions, and the results of a large volume of exhaustive investigation, by numerous workers in different countries, was available for study. The problems, however, which faced the members of the first Conference at Edinburgh appeared to be at once more numerous, more varied and more indefinite than those which had been presented to the Serological Conferences previously held under the same auspices.

Two separate problems are involved in the construction of any method of real standardisation :

1. The definition and preparation of a stable standard of reference.
2. The discovery of a specific and accurate biological method of comparison with that standard.

In the case of sera, this dual requirement had early been appreciated, but in the work which had been done on drugs and hormones there had been no clear appreciation of these two separate factors of successful standardisation. The principle of using stable standards of reference had not been generally accepted. The large volume of reports on the standardisation of substances of this mixed group had been concerned chiefly with the rival merits of the different biological methods which various investigators had devised, and this material formed the basis of the initial discussions of the Edinburgh Conference. Even in the case of a remedy of such recent introduction at that date as insulin, the Conference found itself involved in a consideration of the respective merits of two different suggested units, one based on the reaction of rabbits, the other on that of mice, without any common basis of reference which would enable the relation of the two suggested units to one another to be expressed with any precision. The difficulty of securing agreement on such questions of method soon became obvious by the attempt to persuade an investigator with long experience and confidence in one technique to abandon it in favour of another which he knew and trusted less. It further became clear that, in many cases, the definition of a unit in absolute terms of some animal reaction would give no sufficient guarantee of the uniform measurement in the different countries. Even if such difficulties could have been overcome, there would have remained the doubt whether an attempt to secure uniformity by adopting and stereotyping a method would have been justifiable on scientific grounds. By such considerations the Edinburgh Conference and its successors were led to regard it as their primary task, in the case of each of the remedies concerned, to define a stable standard of activity, to make arrangements for the standard to be prepared and to be kept in some central institute on behalf of the League of Nations Health Organisation, and to define, where necessary, a suitable unit of activity in terms of a weight of the standard.

When, as the result of the discussions at Edinburgh, this general principle of action became clear, arrangements were made for the experimental production of stable standards

¹ These explanatory paragraphs are quoted almost verbatim from an introduction written by the Chairman of the Technical Committee on Biological Standardisation for the volume on this subject (document C.H.734). Some such explanation is needed, and this introduction is the most authoritative that could be made.

for digitalis, insulin and the posterior lobe of the pituitary. During the following two years, these provisional standards were circulated to investigators in numerous countries, with a view to collecting evidence, from as wide a range of experience as possible, on the acceptability of these standards for international adoption. At this stage, the investigations necessarily involved the trial of different methods of biological comparison with the standard. The use of a common standard by so many different workers provided an opportunity previously lacking of direct comparison between the results obtained by the application of different methods of biological measurement to the same remedial agent. These investigations served the further purpose of emphasising the conditions which a method must satisfy in order to be regarded as appropriate for biological measurement, namely, that it shall be capable of giving a sufficient degree of quantitative accuracy and that the active constituent which it measures shall be the therapeutically important one.

In the case of insulin, no doubts arise as to the specific nature of the effect, which was measured by the different methods under investigation. On the other hand, it was a practical therapeutic necessity that this specific action should be determined with the greatest possible accuracy. The result showed that several of the methods proposed would give identical results, within satisfactorily small limits of error, when applied in relation to the common standard. The needs of the situation were therefore met by the adoption, by general agreement, of the provisional standard, and the definition of one common unit in terms of it, in place of the various units previously current and qualified as "physiological", "clinical", "rabbit" or "mouse" units. Several of the existing methods of measurement were recognised as suitable, and the opportunity for the introduction of new and improved methods was left freely open.

In the case of digitalis, on the other hand, there was uncertainty as to whether the active principles measured by the different methods were the same and, further, as to which, if any, of the methods measured that active constituent which was therapeutically desirable and important. Much work was accordingly devoted to the evaluation of different samples by several methods in comparison with a common standard, and, at a later stage, to the endeavour to ascertain whether the relations of activity displayed by any of the methods would hold good for the relative therapeutic activities as determined by the use of the same specimens of the drug in the treatment of selected human patients. To this last question no clear and decisive answer was obtained; but the failure was attributable, not to the inaccuracy of the laboratory methods of assay, but to the highly variable results obtained in the clinical trials. From the point of view of a scientific decision, such an outcome was unsatisfactory. From another point of view, however, it was reassuring, since it indicated that the requirements of clinical practice for uniformity of dosage could be adequately met by the use, in conjunction with the standard, of any of the principal biological methods of assay which had been brought under this organised investigation. Again, therefore, the principle emerged that the proper aim of international action was the acceptance of a common, stable standard, with provision for its central preservation and renewal. As regards the methods of assay, on the other hand, approval could be recorded of those which the organised international trials had shown to be adequate, without compromising in any way the freedom of scientific work directed to the improvement of these, or the development of new and better ones.

The methods used for measuring the activity of pituitary (posterior lobe) preparations, in comparison with the suggested standard, presented a different problem. Three methods were advocated, based on three quite different physiological reactions, and there was evidence that any of them, in expert hands, could be made to give sufficiently accurate and self-consistent measurements. Each of them, moreover, was clearly and directly related to one of the three important, and equally distinct, therapeutic uses of the extract. On the other hand, the Conferences were faced with a conflict of evidence on the important question as to whether the three types of activity represented three distinct active principles or three aspects of the action of one common principle. The Geneva Conference of 1925 therefore recommended the international adoption of the proposed stable standard, which had been widely tested in the interval and found satisfactory, and defined a unit of activity in terms of the standard. On the other hand, it recognised any of the proposed methods of biological measurement as satisfactorily equivalent. Since that date, the position has been cleared by the production of definite evidence that two, at any rate, of the chosen physiological actions are due to distinct and chemically separable principles. As regards these two principles, there is satisfactory evidence that they maintain their normal relative proportions in different samples of the standard, prepared in accordance with the accepted process. Any preparation, therefore, can be assayed by comparison with the standard, using the biological method appropriate to its therapeutic purpose, and its activity in the chosen direction can still be expressed in units corresponding to the activity of the chosen arbitrary weight of the standard. With this new evidence before them, the members of the Technical Committee which met in April 1928 in Frankfort were able to confirm the recommendations of the Geneva Conference with regard to the adoption for international use of the proposed stable standard and of the unit defined in terms thereof. As regards methods, on the other hand, uniformity was not merely

difficult, but inadmissible; it had to be recognised that different methods of assay must be used in relation to the different therapeutic uses of the potent extract.

The case of the arsenobenzene group (salvarsan and its analogues and derivatives) first came under consideration at the Geneva Conference of 1925. The problem was again a different one. There was no question here of measuring a variable activity and expressing it in units. What was needed was a guarantee that no sample of a particular preparation should have a toxicity significantly greater, or a therapeutic potency significantly less, than that of a good average preparation of the compound which it claimed to represent. After prolonged discussions of the possibility of laying down standard methods of testing and securing their international adoption, the members of the Conference found themselves driven back upon the principle of setting up stable standards of reference for the various compounds included in the group, and leaving latitude of choice with regard to the methods of comparison used to determine the conformity of samples with these, both as regards toxicity and potency. The Conference in Frankfort reaffirmed these recommendations on the basis of experience, with such modifications as would define more precisely the permissible limits of variation, while widening yet further the range of acceptable modifications in the methods used.

In the case of some other remedies, such as *Filix mas*, it was not considered practicable or necessary to prepare a basic standard of reference, and the different Conferences contented themselves with recognising, as an adequate guarantee of activity, the determination of the dilution in which the preparation produced a characteristic biological effect.

“In general, however, it may be said that the decisions with regard to remedies of major importance, requiring biological standardisation, resulted in an ever clearer recognition of the fact that the principal aim of international action in this connection should be the creation of permanent stable standards of reference, and that the main object of international agreement should be the acceptance of such standards and of arbitrary units defined in terms of them. Standards, in the nature of the case, should be permanent, and the object of further action with regard to them should be, not to change them, but to ensure that they do not change. Methods, on the other hand, must be open to progressive modification and improvement, in accordance with the teaching of experience and research. If the International Conferences on the biological standardisation of drugs and hormones had had no other result than to bring the practice with regard to these remedies thus into line with traditions long established in the standardisation of sera, they would have justified all the work which so many experienced investigators in different countries have contributed to the common stock and have put before their colleagues in a series of fruitful discussions.” — (From Introduction by Professor H. H. Dale to document C.H.734.)

ACTION TAKEN AT FRANKFORT.

1. *Salvarsan*. — At the Geneva Conference of 1925 it had been decided :

“I. That the internationally recognised biological standardisation of remedies of the arsenobenzene group should be made with a series of standard preparations, one for each of the compounds in question.

“II. That the following are the remedies which at present should be the subject of internationally recognised standardisation :

- “ (1) Dioxydiamino-arsenobenzene dihydrochloride (syn. salvarsan, arsphenamine, arsenobenzol, etc.);
- “ (2) Its metallic derivatives (silver-salvarsan); and
- “ (3) Its sodium salt (sodium salvarsan);
- “ (4) Dioxydiamino-arsenobenzene sulphoxylate of sodium (syn. neosalvarsan, neoarsphenamine, novarsenobenzol, etc.);
- “ (5) Neosilver-salvarsan;
- “ (6) Sulpharsphenamine (syn. sulfarsenol).

“III. That Professor Kolle, of the Georg-Speyer Haus, Frankfort-on-Main, be requested to accept the responsibility for preparing, maintaining, and distributing the standard preparations (1) to (5) on behalf of the Health Organisation of the League of Nations, and that Professor Voegtlin, of the Hygienic Laboratory, Washington, be invited similarly to be responsible for the standard preparation of (6).”

These conclusions were endorsed and the following paragraphs added by the Commission with regard to the standard preparations of neosalvarsan and sulpharsphenamine :

“ (1) That the standard samples for neosalvarsan and sulpharsphenamine provided by Professors Kolle and Voegtlin respectively for trial are suitable, as regards toxicity and experimental therapeutic activity, for adoption as the basis for the international standards;

“ (2) That, when a new preparation of neosalvarsan is required, it shall be tested in the first instance in the Frankfort Institute of Experimental Therapy, and there found to be equivalent in toxicity and experimental therapeutic activity to the existing standard;

and that its equivalence to the existing standard in these respects shall be confirmed by tests carried out in the National Institute for Medical Research, London, acting on behalf of the Health Organisation of the League of Nations, before its adoption for use as an international standard.

" Similarly, when a new standard of sulpharsphenamine (sulpharsenobenzene, sulpharsenol, myosalvarsan) is required, this shall similarly be tested and found equivalent to the existing standard in the Hygienic Laboratory, Washington, and this finding shall be similarly subject to international confirmation, before the new standard is adopted for international use. "

In order to ensure the greatest possible stability for the standards of these two salvarsan derivatives, the Commission considered that the following precautions should be adopted :

The material intended for use as a standard should be tested for its stability by heating to 60°C. for several days ; it should be dried to constant weight *in vacuo* over P_2O_5 ; it should be hermetically sealed in glass ampules filled with a dry, neutral gas ; and it should thereafter be kept at a temperature not higher than 0° C. before issue, and subsequently in the official institute in each country to which it is distributed.

IV. It was decided to recognise a test for experimental therapeutic action on animals infected with spirochaetes as an alternative to that in which trypanosomes are used. The necessary modification was introduced accordingly into the recommendation of the Geneva Conference of 1925.

V. In view of experiments undertaken to determine the efficacy of different tests in recognising the presence in different preparations of a toxicity exceeding that of the standard preparation by varying percentages, it was decided that a 20 per cent excess of toxicity above that of the standard would be a suitable limit of tolerance. Accordingly, the necessary modification was introduced into the recommendation of the Geneva Conference, which provided simply for " a toxicity not greater than that of the corresponding standard sample ".

VI. In conformity with the modification introduced into IV recognising a test for experimental therapeutic action on animals infected with spirochaetes as an alternative to that in which trypanosomes are used, the necessary alteration was made in this recommendation of the Geneva Conference, which provides for the testing of samples of each batch for therapeutic potency on a series of mice or rats infected with trypanosomes, and describes in detail the method to be employed.

VII. This recommendation, providing " that, before a batch of one of the remedies in question is certified for general issue, samples of it shall have been used on a series of human patients, under the supervision of a qualified expert ", was endorsed without modification.

VIII. It was agreed that any individual State could modify its national standard, on the condition that its toxicity and its experimental therapeutic activity are determined by comparison with those of the international standard. (This is a new article.)

2. *Digitalis*. — The Commission reviewed the recommendations of the Conference held at Geneva in 1925. Recommendation No. 1 described the international standard and its preparation, assay, annual control, preparation of a new standard when necessary, and method of distribution, all of which had been entrusted to the late Professor Magnus on behalf of the Health Organisation.

In considering this recommendation, the Commission had in evidence reports from different countries in which the standard preparation had been on trial since 1925. In Germany, a national standard based on that prepared by Professor Magnus had been officially adopted, and in practical use since January 1st, 1928. There had been no difficulty in preparing the whole of the supply of *Folia digitalis* required for use in Germany to a value which corresponded closely with that of the standard prepared by Dr. Magnus. The results in other countries in which the standard had been tried, but without official adoption, being also uniformly favourable, the Commission decided that the standard preparation in question should now be definitely adopted for international use.

Owing to the lamented death of Professor Magnus since the Geneva Conference of 1925, it was necessary to recommend a new arrangement for the renewal of the standard when the present supply should be nearly exhausted or should show signs of deterioration. The Commission recommended that the Pharmacological Laboratory, University of Utrecht, the Netherlands, be requested to undertake this responsibility. They recommended that Dr. Bijlsma be asked to prepare such a standard by mixing a number of samples of carefully dried digitalis leaves from different sources, so as to obtain a mixture possessing specific activity identical with that of the existing standard as measured by the cat method. They further recommended that, before its adoption to replace the standard prepared by Professor Magnus and in international use, the new standard prepared by Dr. Bijlsma should be tested in other countries by other methods (see document C.H.717, page 5, first paragraph). Only when the reports from the experts in different countries, who would test it by such different methods, showed it to be practically identical in activity with the existing standard should it be definitely adopted. It will then be kept and distributed by the National Institute for Medical Research, London, acting on behalf of the Health Organisation. The Commission also recommended more stringent precautions for drying the material for the standard than those formerly employed, so as to give a water content in the final product as distributed into glass ampules for preservation of not more than 8 per cent in place of the 7 to 8 per cent water content of the existing standard preparation.

Recommendation No. 2. — No modification was introduced into this recommendation, which provided :

" According to present knowledge, no particular method of extraction (infusion, cold alcohol, warm alcohol) can be recommended as the only correct one. It is necessary, however, for the purpose of assay, that the preparation to be tested and the standard preparation shall be extracted by the same method. "

Recommendation No. 3. — The Commission believed that they had now sufficient evidence before them to justify a somewhat wider recommendation with regard to comparative methods of testing than that adopted by the Geneva Conference of 1925, and considered that two methods and their

modifications, which were outlined, might be recommended as suitable, a third method (Mansfeld) inviting further investigation with a view to future consideration.

With regard to the recommendation in connection with the frog test, the tolerance of ± 25 per cent in relation to the standard allowed by the Commission in 1925 was altered to ± 15 per cent, which was regarded as an adequate margin for practical use.

With regard to the preparation and standardisation of the *tincture* of digitalis, the Commission took the view that it was desirable to have regard to the conditions of its preparation, whether in small quantities, as by the individual pharmacist, or on a large scale, as in pharmaceutical factories. In the former case, no further prescription is necessary than the use, for preparation of the tincture, of a standardised powder so as to conform to the international standard. In the latter case, which would apply also to the manufacture on a large scale of different proprietary preparations of digitalis containing the whole of the active principles of the drug, it was regarded as unnecessary to require the use of the drug of standard strength, provided that the activity of the tincture, as so prepared, is controlled by biological assay, and adjusted to identity in activity with the tincture prepared from the international standard. For the convenience of notation under such conditions, it was considered that the definition of a *unit* of digitalis activity, in terms of the international standard preparation, would be desirable, and the Commission accordingly made the following recommendation :

“ That, when the dosage of digitalis or its preparations is expressed in units of activity, the unit employed for any preparation and in any country should be an *international unit*, which should be defined as *the specific activity contained in 0.1 gramme of the international standard powder.* ”

Recommendation No. 4. — With regard to the recommendation of the Geneva Conference of 1925 for the use of *G. strophanthine* (ouabain) as a standard for preparations of strophanthus, the Commission, considering the variable activity of different preparations of ouabain, due to varying proportions of water of crystallisation, recommended that, in using ouabain as a standard for biological assay, the quantity employed should be expressed in terms of the weight of water-free ouabain present. To facilitate this, they recommended that a sample of ouabain should be prepared and kept as an international standard for the biological assay of strophanthus and its preparations, and that this standard should have an accurately determined content of water-free ouabain. Professor Tiffeneau (of Paris) will prepare such a standard and place it at the disposal of the Health Organisation, the National Institute for Medical Research, London, keeping and distributing it on behalf of the Health Organisation.

3. *Scilla*. — The Commission considered the possibility of establishing an international standard for scilla and its preparations, and recommended that the possibility of preparing a stable standard from a suitable dried sample of the drug should be the subject of experimental enquiry.

4. *Insulin*. — The Commission had under review results from official and other laboratories in different countries, in which, since 1925, the standard preparations of insulin recommended by the Geneva Conference of 1925 have been in use. The Commission found that the results were uniformly favourable and that the unit adopted and recommended by the Geneva Conference referred to was now in use all over the world as the only unit of insulin. In view of this satisfactory position, the Commission decided to adopt the recommendations of the Geneva Conference of 1925 as regards the standard of insulin without modification.

These recommendations defined the international standard preparation of insulin (of which 1 milligramme contains 8 units of insulin), provided for its being kept and tested for potency by the Medical Research Council on behalf of the Health Organisation, laid down conditions for its distribution, and suggested that each testing laboratory receiving samples should prepare a standard of its own and should compare the potency of this with the sample of the international standard placed in its hands for this purpose.

Two methods for the bio-assay of insulin were considered as suitable and described in detail, the first depending on the effect on blood-sugar, the second on the incidence of symptoms in white mice.

One of the recommendations dealing with the permissible content of organic solid matter per unit in preparations of insulin and with tests for the stability of such preparations, was regarded by the Commission as in abeyance in view of the general improvement in the preparations of insulin now manufactured in different countries in both these respects.

Finally, these recommendations expressed the opinion that in future the term “ unit of insulin ” or “ insulin unit ” should only be used in the sense indicated in their report.

5. *Pituitary Extract*. — Recommendations Nos. 1 and 2 of the Geneva Conference were endorsed without modification, the reports from different centres to which the standard material prepared by Professor Voegtlin had been distributed in the intervening period being uniformly favourable to its adoption.

These recommendations provided that the dry (acetone) extracted substance of the fresh posterior lobe of the pituitary gland is suitable for adoption as a standard of activity for pituitary extracts and should be accepted as the international standard. It had since been adopted as the standard for this purpose in the United States *Pharmacopœia*, Edition X. As a sample of this powder of standard strength can be prepared at any time and in any country, the authority responsible for biological standardisation, in each country concerned, should prepare such quantities of the standard as are needed for distribution in its own country. Professor Voegtlin, of Washington, was requested to furnish a small sample of the standard, as originally prepared for examination by the Edinburgh Conference, to any authority which may need it for confirmation of its own national standard.

Recommendations No. 3 and 4 were not endorsed, as they were regarded by the Commission as no longer necessary and possibly undesirable, in view of the doubt expressed by some members as to whether these standard powders prepared by extraction with acetone retained the anti-diuretic activity of the original gland without loss.

Recommendation No. 5 was altered to read in part as follows :

“ That the extracts from the standard powder should be prepared for the purposes of the comparative biological tests according to the method indicated in the United States *Pharmacopœia*, Edition X. ”

The recommendation goes on to specify the method of biological assay for the oxytocic and pressor activities and for estimation of the antidiuretic action.

In a note the Commission points out the effect of recent evidence on this recommendation, proving that the pressor and oxytocic activities of pituitary extract are due to different active principles, and indicating that the anti-diuretic activity may be due to yet another principle. The Commission noted that the discoverers of the method of separating the oxytocic and pressor principles have found no difficulty in expressing the activity of their univalent preparations in pressor and oxytocic units of the international standard powder. It was therefore of the opinion that, if the anti-diuretic action should prove to be due to yet another principle, it might be possible to express its activity in units of anti-diuretic action of the same standard powder, but considers that further evidence is necessary of the uniformity and stability as regards this action of different preparations of the standard. Accordingly, the Commission recommended, in the light of the uniformly favourable experience obtained since the Geneva Conference of 1925 :

“That the dry preparation of the acetone-extracted fresh posterior lobe substance of a pituitary be now definitely adopted as the international standard preparation for the biological evaluation of preparations of the posterior lobe of the pituitary body, whether containing all the active principles of the lobe, or the pressor or oxytocic principle only, in separate solution.”

It further recommended that the activity of any such preparation should be expressed in relation to the international standard in units of pressor or oxytocic activity, and that, in each case, *the unit of such activity* shall be that of 0.5 milligramme of the standard powder.

The Commission expressed no final opinion concerning the suitability of the standard for assay of the anti-diuretic action.

Recommendation No. 6 of the Geneva Conference providing for a test for non-specific stimulant activity of the guinea-pig's uterus in making the assay for oxytocic action was amended in such a way as to result in greater precision.

Recommendation No. 7. — In view of the evidence before it that the methods of indicating the strength of extracts in the units recommended by the Geneva Conference of 1925 have been found of practical value in different countries and particularly in the United States of America, where the standard, but not the unit, has already been adopted in the *Pharmacopœia*, the Commission decided to endorse this recommendation in modified form as follows :

“That the strength of all extracts of the pituitary posterior lobes should be expressed in units of activity, the activity extracted from 0.5 milligramme of the standard powder under the conditions above indicated being defined as one unit.”

6. *Thyroid Preparations.* — After consideration, the Commission decided to make no further recommendations.

7. *Ergot.* — In view of results of recent clinical experiments showing that the essential factor in the activity of ergot on the uterus is the action of the specific alkaloids (ergotoxine, ergotamine), histamine having a subsidiary effect in accelerating the onset of the action, and experiments made on the parturient cat, which appeared also to indicate a potentiating effect of histamine on the action of the specific alkaloids, the Commission decided to endorse the recommendation of the Edinburgh Conference for the standardisation of ergot and its preparations by a method measuring its content of the specific alkaloid (ergotoxine or ergotamine). For this purpose, the method of Broom and Clark was recommended as convenient and accurate.

8. *Anthelmintics and Filix Mas.* — No further recommendation concerning the standardisation of this preparation was made.

9. *Oil of Chenopodium.* — The different biological methods for standardising or controlling the activity of this substance, with reference to its content of ascaridol, having proved unsatisfactory, and in every case inferior to a relatively simple colorimetric chemical determination of the ascaridol content, the Commission decided that no recommendation can at present be made for the biological assay of this oil (document C.H.717).

ACTION OF THE HEALTH COMMITTEE.

The Chairman of the Commission presented the report of this session to the Health Committee in May 1928, pointing out that the recent session in Frankfort had been the third of the principal sessions. The first had been held in London in 1921 and the second in Paris in 1922. He went on to explain the action taken in Frankfort, pointing out the very satisfactory results obtained. After lengthy research, definite resolutions had been drafted with regard to certain important biological and serological work. There remained the task of giving effect to this international work by making it known to the medical profession, the public health administrations and the Governments.

A resolution was adopted recommending to the Council of the League that the report and recommendations of the Frankfort session be communicated to the various Governments and to the competent authorities of these Governments, together with all the relevant documents, in order that the necessary official action might be taken. The Health Committee also associated itself with the expressions of appreciation contained in the report of the Chairman in regard to the facilities and hospitality so generously offered by Professor Kolle and the interested authorities of the (German) Federal and Prussian Administrations.

OTHER STANDARDISATION WORK CARRIED ON DURING 1928.

As usual, the routine distribution and comparative assay of standard sera were carried on during the year by the Danish State Serum Institute, acting as the Central Laboratory of the Health Organisation.

Anti-diphtheritic Serum. — The American, English, French, German and Danish standard sera were compared in 1928. The usual annual comparison of these standards will be carried out next in the spring of 1929.

Anti-tetanic Serum. — In 1928, the German, English and Danish standard sera were compared. Samples of the international standard serum were distributed to the National Institute for Medical Research, London; to Dr. Hirzfeld at the Warsaw Institute of Hygiene; and to the South African Institute for Medical Research, Johannesburg.

Anti-dysenteric Serum. — Samples of the standard serum were distributed to Professors Kolle (Frankfort), Hirzfeld (Warsaw), Shiga (Corea), Cartacuzène (Bucarest), Dumas (Paris), to the National Epidemic Prevention Bureau, Peking, and to Moscow, Sofia, Albany (N.Y.), Minsk (U.S.S.R.), Vienna, Zagreb, Buenos Aires, Tokio, Calcutta, Java, Dresden, Johannesburg, Lyons, Marburg. Samples will be sent to the same institutes in 1929.

Anatoxin. — Comparative titrations were carried on at the Pasteur Institute, Paris, and the Danish Serum Institute, Copenhagen, samples being exchanged for this purpose. It is hoped that sufficient progress will have been made by the spring of 1929 to permit of definite proposals for standardisation.

Tuberculin. — Comparative tests were made of German, French, English, Japanese and Danish standard tuberculins, and it is hoped soon to be in a position to make definite proposals with a view to the international standardisation of tuberculin.

Blood Types. — Samples will be sent to Professors Hirzfeld, Sachs and Krauss and to the Medical Research Council (London). It is hoped to secure agreement during the year on the standardisation of the standard sera employed.

Anti-gas-gangrene Sera. — Sera of this type from England and France are being compared.

(Extract from letter dated January 22nd, 1929, from the Chairman of the Commission in regard to the work being done at the Danish State Serum Institute.)

II. JOINT COMMISSION OF EXPERTS FOR THE STUDY OF THE RELATIONSHIP BETWEEN PUBLIC HEALTH SERVICES AND HEALTH INSURANCE ORGANISATIONS.

A. — Owing to the complexity of the problems under consideration, it was decided to restrict the work of this Commission during 1928 to the following questions :

1. Preventive measures against tuberculosis.
2. Maternal welfare and the protection of infancy from birth to school age.

During 1928, the Joint Secretariat continued its work of collecting information and endeavoured to bring to a conclusion the enquiries and investigations on these two problems.

A single questionnaire was prepared for the investigation of the general principles and results of tuberculosis prevention, the work of the institutions concerned being classified according to six main headings :

1. Education and training of public health staff in regard to tuberculosis.
2. The discovery and notification of cases of tuberculosis.
3. Measures concerning non-contagious cases.
4. Measures concerning patients with the disease in such a stage as to offer hope of arrest, classified as to whether or not capable of being trained.
5. Measures concerning patients with the disease in such a stage as to offer no hope of arrest, classified as to whether or not capable of being trained.
6. Protection of the non-tuberculous.

The investigators sought to determine the manner in which this preventive work was carried out by public health services, health insurance institutions and voluntary agencies in each of the selected districts, bearing in mind the relationship in these matters existing between the three types of organisation mentioned above.

The enquiries on these subjects carried on jointly by representatives of the public health services and of health insurance organisations have resulted in a series of reports dealing with Austria, Belgium and Germany.

Austria. — Dr. Foramitti, in agreement with the Chief Medical Adviser to the principal workers' insurance fund, has written a report on the prevention of tuberculosis in Vienna, in which he emphasises new methods employed in the campaign, with respect particularly to apprentices and to pupils in technical schools.

Belgium. — M. Jauniaux and Dr. Timbal have presented a report which explains the anti-tuberculosis campaigns in Belgium and deals particularly with the urban district of Charleroi and the rural district of Antwerp.

Germany. — President Hamel, in agreement with Dr. Grieser, has presented a memorandum on the co-operation of the public health services, social insurance institutions and voluntary organisations in the prevention of tuberculosis.

Dr. Seiffert has prepared a report on the prevention of tuberculosis in Bavaria, paying special attention to Middle Franconia (including Nuremberg), and to the direct or indirect participation of insurance institutions in the campaign.

Dr. Coerper has written a report on the prevention of tuberculosis in Cologne, where interesting methods of co-operation between public health services and insurance funds have developed.

A report on the same subject has been secured from Dr. Thiele concerning the Free State of Saxony, where the tuberculosis mortality is particularly low.

A memorandum on the campaign against tuberculosis in Silesia was presented by M. von Legat and Dr. Wilhelm May.

With regard to the protection of maternity, infancy and childhood, the conclusions of Dr. Winter were referred to the other members of the Commission. Replies and interesting suggestions were made by M. Jauniaux (Belgium), M. Olivier (France) and Mr. Potts (Great Britain).

1. SUB-COMMITTEE ON PREVENTIVE MEDICINE.

In order to facilitate the solution of the complex problems confronting the Commission, it was decided to set up a Sub-Committee of experts to deal with the *methods* of:

“Co-operation between public health services and organisations and insurance institutions, with a view to the development of preventive medicine, and the orientation of medical practice towards hygiene and prevention in welfare institutions.”

After consulting the Chairman of the Joint Commission, the matter was presented to the Health Committee and approved (document C.555.M.175.1928.III, page 5).

The Sub-Committee¹ met at Geneva on December 17th, 18th and 19th, under the chairmanship of Dr. L. Heijermans, and drew up a report of which the following is a summary (document C.H./S.H.—A.M./8 (1)).

The proceedings began with a general discussion on the necessity and importance of directing medical practice towards prophylaxis and later special attention was devoted to the following subjects:

1. Data regarding preventive medicine and morbidity and mortality statistics.
2. Training of medical practitioners in preventive medicine.
3. Equipment necessary for the practice of preventive medicine.

2. GENERAL RESOLUTIONS.

Two general resolutions were adopted, the first pointing out that medical practice should be developed along preventive lines for the protection and improvement of the public health. This, according to the Sub-Committee, implies a rational organisation of methods of prevention and treatment.

The second general resolution urged that the object of preventive medicine should be defined by public health administrations, social insurance institutions and public welfare services, which should co-operate for this purpose as well as for the purpose of furnishing preventive medicine with the necessary resources.

3. RESOLUTIONS CONCERNING DATA REGARDING PREVENTIVE MEDICINE.

The Sub-Committee stated that morbidity and mortality statistics are essential for the efficient organisation of preventive medicine, but pointed out that morbidity statistics in their present form are not adequate for its needs. Fuller information is required concerning personal, social and occupational conditions, and the nomenclature of diseases must be adopted to the needs of the different institutions and organisations concerned with the practice of preventive medicine. The Health Committee was requested to refer to its

¹ For membership of this Sub-Committee, see Annex II.

Commission of Expert Statisticians the practical problems relating to the classification of diseases suitable for use in these various institutions and two members of the Sub-Committee were asked to make the necessary explanations to that Commission.¹

The Sub-Committee considered that it was the duty of medical practitioners employed by these institutions and called upon on their behalf to furnish such detailed information regarding the incidence of disease as is essential to the compilation of morbidity and mortality statistics.

In the opinion of the Sub-Committee, this obligation implies a change in the attitude of the medical practitioner towards professional secrecy and its adaptation to the needs of preventive medicine in the higher interests of the community.

4. RESOLUTIONS CONCERNING THE TRAINING OF MEDICAL PRACTITIONERS IN PREVENTIVE MEDICINE.

The Sub-Committee considered that the medical personnel and assistants employed by institutions of preventive medicine should be given special training and that the curricula of medical schools should include preventive medicine as a compulsory subject, leading to an examination. All clinical instruction, moreover, should have a bias towards preventive medicine.

The Sub-Committee believed that the public authorities, in co-operation with the welfare institutions concerned, should organise post-graduate courses in preventive medicine for all practitioners. The Health Committee was asked to request its Commission on Education and Hygiene to draft a programme of instruction in preventive medicine for medical faculties and schools of hygiene.

5. PUBLIC HEALTH EQUIPMENT.

The progress of science and medical technique has placed at the disposal of preventive medicine special equipment facilitating the diagnosis, prevention and treatment of disease. In the opinion of the Sub-Committee, these facilities should be placed at the service of the community by public health and welfare administrations and insurance institutions, in special establishments, in order that they may be utilised by public health officers and medical practitioners, whose work would thereby be rendered more effective.

6. STUDY TOURS.

The Sub-Committee approved the idea of study tours in which its members would take part. The first of these study tours will take place in April in selected cities of Germany and Austria, where there are many opportunities for studying methods of preventive medicine and co-ordination in public health, public welfare and social insurance institutions.

III. CANCER COMMISSION.

During the twelfth session of the Health Committee, a report on the work of the Cancer Commission was presented (document C.H.712), which dealt with the selection of the subjects on which international enquiries in regard to cancer seemed likely to yield important results. As a result of numerous enquiries and suggestions received, the Cancer Commission concluded that valuable results might be expected from investigations into occupational cancer and into radiological methods of treatment.

1. INVESTIGATION INTO OCCUPATIONAL CANCER.

The proposal to investigate this subject came from the Sub-Committee of Statisticians in October 1927, and was examined by the Commission with the aid of Dr. Carozzi, of the International Labour Office. The fact that the available statements regarding occupational cancer cannot be accepted at their face value because of the many opportunities which exist for concealing or mistaking the origin of the disease, and the further fact that there is a very irregular distribution of cancer in different countries, even among workers in the same industries, the causes of which are unknown, made it seem probable that valuable lessons on the causation of cancer might be learned from their intensive study. Moreover,

¹ This subject has been placed on the agenda of the Commission of Expert Statisticians, which meets in Berlin on April 8rd, 1929.

something might be learned from methods of control which have been applied so successfully in certain industries, i.e., in the case of cancer of the bladder among aniline-dye workers in Germany.

For these reasons, a Sub-Committee of Experts was set up to investigate this subject.¹

2. POSSIBILITIES OF INTERNATIONAL WORK IN RADIOLOGICAL METHODS.

The use of radium and of Röntgen-ray therapy has been fairly successful, particularly in the treatment of certain types of cancer, such as cancer of the *cervix uteri*, the site for which the most extensive use has been made of ray-therapy. But there is little general agreement as to the precise action of the rays and as to the best method of applying them. Want of agreement extends even to radium alone when applied to cancer of the same degree affecting the same site. Radium appears to give results about equal to surgery in the treatment of cancer of the cervix and is the only known means of dealing successfully with patients already in an inoperable stage of the disease when first applying for treatment.

The success which has crowned the treatment of cancer with radium has led to the extensive use of this method in small clinics and hospitals and even by private practitioners. But the methods used are so divergent that it seems impossible to indicate the direction in which further progress may be achieved. How wide these divergences really are or how small they may be it is impossible to say in view of the fact that the published data are not sufficiently detailed.

The Cancer Commission therefore proposed to the Health Committee that a study should be made of the practical methods of radiology from the international point of view, by securing a survey of the most expert opinion and conclusions of as authoritative a nature as is possible at the present time. For this purpose, it was proposed that the Sub-Committee should consist of the directors of clinics with the largest experience of this method of treatment.¹

The Cancer Commission also drew attention to the importance of obtaining information on the incidence of cancer in relation to constitution, which was suggested by the Italian group and supported by Professor Nagayo.

The Sub-Committee for the Study of Occupational Cancer requested its secretariat:

1. To report on the practicability of an analytical study of the technical literature of industrial processes, with the object of proving or disproving the statement that the primary existing cause of certain industrially localised forms of cancer is a particular chemical product.

2. To keep informed of the progress of enquiries which are being made by the English Departmental Committee on Cancer, with the object of tracing back the industrial life of the patient in cases of skin cancer which come under observation in private hospital practice or are reported under a voluntary notification system.

3. To obtain any available detailed information respecting the incidence of cancer of the lung upon miners in places where conditions appear to be analogous to those of Schneeberg.

4. Professor Roussy was asked to study the best method of enquiring into the existence and prevalence of occupational cancer in France; and three members (the Chairman, Professor Greenwood and Dr. Teleky) were invited to undertake an analysis of cancer in its relation to occupation in the German Health Insurance Funds according to the method utilised by Dr. Stevenson, of the English General Register Office, in his enquiry.

The Sub-Committee of Experts studying the radio-therapy of cancer selected cancer of the *cervix uteri* for the investigation and invited three experts possessing the experience and resources respectively of the Fondation Curie, Paris, the Universitäts-Frauenklinik of Munich and the Radiumhemmet of Stockholm to help in collecting and analysing information on the results of radiological treatment at clinics and institutions in different countries where experience has extended over a sufficiently long period. The services of Dr. Lacassagne, Professor Voltz and Dr. Heyman were secured for this purpose.

For the present, this investigation is limited to the three institutions represented by these investigators, and the records of cases are being collected according to a uniform method in order to ensure as much comparability as possible. For the same reason, the three investigators have met at the different institutes to exchange experience and information.

On the suggestion of Professor Regaud, the Radiology Sub-Committee formulated a series of questions on the radio-therapy of cancer from its practical side, which should be

¹ For membership, see Annex, II.

answered by the Cancer Commission after information and suggestions have been received. Publication of these in the medical Press and otherwise ensured their being called to the attention of those most concerned.

These questions include the following :

1. Action which should be taken to increase the number of centres for consultation.
2. Better organisation of means to ensure early diagnosis.
3. Recommendations for radio-therapeutical equipment.
4. Advantage or disadvantage of radium treatment being given without retaining the patient in the hospital or institute.
5. Supply of radium for use by individual practitioners or by hospitals and clinics whose resources and experience in the matter are necessarily limited (document C.H.744).

During its session in October 1928, the Cancer Commission decided that the time was not ripe to call a conference of cancerologists, a suggestion previously made to the Health Committee.

During the twelfth session of the Health Committee, Dr. Hamel and Professor Nagayo were made members of the Cancer Commission.

The Health Committee took action on the lines suggested by the Cancer Commission during its twelfth and thirteenth sessions.

IV. SMALLPOX AND VACCINATION COMMISSION.

This Commission sat three times during 1928, twice in connection with the semi-annual sessions of the Health Committee and once in August with a group of experts.

During the April session, the Commission considered the following questions (document C.H.707).

1. ENQUIRIES INTO THE INCIDENCE AND CHARACTER OF SMALLPOX IN DIFFERENT EUROPEAN COUNTRIES.

A report on this subject, prepared by the Epidemiological Intelligence Service, was presented to the Commission.

2. ENQUIRIES AS TO POST-VACCINAL ENCEPHALITIS.

The Commission considered that by the month of August sufficient information should be available to warrant a full session of the experts.

3. FURTHER WORK BASED ON THE PROGRAMME ADOPTED AT THE HAGUE IN 1926.

Under this heading, the Commission received and considered a memorandum prepared by the Chairman and a note by the British member.

A resolution was adopted dealing with these three subjects, providing that the Commission:

1. Should continue, with the aid of the Epidemiological Intelligence Service, to collect data on the incidence and character of the smallpox prevailing in Europe and certain other countries with a view to the preparation of a special report on this subject;
2. Should review the extent, characteristics and causation of the conditions termed post-vaccinal encephalitis at a session in August attended by its experts;
3. Should take steps, in consultation with the experts, to give effect to outstanding items of the programme of the Hague Conference, 1926, such as are indicated in the memorandum annexed to their report.

The first annex of the report was a memorandum by the Chairman in regard to enquiries in the principal vaccine institutes on the origin, method of preparation and technique of employing vaccine lymph, as well as to measure the immunising properties of vaccination and to answer certain questions in regard to the virus.

The second annex, a note by Sir George Buchanan, dealt with the possibility of further diluting the vaccine lymph, the relationship of the various strains of vaccine in use in the different lymph establishments, the nature of the influence of certain disinfectants on the virus, and the possibility of having prepared a detailed monograph summarising the present knowledge on the mutual relationship of the different viruses.

During its twelfth session, the Health Committee considered the report of the Commission on Smallpox and Vaccination and adopted a resolution accepting its recommendations as set out above.

4. SESSION HELD AT GENEVA IN AUGUST 1928.

A session of the Commission and associated experts was held at Geneva from August 22nd to 25th, 1928, to consider the following problems :

1. The problem of post-vaccinal encephalitis.¹
2. The preparation and preservation of vaccine lymph.
3. The relationship between the different types of smallpox virus and those of certain human and animal pathogenic viruses.

The preliminary discussion of questions 1 and 2 was entrusted to the two Sub-Commissions, whose reports were adopted by the Commission. Question 3 was postponed for further examination.

Without attempting to summarise the technical considerations of the first Sub-Commission which led to the adoption of conclusions, it will suffice for the purposes of this report to reproduce the conclusions in full :

" Conclusions.

" The facts and considerations which have been before the Smallpox and Vaccination Commission at its present session seem to permit the following conclusions :

" (a) The foremost of these is the rarity of cases of post-vaccinal encephalitis, even in the countries specially affected, by contrast with the number of vaccinations. We are, in fact, concerned with a minimal proportion of them.

" (b) Apparently the matter is not one in which mere coincidence between vaccination and encephalitis can be invoked ; in other words, we are not dealing with a merely fortuitous occurrence.

" (c) In our present state of knowledge, we must conclude that post-vaccinal encephalitis is a different disease from encephalitis lethargica. The conditions under which post-vaccinal encephalitis has manifested itself in the Netherlands and in England and Wales tend to show that children between 3 and 13 years of age are particularly susceptible, whilst infancy and adult ages are almost wholly exempt. All observations point to the conclusion that the appearance of encephalitis is not connected either with particular strains of lymph or with particular accidents of lymph preparation.

" (d) Passing to the ætiologico-pathological side of the problem, it would appear in our present state of knowledge that the virus of vaccinia of itself cannot be considered responsible for the supervention of encephalitis. Rather it has to be supposed that some unknown factor exists—perhaps bacterial or a filter-passing virus, or a latent virus—which, by means of a reciprocal reaction, determines the occurrence of the accidents in question."

5. SUB-COMMISSION ON THE PREPARATION AND PRESERVATION OF THE VACCINAL LYMPH.

This Sub-Commission drew up a report on certain questions which appear to be of particular importance in regard to the quality of the lymph or to exercise favourable or unfavourable effects on lymph. It did not consider that it was called on to set up rules for guidance in the preparation of lymph or to lay down a uniform method for the use of lymph which should be followed by all vaccine establishments. This Sub-Commission had before it a detailed report consisting of an analysis of the replies from twenty-nine lymph institutes to the questionnaire sent out by the Health Section on the preparation and preservation of vaccine lymph.

The Sub-Commission submitted observations in regard to :

1. Origin of the seed lymph.
2. Maintenance of the virulence of the vaccine strain.
3. Neuro-lapine and testicular lapine.
4. Treatment of the seed lymph.
5. Preparation of vaccine for human vaccination.
6. Preparation and employment of the lymph.
7. Potency of the lymph.
8. Vaccine technique.

While these observations of the Sub-Commission relate to technical aspects of the subject, certain of them are also of interest to public health administrations :

¹ The Commission explained that this term was adopted for practical convenience, without necessarily implying that " post-vaccinal " is the equivalent of " propter-vaccinal ". For further explanation, see the full text of document C.H.739.

“ . . . The Sub-Commission considers it desirable to recommend to vaccine institutes that they should carefully test the methods they use to maintain the standard and activity of the strain, with a view to ascertaining what factors appear to exert a favourable or unfavourable effect on virulence. The institutes are requested to communicate to the Health Section of the League of Nations for transmission to the Smallpox and Vaccination Commission all the information which they can collect on this point.

“ A number of institutes have, moreover, declared their readiness to place at the disposal of other institutes, through the intermediary of the Health Section of the League of Nations, samples of vaccine strains as to the pedigree and treatment of which detailed information is available, for the purpose of comparative research work, which would include animal experiment and virulence tests on man. In connection with this research work, endeavours should be made to determine how far such strains differ with respect to association with post-vaccinal encephalitis . . .

“ It would be desirable for vaccine institutes to endeavour to determine, by careful investigation, what are the conditions under which the virulence of the vaccine can be kept up to a constant standard when it is carried on continuously from calf to calf . . .

“ The Sub-Commission considers it important, however, to emphasise as strongly as possible its conviction that a veterinary control of animals used for lymph production is in all circumstances essential . . .

“ Research into the suitability of diluted lymph for purposes of immunisation is in any case of the greatest interest and deserves to be proceeded with, both in laboratory experiments and particularly also by practical application. . . It should be carefully ascertained whether, in view of the great differences in the vaccine technique employed by doctors, as well as the variations in individual susceptibility to vaccination, the diluted lymph gives sufficiently satisfactory results in practice and confers a reasonable degree of immunity. The Sub-Commission is of opinion that the investigation of this question should be left to the discretion of the institutes, and that the guiding principles briefly outlined above make it unnecessary to draw up a special plan of study. It would be desirable that any results obtained should be reported to the Health Section of the League of Nations for the information of the Smallpox and Vaccination Commission . . .

“ An attempt should be made to record objectively the result of the vaccinal reaction. In the case of primary vaccinations, it is sufficient to describe them as successful or unsuccessful, while noting the percentage of *insertion successes*. In the case of *revaccination*, on the other hand, the type of reaction should be described in greater detail. On the basis of many years' experience, the adoption of the following three classes of reaction may be recommended :

- “ 1. Reaction of the primary vaccination type (Jenner's pustule).
- “ 2. Accelerated reaction (vesicular reaction) “modified vaccine”.
- “ 3. Allergic or early reaction (papular reaction).

“ In countries which have official vaccination records, these three categories should find a place in the form of records . . .

“ The Sub-Commission does not consider it desirable or even within its province to declare that any one particular defined method of vaccination should be exclusively employed by vaccinators in all countries. It would, however, advise that the technique and methods of vaccination which are permitted or are recommended should be carefully defined in each country on expert authority ; and that the extent to which these instructions or recommendations are followed in practice should be duly ascertained by the competent authorities of these countries, the results carefully recorded and reported and, whenever possible, judged in respect of the actual immunity conferred on exposure to smallpox infection or on revaccination. It is only in this way that satisfactory or universally applicable rules or recommendations for the technique of vaccination can be ultimately adopted.”

* * *

“ None of the facts considered in this report lead the Commission to the conclusion that there is reason for discontinuing the use of vaccination, which remains the most powerful weapon against smallpox that we possess.

“ In view of the circumstances associated with the occurrence of nervous complications, which, as explained in the first part of this report, are, in any case, of extreme rarity, the Commission draws attention to the advantage which may result from practising primary vaccination during early infancy rather than at later ages of childhood.” — (Document C.H.789.)

The report contains, as an annex, a detailed bibliography of post-vaccinal encephalitis, taken, with a few additions, from the Report of the Committee on Vaccination, Ministry of Health, London.

6. SESSION HELD AT GENEVA IN OCTOBER.

The Commission met on October 30th, and submitted to the Health Committee the following recommendations :

“ (a) That the collection of information by the Epidemiological Intelligence Service concerning the prevalence and nature of smallpox in Europe and in certain countries outside Europe be continued, with the object of preparing in due course a special report on the subject.

"(b) That the different health administrations be asked to communicate to the Health Section the occurrence of any cases of post-vaccinal encephalitis that may occur, as well as information concerning such enquiries as may be carried out with regard to this matter."

In addition, the Commission recommended that special information concerning post-vaccinal encephalitis (such as is described in paragraph 16, Chapter I, of document C.H.739) should be requested from the administrations of countries other than England and the Netherlands, to be communicated by the Health Section to the members of the Commission.

In regard to the preparation and preservation of lymph, the Commission proposed :

"1. That health administrations and vaccine institutes should be asked whether the prescriptions concerning the standardisation of lymph and the estimation of potency formulated by the Berlin Conference (document C.H.533) have been adopted.

"2. That an endeavour be made to obtain information on the results obtained with diluted lymphs and with dead lymphs (ana-vaccine) (see paragraph 6, Chapter II, document C.H.739), as well as any attempts that may have been made to cultivate *in vitro* the virus of cowpox.

"3. That vaccine institutes be asked to study the factors determining changes in virulence of their strains of vaccine and to communicate the results obtained to the Health Section of the League of Nations.

"4. That a certain number of vaccine institutes be asked to exchange their strains of vaccine, of known pedigree, to enable their virulence to be estimated, and in what manner they can be differentiated from each other."

The Commission finally directed the attention of the Secretariat to the desire already expressed that a study of the diseases and the viruses of the smallpox family should be carried out.

7. ACTION BY THE HEALTH COMMITTEE.

These recommendations of the Smallpox and Vaccination Commission were approved by the Health Committee in October 1928 (document C.555.M.175.1928.III, page 5, Resolution VIII).

V. OPIUM COMMISSION.

Article 4 of the Opium Convention¹ of February 19th, 1925, gives the names of all the substances to which the Convention applies. Nevertheless, the provisions of the Convention can be made applicable to any drug not mentioned in Article 4 by the application of Article 10, which provides a method of extending the scope of the Convention to other substances. On the other hand, a preparation containing any of the drugs referred to in Article 4 can only be withdrawn from the operation of the Convention through the application of the method described in Article 8.

The Convention provides that the Health Committee is the competent authority to advise the Council in regard to the necessary steps both as to extending and limiting the effects of the Convention.

After having submitted the question to the Permanent Committee of the Office international d'hygiène publique in Paris, the Health Committee is required to recommend to the Council of the League the limitation or extension of the Convention with respect to any preparation or drug. The Council will thereupon communicate the said recommendation, which is compulsory in the case of Article 8 and optional in the case of Article 10, to the contracting parties.

1. APPLICATION OF ARTICLE 8 OF THE CONVENTION.

The Health Committee, at its session in April 1925, came to the conclusion that Governments should be asked to furnish a list of narcotics to which, in their opinion, the provisions of the Convention should not be applicable.

The Council approved this conclusion on June 9th, 1925, and a circular letter was addressed to Governments on November 5th, 1925. Up to the present date, seventeen Governments have sent the lists required.²

With the exception of the list submitted by the Government of Siam (received only after this action was taken), all these were forwarded to the Permanent Committee of the Office international d'hygiène publique for advice and report. The Office consulted a Committee of Experts, and on November 14th, 1927, adopted the Committee's conclusions (Minutes of Permanent Committee of Office international d'hygiène publique, November 1927, pages 97 *et seq.*).

¹ This Convention entered into force on September 25th, 1928.

² Argentine, Austria, Bulgaria, France, Germany, Great Britain, Hungary, India, Irish Free State, Latvia, Poland, Roumania, Siam, South Africa, Spain, Sudan and Sweden.

These conclusions were to have been laid before the Health Committee in April 1928. A note was, however, received from Sir George Buchanan pointing out that some of the preparations mentioned in the lists submitted by the various Governments were not accompanied by a full definition of their composition. A second meeting of the Experts' Committee was held to draw up the formulæ necessary for an exact definition of the preparations in question, but as the matter was found to be too complicated for immediate action, and as the Convention was not yet in force, the whole question was adjourned until the next session of the Health Committee.

The Permanent Committee of the Office international d'hygiène publique discussed all the preparations separately and gave its opinion in each case as to the possibility of applying Article 8 to each one of the preparations examined.

The Committee reached definite decisions on certain preparations and provisional decisions on others. As regards the first class of preparations, it was in favour of either accepting or refusing the requests made by the Governments in view of the composition of the preparations as described in the official lists submitted. As regards the other class, it was in favour of granting certain preparations the benefit of Article 8 of the Convention, *on condition that they correspond to a given formula*. On account of certain practical difficulties, the lists submitted to the Health Committee contained only the preparations which were accompanied by precise indications as to their composition and which have been admitted or rejected by the Permanent Committee of the Office international d'hygiène publique.

2. APPLICATION OF ARTICLE 10 OF THE CONVENTION.

During its fourth session (April 1925), the Health Committee asked the Permanent Committee of the Office international d'hygiène publique, in conformity with the procedure laid down in Article 10 of the Convention, to give its opinion:

“Regarding the desirability of adding to the preparations dealt with by the Convention two new medical preparations derived from morphine and codein — eucodal and dicodide — which would appear to be of a habit-forming nature.”

The Health Committee, at its eleventh session (October-November, 1927), informed the Council that eucodal and dicodide were narcotics liable to produce injurious effects analogous to those of the products expressly referred to by the Convention and that, “consequently, they should come under the said Convention”. This resolution was approved by the Council in December 1927, and all the Governments signatory to the Geneva Opium Convention were invited to state whether they were prepared to agree that eucodal and dicodide should come under the Convention.

A large number of Governments¹ replied in the affirmative. The Government of Spain merely acknowledged receipt of the letter and the Government of Hungary was of opinion that the Convention should not be made to apply to eucodal and dicodide.² (Further details are given in document C.H.698.)

In the meantime, the Secretary-General had received a letter from the British Foreign Office, dated June 6th, 1928, inviting his attention “to a further point which has arisen in regard to the application to the drugs eucodal and dicodide of the provisions of the Geneva Opium Convention of 1925”. The letter went on to state:

“The original recommendation of the Health Committee upon which the Council based its resolution did not state whether preparations of eucodal and dicodide were to be subject to the same provisions as the drugs themselves. It is not clear, therefore, whether the acceptance of the Health Committee's recommendation carries with it the automatic application of the Convention not only to eucodal and dicodide but also to preparations containing them, nor, if it does, whether such preparations containing less than a certain percentage of the drug are to be exempted: *vide* Article 4(d) of the Convention. Sir Austen Chamberlain will be grateful if you will take the necessary steps to obtain a decision of this point.”

(The letter is quoted in full in document C.H.749.) In accordance with precedent, this letter was forwarded to the Permanent Committee of the Office international d'hygiène publique for advice and report.³

3. DILAUDIDE, BENZOYLMORPHINE AND OTHER ESTERS OF MORPHINE.

The Health Committee resolved, during the course of its eleventh session (Geneva, October-November 1927), in conformity with the stipulations of Article 10 of the International Opium Convention of February 19th, 1925:

¹ Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Czechoslovakia, Danzig, Germany, Great Britain, India, Japan, Latvia, Luxemburg, Netherlands, Netherlands East Indies, New Zealand, Nicaragua, Poland, Portugal, Siam, South Africa, Sudan, Surinam and Curaçao, Switzerland.

² Extract from the provisional minutes of the seventh meeting of the Fifth Committee of the ninth ordinary session of the Assembly, September 15th, 1928: “Countess Apponyi (Hungary) announced, on behalf of her Government, that, if the other countries agreed to include eucodal and dicodide among the products controlled under the provisions of the Hague Convention, the Hungarian Government was prepared to follow their example.”

“To ask the Permanent Committee of the Office international d'hygiène publique to examine the injurious effects of dilaudide, on the one hand, and of benzoylmorphine and other esters of morphine on the other, as narcotics liable to cause toxicomania, and to state whether it is of opinion that those products, or certain of them, should also come under the International Opium Convention.”

This request was referred by the Permanent Committee of the Office to a Committee of Experts, which met in Paris in April 1928; their report was adopted by the Permanent Committee of the Office at a plenary meeting on May 15th, 1928.

The Committee of Experts was of opinion that the provisions of the International Opium Convention should be made applicable to dilaudide and benzoylmorphine (mono- and dibenzoylmorphine), which are of a more active nature than morphine and heroin and liable in the same way as these two narcotics to cause toxicomania.

The Committee had to state further whether it was of opinion that the provisions of the Convention should also apply, as in the case of benzoylmorphine, to all the esters of morphine.

On this point too, the experts' reply was positive. They came to the conclusion that experiments made so far with certain esters of morphine prove that these substances possess all the characteristic properties of morphine and that it can be assumed the result would in all probability be the same in the case of those which have not yet been listed. On the other hand, they emphasise the fact that it is extremely easy to recover the morphine contained in the esters. If the esters, therefore, were not brought under the Convention, considerable quantities of morphine could be put into circulation, thus evading all supervision. For these reasons, the experts are of opinion that the Convention should be made to apply to all esters of morphine without exception.

4. ACTION BY THE HEALTH COMMITTEE. (1)

On the report of the Permanent Committee of the Office international d'hygiène publique on the application of Articles 8 and 10 of the Opium Convention of February 19th, 1925, the Health Committee, during its thirteenth session, adopted the following resolution:

“(a) With regard to the application of Article 8, which deals with preparations containing narcotics which should not be brought within the scope of the Convention, the Health Committee has taken note of a report of its Opium Commission (Annex 5). The latter, having considered the list of such preparations adopted by the Permanent Committee of the Office international d'hygiène publique, decided to recommend its acceptance by the Health Committee, with the exception of certain preparations with regard to which it appeared necessary to have further information, and which will consequently be referred back to the Office international d'hygiène publique for further examination and report.

“Resolution:

“The Health Committee, having considered this report, decided to adopt its conclusions.

“(b) The Committee noted the opinion of the Permanent Committee of the Office international d'hygiène publique that the provisions of the International Opium Convention of 1925 should be made applicable to dilaudide and benzoylmorphine, which are liable in the same way as morphine and heroin to cause toxicomania. The Permanent Committee also came to the conclusion that the esters of morphine, to which group benzoylmorphine belongs, should, generally speaking, be brought under control in a similar manner, because all those which are known and which have been examined hitherto possess the same properties as benzoylmorphine.

“Resolution:

“The Health Committee,

“Having taken note of the opinion formulated by the Permanent Committee of the Office international d'hygiène publique in its report of May 15th, 1928;

“Having noted that dilaudide, on the one hand, and benzoylmorphine and, in general, the morphine esters, on the other hand, are capable of producing toxicomania:

“Decides to inform the Council of the League of Nations, in conformity with Article 10 of the International Opium Convention of February 19th, 1925, that dilaudide, on the one hand, and benzoylmorphine and the morphine esters generally are narcotics capable of producing harmful effects similar to those produced by products envisaged by the Convention, and that they should, in consequence, be brought within the scope of the Convention.

“(c) The Committee likewise considered the procedure laid down in Article 10 of the International Opium Convention and the possibility of reducing as much as possible the delays necessitated by this procedure. It was accordingly decided to authorise its Opium Commission to examine directly the questions which may be submitted to it in accordance with Article 10 of the Convention and, after having received from the President of the Permanent Committee the opinion of the Office international d'hygiène publique, to take such

¹ In document C.H.749 a full account will be found of the Health Committee's action with regard to Articles 8 and 10 of the Opium Convention.

decisions as may be necessary, with the approval of the President of the Health Committee.”
— (Document C.555.M.175.1928.III, Resolution XI.)

The Council, at its fifty-third session (December 11th, 1928), noted the Committee's decisions, and invited the Secretary-General to apply the procedure laid down in Articles 8 and 10 of the Convention. The representative of Germany :

“ . . . Gathered from the report that esters of morphine did not come within the regulations contemplated except in so far as they contained products that might be calculated to have injurious effects. He would be grateful to the Council if it would state that such was its opinion.”

The representative of Spain (Rapporteur) agreed with the representative of Germany. The Council therefore approved the Health Committee's report subject to the observations made by the representative of Germany (document C./53rd Session/P.V.2(1)).

VI. COMMISSION ON THE FUMIGATION OF SHIPS.

During the eleventh session, held at Geneva from October 28th to November 8rd, 1927, the Health Committee adopted a resolution of which the following paragraph is an extract :

“ Requests its bureau to consult the President and Director of the Office international d'hygiène publique on the programme of study of the methods of deratisation by means of hydrocyanic acid, and asks the Medical Director to examine the possibilities of giving effect to the proposed investigations.” — (Document C.538.1927.III.)

After the consultation proposed in this resolution, the Medical Director presented a note on this subject proposing the setting up of an expert committee and study tours to certain ports (document C.H.690). This proposal was approved by the Health Committee.

In agreement with the Permanent Committee of the Office international d'hygiène publique, a Joint Commission on the Fumigation of Ships was set up, under the chairmanship of Surgeon-General Cumming, and the first meeting was held in Paris on May 14th, 1928.¹

The Commission considered two memoranda, the first, submitted by Dr. C. L. Park, containing a plan for the enquiry ; the second, by Dr. P. G. Stock, on the problems requiring solution. These memoranda appear as annexes to the report of the Commission (document C.H.725). The Commission decided :

1. To request Surgeon-General Cumming to collect and analyse available literature on the methods and results of ship fumigation by hydrogen cyanide. Information on this subject was obtained from the health administrations and forwarded to Surgeon-General Cumming. Information on other aspects of ship fumigation was being collected by the Office international d'hygiène publique.

2. To accept Surgeon-General Cumming's offer to design and carry out experiments with regard to such fumigation, to determine more exactly the value of this process in respect of its efficiency to destroy rats with the cargo *in situ*, the effect of the gas on different cargoes, the question of “ pocketing ” of the gas, the influence of temperature, humidity and like matters.

The Commission considered that, in connection with these studies, certain other measures might be necessary, such as :

1. Inspection by the Expert Committee referred to below of cargo-laden vessels which must in any case be fumigated by the quarantine stations at certain North American ports.
2. The fumigation under experimental conditions of ships not in actual use.
3. The fumigation of ships “ salted ” with marked rats.

Surgeon-General Cumming agreed to prepare a programme of these investigations to be communicated to the members of the Commission and Expert Committee by the Health Section, which will also forward their observations to Surgeon-General Cumming.

In the view of the Commission, certain problems arising out of the enquiry might be solved by laboratory experiments.

It was decided that an early report should be made on the possibility of danger to health from cyanide fumigation of food cargoes. Work on this subject has already been carried out in Germany, the Netherlands and elsewhere.

¹ For membership, see list in Annex II.

The Expert Committee should consist of persons having a practical knowledge of the subject from countries possessing the largest experience of fumigation with hydrogen cyanide. This Committee might visit selected ports in order to secure a first-hand knowledge of local conditions and methods; definite proposals on this subject were, however, deferred. In order to secure the assistance of shipowners in the enquiry, the Commission suggested inviting a representative of the International Chamber of Shipping to sit on the Commission.

ACTION TAKEN TO GIVE EFFECT TO THE RESOLUTIONS OF THE COMMISSION.

Since this session of the Commission, Surgeon-General Cumming has prepared and circulated a programme of investigation and an analysis of the literature on fumigation of ships by means of hydrogen cyanide. He has instructed the medical officers of his service in charge of important North American ports to carry on their work of fumigation in such a way as to answer some of the questions raised by the Commission, and he is preparing to fumigate ships "salted" with marked rats. Arrangements are being made for the Expert Committee to meet and carry out a programme of study during 1929.

The International Chamber of Shipping has designated a representative to sit on the Expert Committee.

VII. COMMISSION FOR THE STUDY OF LEPROSY.

The Health Committee, during its twelfth session, received communications from its President, the members from Japan and India and a report presented by Professor Carlos Chagas on the question of leprosy. A resolution was adopted, of which the following is the relevant extract :

"The Health Committee :

"Decides to give at once, in its programme of work, a place to the study of leprosy suitable to its importance, and to entrust to Professor Carlos Chagas, Surgeon-General Cumming, Colonel Graham and Professor Nagayo the preparation of a plan of international investigation of leprosy, requesting them to consult those experts whose opinion it would be desirable to obtain." — (Document C.254.M.79.1928.III, page 122.)

These members met in Paris on May 14th, 1928, under the chairmanship of Professor Chagas, and prepared a report setting out the problems in connection with leprosy which are in urgent need of solution.

In the opinion of the Commission, these problems fall within the three following groups :

- (a) Early diagnosis.
- (b) Method of communication,
- (c) Treatment.

More information was needed on the prevalence of leprosy in various countries and on the methods of prevention in use, as well as on the investigations being carried on by various agencies.

Only when such information is available can a general programme of international study be arranged, and for this reason the members of the Commission agreed to collect these data in their own countries. In the meantime, the Commission considered that an expert might study these matters at a suitable institute such as that established in Brazil.

The following is a summary of the Commission's observations :

1. EARLY DIAGNOSIS.

Early diagnosis might be arrived at by clinical and biological methods. In regard to clinical methods, the greatest need appears to be for the education of physicians by special courses, such as have been held in India and elsewhere, so that in practice such physicians might recognise the disease at an early stage.

For biological methods, research is needed to supply a suitable test, and reference was made to the flocculation and complement deviation tests for syphilis, which frequently furnish assistance in the diagnosis of leprosy but which require further study.

The Commission indicated the need of establishing confidence in the population exposed to leprosy by the mildest methods of prevention, such as the parole system, educational measures and restriction of segregation, which influence suspect cases to seek medical advice.

2. METHOD OF COMMUNICATION.

This being the key to the disease, the Commission considered that further study of the epidemiology of the disease was required. Studies being carried on in India and elsewhere to delimit endemic areas or foci of the disease were noted.

3. TREATMENT.

The Commission thought it would be of interest to determine what facilities exist in the various countries for the proper testing of different methods. The esters of Chaulmoogra-oil so generally used for treatment possess widely varying activity, and it would be useful to collect information on the methods of preparing and testing these esters.

4. GENERAL.

Certain members of the Commission emphasised that segregation as a method of prevention resulted in the concealment of early cases, which thus escaped treatment at the stage when it was most useful.

The Commission approved the plan of its members getting into touch with leprosy relief and other similar organisations which might be interested in its work. The British Empire Leprosy Relief Association and the American Mission to Lepers were referred to particularly.

Note. — A technical secretary has been appointed to the Commission on Leprosy and he will proceed in 1929 to various countries of Latin America where leprosy is a problem, and where some of the information referred to by the Commission may be collected. (See also in this report "Co-operation with Latin-American Health Administrations".)

VIII. COMMISSION ON EDUCATION IN HYGIENE AND PREVENTIVE MEDICINE.

During the thirteenth session of the Health Committee, the chairman of this Commission presented a memorandum (document C.H.759) and made a statement as to its work. One of the first aims of the Commission had been to ensure the co-operation of the various schools of hygiene in a common programme of study. The most satisfactory method of ensuring that co-operation had not yet been found; nevertheless, the independent enquiry into the prevention of diphtheria and scarlet fever being carried on by Professors Debré and Gorter (see Infant Mortality enquiry) would afford an opportunity of getting into touch with such schools.

The Chairman of the Commission proposed to the Health Committee that the Commission should be selected by that Committee to advise the Director of the International Educational Cinematographic Institute established in Rome as to the value and composition of films on subjects relating to hygiene.

The Commission had established a programme in public health for health experts, physicians and auxiliary personnel. In preparing this programme, many schools had been visited and much information collected. It was considered desirable to appoint a Drafting Committee to analyse and summarise that information, particularly as it related to hygiene.

These two proposals of the Chairman were approved by the Health Committee (document C.8.M.8.1929.III.408).

Chapter V.

CO-OPERATION OF EXPERTS IN THE WORK OF THE HEALTH ORGANISATION.

I. THE ENQUIRY INTO INFANT MORTALITY.

As a result of proposals made to the sixth ordinary session of the Assembly by the delegation of the Netherlands, an enquiry into the causes of infant mortality was initiated in selected urban and rural districts of Austria, France, Germany, Great Britain, Italy, the Netherlands and Norway. The enquiry started in 1927 and was completed in 1928. The experts met in London on July 3rd, 1928, to decide upon the methods and principles to be followed in preparing the final reports. The following subjects were discussed :

1. RESULTS OF THE ENQUIRIES IN THE DIFFERENT COUNTRIES.

A preliminary examination of the material collected in each country substantiated the opinions expressed at the Conference held in Vienna in September 1927 (document C.H.684). Three principal causes accounted for the largest proportion of infant deaths occurring in all the countries concerned, namely :

1. Dead-births and prematurity,
2. Respiratory diseases,
3. Gastro-intestinal affections.

As a whole the chief importance of these causes was constant in all the countries, although their relative importance varied.

The Conference was of the opinion that the causes of premature birth and dead-birth might be due to the absence of adequate prenatal and obstetrical service, or to lack of supervision during pregnancy and undue obstetrical interference.

2. FORM OF THE FINAL REPORT.

It was decided that the data obtained in some of the countries were sufficient to justify statistical analysis which would supplement the conclusions drawn on the basis of personal observation and clinical experience.

It was decided that separate reports should be prepared on the results of the enquiry in each country, such reports to consist of an analysis of the material arranged according to a uniform plan. Supplementary reports from each member might consist of the statistical analyses mentioned above, as well as observations on aspects of particular importance in the various districts.

The general report on the enquiry was to be prepared by the Health Section on the basis of the national reports.

3. FURTHER ENQUIRIES.

The Conference agreed that certain problems of general as well as of special interest had emerged from the preliminary study of the results. Of general interest was the relatively large number of dead-births and infant deaths for which it was impossible to ascribe a specific cause, a problem obviously requiring further investigation with the help of pathologists.

The occurrence and prevention of broncho-pneumonia and allied respiratory conditions, the causes of premature birth and of deaths occurring within a few hours of birth required further study, the latter with the help of obstetricians and the pediatricians. The enquiry had not fully revealed the part played by syphilis in causing dead-births, prematurity and early infant deaths. The relation of the milk supply to infant mortality is another problem of importance, particularly in urban districts.

Some of these problems lend themselves readily to international investigation, others to national enquiry with the help of the public and private health agencies concerned.

The Conference decided that its members should prepare detailed suggestions for enquiries along these lines to be discussed at the next session.

II. IMMUNISATION AGAINST DIPHTHERIA, SCARLET FEVER, MEASLES AND WHOOPING-COUGH.

The Conference took note of the measures that had been taken by the Permanent Standards Commission to deal with the international standardisation of diphtheria toxoid and scarlet-fever serum, as well as the proposed co-ordinated studies of active immunisation undertaken by the public health schools and institutes of Central Europe, and decided to continue the studies proposed at the Vienna Conference and to discuss the results at a subsequent session.

III. PROPOSED ENQUIRY INTO THE OCCURRENCE AND PREVENTION OF RICKETS.

In view of the increasing interest taken in the incidence and prevention of rickets as a result of recent work, the Conference submitted a proposal on this subject to the Health Committee (document C.H.787, Appendix II).

* * *

The appendices to the report of the Conference consist of a model general report for each country and the proposal concerning the enquiry into rickets.

This report was approved by the Health Committee during its thirteenth session (document C.555.M.175.1928.III, page 4).

Professors Debré and Gorter were asked to prepare a preliminary report on immunisation against diphtheria and scarlet fever.

Professor Debré visited the health administrations and experts with special experience in immunisation against scarlet fever in Germany, the Netherlands, Poland and Roumania. He will report to the next session of the Conference.

Professor Gorter undertook a similar study of immunisation against diphtheria in Austria, Belgium, Denmark, France, Germany and Great Britain.

CO-ORDINATED ENQUIRIES INTO INFANT MORTALITY IN THE ARGENTINE, BRAZIL, CHILE AND URUGUAY.

Enquiries into infant mortality are being conducted in the four countries mentioned on the same lines as in Europe (document C.H.617). The experts who are carrying them out are keeping in touch with the European studies and furnishing information on their own enquiries through the Health Section of the Secretariat.

The definite enquiries were begun in February and March 1928, and will be completed by April 1st, 1929. A conference of the experts concerned will be held in 1929 to discuss the material collected and to prepare the final reports.

IV. THE ENQUIRY INTO THE TREATMENT OF SYPHILIS.

On his return from South America and in connection with the proposal to convene a second Laboratory Conference on the Serodiagnosis of Syphilis, the President of the Health Committee suggested that a small group of experts should be consulted in regard to the treatment of syphilis and its results (document C.579.M.205.1927.III, page 31). The Health Committee approved this suggestion (*idem*, page 177, Resolution I (b)).

A preliminary consultation of experts took place at Copenhagen at the end of the second Laboratory Conference on the Serodiagnosis of Syphilis, and a second meeting was held at Geneva from October 8th to 10th, 1928.¹

The following is a summary of the experts' conclusions (document C.H.750).

The results in the fight against syphilis have not been so great as the progress of syphilis therapy would give reason to expect. The explanation suggested by the experts was that advances in syphilis diagnosis and therapy have not been exploited everywhere so rapidly and effectively as would be desirable, and that a generally recognised uniform method of treatment did not exist. For this reason, it was suggested that a statistical compilation of the various methods of treatment in clinics and dispensaries might convey a better idea of the efficacy of these methods. The two purposes for which treatment is given should be borne in mind first, the rapid and effective suppression of contagiousness; second, the protection of the patient from the severe late effects of syphilis. For these reasons, a retrospective enquiry on the following lines was recommended:

Materials from the participating clinics relating to individual cases recorded on forms prepared by the experts would be sent to the Health Section, acting as the central bureau of the enquiry. A special card was prepared for cases of syphilis in pregnancy.

Directors of participating clinics would be requested to work up their cases for a given period of years, including all cases of syphilis belonging to categories I, II and III which had been under their observation for more than six months.

The directors of these clinics would also be asked to prepare a general statement of the methods of treatment which they have applied at different periods, according to a questionnaire prepared by the experts.

In addition, participating clinics would be asked to start a fresh enquiry recording all newly arriving cases of fresh or old syphilis on these individual cards in order to secure material suitable for future statistical enquiry.

The experts suggested that, in the larger centres, insurance funds, private institutions and dispensaries and other agencies concerned with the matter should co-operate in the enquiry.

The Health Committee approved these proposals (document C.555.M.175.1928.III, Resolution XII), and the clinics and dispensaries are now being selected to participate in the enquiry in Denmark, France, Germany, Great Britain and the United States of America. In the United States of America, the enquiry centres in the United States Public Health Service, an officer of that service having been appointed by Surgeon-General Cumming to co-ordinate the work of the participating clinics. The American Committee on Research in Syphilis, a private organisation, will help in the enquiry and, in co-operation with the American expert and the United States Public Health Service, will select the clinics which are to be invited to participate.

¹ A list of the experts is given in Annex II.

Chapter VI.

SYSTEM OF LIAISON WITH THE HEALTH ADMINISTRATIONS OF THE DIFFERENT COUNTRIES.

I. INTERCHANGES AND INDIVIDUAL MISSIONS IN 1928.

During 1928, three interchanges were held, the first in India, the second in six European countries and the third in Italy.

A. INTERCHANGE IN INDIA.

The interchange in India (January 1st to February 18th, 1929) was attended by sixteen public health officers from the public health administrations of twelve Far-Eastern countries.¹

The interchange followed immediately after the Annual Congress of the Far-Eastern Association of Tropical Medicine. The work began with the inspection of the Central Public Health Services at New Delhi and visits to local institutions. The group visited Lahore, points in the Punjab, the United Provinces, Bihar and Orissa, Assam, Bengal, Madras, Mysore and Bombay.

The programme had been arranged by the Public Health Commissioner with the Government of India in co-operation with the public health services of the Provincial Governments and Indian States, so as to enable the participants to study the life and habits of the people, the most highly developed and the worst sanitary conditions, as well as variations in the health problems due to economic, climatic and racial conditions. Special attention was paid to rural hygiene, in view of the importance of this subject in India and the necessity of raising economic conditions and the standard of living, in order to bring about an improvement in public health. The participants were shown the effect of irrigation on desert areas, and studied public health campaigns in districts with widely different characteristics, visiting areas in which the chief industries were tea, rubber, coal, the manufacture of cotton, and agriculture.

A number of opportunities were afforded for studying the campaign against malaria, (probably the most serious health problem in India), and against other tropical diseases such as cholera, kala-azar, leprosy, ankylostomiasis, plague and smallpox.

The participants examined model housing schemes — in colliery districts, for example, and also visited the worst quarters of cities and villages, in order to gain a genuine idea of the conditions in which the people live.

The precautions taken to prevent disease on the occasion of pilgrimages were observed for example, at Hardwar.

Attention was paid to municipal sanitation and to methods of purifying public water supplies, especially by the use of chlorine.

¹ Australia, Ceylon, China, Egypt, Federated Malay States, French Indo-China, Japan, Netherlands East Indies, New Zealand, Philippine Islands (United States Public Health Service and Philippine Health Service), Siam, Straits Settlements.

Visits were made to hospitals of all types as well as to medical colleges, public health laboratories and institutes, sewage-disposal works and the provincial and local public health services.

Before starting on the tour, each participant was supplied with a volume on Health Organisation in British India (document C.H.691), prepared under the direction of Colonel J. D. Graham, C. I. E., I. M. S., Public Health Commissioner with the Government of India, and containing chapters by the competent authorities on the public health services and problems in India in the various provinces and States. The participants were made to feel, by the welcome they received, that their study of public health and hygiene in India was welcomed not only by the authorities but by the people themselves.

One of the participants translated into French for the use of his Government the volume on Health Organisation in British India.

B. INTERCHANGE ON RURAL HYGIENE.

The interchange for the study of rural hygiene began on May 27th at Ljubljana and ended with a final conference at Geneva on July 23rd. There were twenty participants from eighteen countries¹, fourteen being public health or medical officers and six sanitary engineers.

Visits were made to rural areas in the Kingdom of the Serbs, Croats and Slovenes, Hungary, Germany, the Netherlands, Belgium and France. The programme had been arranged by the sanitary authorities of the several countries in co-operation with the Health Organisation with the object of giving as complete a picture as possible of rural hygiene under different conditions. Special attention was given to the methods for providing pure drinking-water, housing, the safe disposal of sewage and the protection of milk supplies. The administration work of Government authorities and of private organisations connected with the health of rural populations was studied. Pamphlets prepared by the sanitary authorities were distributed to the participants as far as possible in advance of the visits. A number of officials from the local public health services joined the interchange group not only to act as guides but also to make use of the opportunity afforded to study administrative work on rural hygiene.

Almost every country has specially developed some branch of health work of particular importance owing to local conditions, and particular attention was devoted to these characteristic developments, such, for instance, as the work of the Farmers' League in Belgium, and the system of common water supplies for villages in the Netherlands.

During the final conference at Geneva, each participant gave an account of the work which he hoped to incorporate in the health practice of his own service. A general report (document C.H./E.P.S./146 (1)) was prepared embodying the views of the participants on the most important aspects of rural hygiene, difficulties of administration and the expenses involved. It suggested that health officials should make use of agencies devoting their attention to the rural population, to co-ordinate their work and concentrate their efforts on particular problems. It also recommended the use of subsidies in poor districts. The participants were struck by the great need for public education in hygiene in rural districts and considered that a number of agencies should be utilised for this purpose, particularly State schools; the public health nurse and the medical profession. Health demonstrations as a means of spreading knowledge were commended in particular cases. The participants pointed out the frequent reduction of typhoid fever observed when the water supply is improved. The use of precise methods of treating water supplies with chlorine was suggested. The participants recommended that the protection of milk supplies might well be the subject of study by a special interchange group organised for the purpose, including representatives of all types of officials having to do with milk supplies. In view of its many technical aspects, a similar suggestion was made in regard to the study of rural housing.

An interesting form of sewage disposal found in Hungarian villages was recommended for further experiment.

The participants were unanimous in their agreement with the principle of full-time service for health officials and personnel in charge of rural health districts.

The necessity for co-operation between medical officers of health and sanitary engineers in solving rural sanitary problems was emphasised.

The participants also pointed out the need for modern methods of transport as a means of bringing the public health personnel into close contact with the public.

¹ Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, Estonia, Germany, Guatemala, Hungary, Irish Free State, Italy, Japan, Lithuania, Poland, Portugal, Roumania, Kingdom of the Serbs, Croats and Slovenes, Union of Socialist Soviet Republics.

The programme in a rural district should include adequate measures for the protection of the expectant mother, the infant, the pre-school child, the child of school age, the adolescent and the adult, in addition to the provision of sanitary facilities, such as water supply, sewage disposal, pure milk and food supplies and healthy housing conditions.

The final report comments on the value of a number of institutions studied during the interchange, such as milk kitchens, open-air schools, special classes for retarded or defective children, preventoria and sanatoria for those predisposed to or having tuberculosis, child-welfare centres, etc. The participants recommended further studies of rural hygiene along the same lines as the present interchange.

C. THE INTERCHANGE IN ITALY.

The interchange in Italy began in Turin on September 16th and terminated at Geneva with a final conference on November 8th, 1928. Twenty-one public health officials from sixteen countries¹ participated. Representatives of the Central Health Administration of Italy accompanied the group throughout the tour. The interchange visited successively Turin, Genoa, Parma, Salsomaggiore and Massa, Rome, Sardinia, Naples, Palermo, Calabria, Sila and Cosenza, Florence, Montecatini, Castiglione dei Popoli, Bologna, Ferrara, Venice, Brescia and Milan. This comprehensive journey, with visits to places in the Neighbourhood of all these centres, permitted the participants to obtain a clear picture of the varying social and economic conditions in Italy, as well as a good general idea of the public health problems and the measures taken to solve them by the sanitary authorities.

A booklet was prepared by the Italian authorities containing information on central, provincial and municipal health organisation and administration, as well as on other agencies concerned with hygiene and social welfare. The booklet contained the text of forty-eight lectures which were delivered to the participants during the interchange.

The national organisation known as the L. U. C. E. had prepared a series of films illustrating the progress of hygiene in Italy, and by means of these the participants were able to understand many organisations of which the limited time at their disposal only permitted them to make a brief and incomplete study.

An attempt was made by the Italian sanitary authorities to give as broad a view as possible of Italian life and customs, so that the participants might understand the reasons for the adoption of certain health programmes. Particular attention was paid to measures for the conservation of infant life, housing, water supplies, industrial hygiene, protection of milk and food supplies, the control of malaria by drainage measures, and the anti-tuberculosis insurance law. Municipal hygiene under varying conditions was studied in detail, and the participants were given every opportunity to examine the provision made for treatment in hospitals, sanatoria, preventoria and other institutions.

During the final conference at Geneva, which was attended by representatives of the Italian public health services, reports were presented by the participants on :

1. Health Organisation in Italy.
2. Maternity and Infant Welfare, including the Anti-tuberculosis Campaign and School Hygiene.
3. Infectious Diseases and the Campaign against Venereal Diseases, Cholera and Plague.
4. Water Supply and Sewage Disposal.

The participants expressed keen appreciation of the trouble taken by the central, provincial and municipal governments in Italy to ensure the success of the interchange.

D. INDIVIDUAL MISSIONS IN 1928.

A number of individual missions were awarded in 1928 with the object of continuing the co-operation already established with a number of health administrations. Two Japanese public health officers studied in Europe during the year, one devoting himself to physical education in a number of European countries ; the second helped in the work of the Permanent Standards Commission and lectured in Europe on his work in Japan.

The Inspector of School Hygiene in the Ministry of Public Health of the Kingdom of the Serbs, Croats and Slovenes studied new methods of school hygiene as applied in Austria, France and Switzerland.

¹ Belgium, Brazil, Denmark, Egypt, France, Germany, Great Britain, Japan, the Netherlands, Poland, Kingdom of the Serbs, Croats and Slovenes, Spain, Sweden, Switzerland, United States of America and Uruguay

The newly appointed Professor of Public Health Administration in the London School of Hygiene and Tropical Medicine studied the work and organisation of schools of hygiene in Germany and Poland, as well as new aspects of public health administration in those countries.

In addition to these individual missions, for which grants were made by the Health Organisation, programmes of study were arranged for a number of public health officers who were travelling at the expense of their administrations. For example, the medical superintendent of the hospital at the Peking Union Medical College accompanied the interchange on Rural Hygiene during the first stage of its visit to the Kingdom of the Serbs, Croats and Slovenes, and his studies in other countries were facilitated by arrangements made with the competent sanitary authorities by the Health Organisation.

Owing to the information which has been collected at Geneva, public health officers who wish to study in foreign countries are applying in increasing numbers to the Health Organisation for advice and assistance in preparing their itinerary and programme.

II. PROGRAMME OF INTERCHANGES FOR 1929.

In view of the good results obtained and the importance of the subject, the study of rural hygiene will be continued in one or two Western European countries, beginning probably in Denmark, where rural hygiene has attained such development and has been accompanied by an improvement in the economic conditions. The participants will be selected from lists of public health officers and sanitary engineers holding important posts in the rural health services of their countries.

An interchange for the study of the protection of the milk supply will probably be organised during 1929. In view of the importance of this subject to municipalities, the participants will be drawn from the health services of large cities which have decided to reform and improve their systems of controlling and safeguarding milk. After visiting a few such cities in order to acquire a first-hand acquaintance with the problems involved, the participants will be given an opportunity to examine all the factors involved in safeguarding the milk supply of large centres of population where the most modern systems are maintained. It may be possible for this interchange to visit one or two centres in the United States of America for this purpose.

An Interchange on Industrial Hygiene will be held in France, Italy, Germany and Switzerland. The participants will assemble in Lyons in April to attend the International Conference on Industrial Hygiene, where a series of special lectures on medical inspection of labour has been arranged. The group will then proceed to Northern Italy, Bavaria and Switzerland to study industrial medical inspection in the larger centres. The participants will be selected from the public health services of countries desiring to organise or reform their systems of industrial medical inspection and from other countries having well-developed systems. This interchange will be arranged by the Health Organisation of the League in co-operation with the competent services of the International Labour Office.

There will be an Interchange on Health Insurance and Preventive Medicine, in order to study the relations between different health agencies. The Sub-Committee on Preventive Medicine, which includes medical advisers of health-insurance organisations and experienced administrators of preventive medicine, is particularly qualified to make such a study. This Sub-Committee will visit such centres as Berlin, Cologne, Hamburg, Nuremberg and Vienna, where the work of a number of health agencies can be studied and where the work of these agencies is well co-ordinated. During this interchange, which will be organised jointly by the Health Organisation of the League and the Insurance Services of the International Labour Office, the second session of this Sub-Committee will be held, in order that a report may be prepared in the light of the experience gained.

Providing credits are available, small Interchanges on Rural Sanitary Engineering and Housing will be organised. The study of rural hygiene in 1928 revealed many problems of interest to sanitary engineers which require special study by a group of qualified engineers. Housing, too, presents many unsolved problems which merit special attention. In regard to housing, the programme during the year may be restricted to preliminary studies by one or two experts in order to prepare for the future interchange.

Chapter VII.

TECHNICAL CO-OPERATION WITH PUBLIC HEALTH ADMINISTRATIONS.

I. LATIN-AMERICAN COUNTRIES.

During the forty-eighth session of the Council, the Latin-American representatives expressed a desire for a closer co-operation between the Health Organisation and Latin America (March 5th, 1928). After consideration of these observations, the Health Committee during the twelfth session adopted a resolution requesting the Medical Director to report on the subject at the next session of the Committee (document C.193.1928.III, Resolution 8, A).

This report describes the co-operation already established and the possibility of extending it to include more health administrations and other work.

The essential need was to establish such liaison as would lead to the extension to Latin America of methods already studied in Europe and the pooling of the results obtained to the advantage of both. It was necessary to choose from among the health problems facing the Latin-American countries those which were not merely local or national but which made a universal appeal.

The following paragraphs are a summary of the Medical Director's report.

1. INFANT MORTALITY ENQUIRIES.

During the course of the year, the enquiries into infant mortality, according to the method set out by the Conference of Health Experts on Infant Welfare and applied to selected areas in seven European countries, were begun in similarly selected areas in the Argentine, Brazil, Chile and Uruguay (see chapter on this enquiry). The enquiry promises to give results of considerable interest, for example, in Brazil, where post-mortem examinations have been possible in a large proportion of the infant deaths investigated, contrary to experience in the majority of European districts. A second conference of the experts responsible for these investigations¹ will probably be held in 1929, when it may be possible to extend the enquiries to countries other than those cited above.² The Health Section is responsible for the exchange of information between the experts responsible for the European and Latin-American enquiries.

2. LEPROSY.

After the twelfth session of the Health Committee, the Leprosy Commission held a meeting in Paris on May 14th, 1928, when the general lines of the enquiry were decided. Professor Chagas, the Chairman, has promised to draw up a detailed programme for the consideration of the Health Committee. Since his return to Brazil, a National Research Centre has been formed, under the direction of M. Guinle, who is contributing \$10,000 yearly for investigations into this disease. The Health Committee has promised to send a European expert to undertake research into the more important problems of leprosy, and an attempt is being made to obtain the services of a suitable expert to undertake this work.

¹ The first Conference was held at Montevideo in June 1927 (document C.H.617).

² The delegates of Bolivia and Paraguay attending the Montevideo Conference decided to study the material and technical possibilities of organising such enquiries before undertaking them definitely. Experts in Peru are following the work and may participate in the next Conference.

Dr. Etienne Burnet, of the Pasteur Institute, who will act as technical secretary of the Leprosy Commission of the Health Organisation, left for Latin America early in 1929 to visit several countries whose assistance in carrying out the enquiries is indispensable. The interest of the Argentine and Brazil in leprosy is shared by the health administrations of other Latin-American countries, notably Colombia, Peru and Venezuela.

To give effect to the Health Committee's resolution on leprosy (document C.193.1928.III, Resolution 9), approved by the Council during its fiftieth session, all the health administrations were asked to state how far they would be ready to participate in the studies of leprosy and whether they would be disposed to contribute financially. Replies have been received from the Argentine, Brazil, France, Mexico, the Netherlands and Norway, promising their assistance.

Advantage will be taken of Dr. Burnet's presence in Latin America to study the possibility of extending to those countries the enquiries into the serodiagnosis of syphilis, and subsequently into the treatment of syphilis, now being carried on in other countries).¹

3. RELATIONS BETWEEN THE PUBLIC HEALTH SERVICES AND HEALTH-INSURANCE INSTITUTIONS.

During the year, the President of the National Health Council of Uruguay studied, with the co-operation of the Health Organisation and of the International Labour Office, the relations between the public health services and health-insurance institutions in Europe, with a view to the preparation of a Bill revising the health legislation in force in Uruguay.

The results of the Uruguayan Government's preliminary consideration of this proposed amalgamation of the present health code with social insurance legislation in a single public health act will probably be submitted to the Health Organisation. It is possible that the Joint Commission of Experts for the study of this question may then be able to co-operate with the Government of Uruguay in a detailed examination of the question.

4. INTERCHANGES OF PUBLIC HEALTH PERSONNEL.

A study is being made as to the manner in which the Health Organisation's system of interchanges of public health personnel may be made of more permanent value to the health administrations of Latin-American countries, and the particular needs and special problems of the individual administrations are being examined.

5. ESTABLISHMENT AT BUENOS AIRES OF AN INTERNATIONAL CENTRE OF INFANT WELFARE UNDER THE AUSPICES OF THE LEAGUE.

This proposal, intended to fortify and continue the application of the results of the infant mortality enquiries, was discussed in the Health Committee and in official correspondence between the Secretary-General of the League and the Argentine Government.² On the proposal of the member of the Health Committee from the Argentine, its further examination was postponed until his arrival in Europe.

6. ESTABLISHMENT AT RIO DE JANEIRO OF AN INTERNATIONAL SCHOOL OF PUBLIC HEALTH.

The proposal of the Federal Government of the United States of Brazil that an International School of Public Health to be organised at Rio de Janeiro should be placed under the auspices of the League of Nations was also the subject of official correspondence between the Secretary-General of the League and the Brazilian Government. After discussion at the twelfth session, the Health Committee decided that it was not called upon to consider the plan at that session (document C.193.1928.III, Resolution 8, B).

After considering the report of the Medical Director in regard to co-operation with the health administrations of Latin-American countries, the following resolution was adopted by the Health Committee during its thirteenth session (document C.555.M.175.1928.III, Resolution IV):

"The Health Committee notes with satisfaction the progress being made with regard to the collaboration of Latin-American administrations in the work of the Health Organisation of the League, notably with regard to the enquiry into infant mortality and the facilities accorded to the health administration of Uruguay in its study of health insurance and preventive medicine.

"It approves the suggested arrangement for the leprosy enquiry and welcomes the proposals to extend to Latin-American countries the enquiries that have been carried out in connection with the serodiagnosis of syphilis and to enlist the co-operation of Latin-American countries in the enquiry into the treatment of syphilis.

¹ Dr. A. SCALTRITTI, Director of the Laboratory of the Prophylactic Institute at Montevideo, participated in the Conference on the Serodiagnosis of Syphilis held at Copenhagen in May 1928.

² Document C.H.623, Appendix II.

“ It approves the suggestion to develop the liaison system of interchanges and individual missions in order to render it of more permanent value to the health administrations concerned.”

In presenting the report to the Council on the work of the thirteenth session, the representative of Spain said :

“ I have no doubt that the Council will approve these recommendations of the Committee, which follow the guiding lines laid down in this connection by the Council and Assembly.” (Document C./53rd Session/P.V. 2 (1).)

The representative of Venezuela stated that his Government would take the opportunity offered by the expert's tour (secretary of the Leprosy Commission) to establish closer co-operation with the Health Committee.

The Council approved the resolution.

II. GREECE.

1. TUBERCULOSIS AMONGST THE REFUGEES.

On the proposal of the Financial Committee, approved by the Council, concerning the expediency of co-operation between the Health Organisation, the Greek Health Authorities and the Greek Refugee Settlement Commission in the campaign against the ravages caused among those refugees by tuberculosis, this subject was discussed by the Health Committee during its twelfth session (document C.254.M.79.1928.III, pages 48 *et seq.*). Dr. Copanaris, Director of Public Health in Greece, was present on the invitation of the Health Committee. He made a statement on health conditions in Greece, referring first to the part played by the Epidemic Commission of the League of Nations in assisting the Greek Health Authorities shortly after peace was declared, and went on to describe the evolution of the health services in Greece and the problems which faced these services, of which the most important perhaps were malaria and tuberculosis. The statement of Dr. Copanaris contained full particulars as to tuberculosis amongst the refugees and the facilities available in the way of credits, institutions and organisations, and went on to outline what he considered to be the essential principles of a general anti-tuberculosis campaign adapted to prevailing conditions.

Professor Léon Bernard, who was appointed Rapporteur on this subject, presented a report recommending the creation of dispensaries, hospital provision and the organisation of measures for the protection of children. In order to determine the number of dispensaries needed and where they should be established, a local clinical enquiry should be carried out dealing with the extent and distribution of the disease in certain selected districts. As for hospital accommodation, instead of constructing costly sanatoria, establishments might be organised on lines similar to the French hospital-sanatoria. Moreover, the houses in which a number of refugees suffering from tuberculosis are living would perhaps enable an experiment to be carried out in the matter of creating villages for sufferers from tuberculosis on the lines of the remarkable colonies in Great Britain, notably at Papworth. Organisation of measures for the protection of children should be based on three principles—first, the Grancher method ; second, the creation of preventoria ; and, third, specific immunisation of infants born of tuberculous parents by BCG.

For carrying out these measures, a campaign of public health education and a trained personnel would be necessary. The personnel should consist of well-trained doctors and public health nurses. These proposals and the permanent co-operation of the Health Organisation by the despatch to Greece of a member of the Health Committee or Health Section were recommended to the Health Committee, which adopted the following resolution :

“ The Health Committee,

“ Having taken note of the proposal formulated by the Finance Committee and approved by the Council with regard to the expediency of collaboration between the Health Organisation of the League of Nations and the Greek authorities and with the Greek Refugee Settlement Commission for the campaign against the ravages caused amongst these refugees by tuberculosis ;

“ Having also taken note of a memorandum presented by Dr. Copanaris and of a report by Professor Léon Bernard in which an anti-tuberculosis programme is outlined for Greece ;

“ Realising the necessity of organising in Greece an efficient campaign against tuberculosis, and desirous of supporting it ;

“ Places at the disposal of the Greek Administration the services of the Health Organisation of the League of Nations in order to help to carry out a practical programme and an efficient campaign against tuberculosis ;

“ Requests the Medical Director to study, in collaboration with the Director of the Public Health Service in Greece, a detailed plan of action conforming to the principles laid down in the report by Professor Léon Bernard, of which the first steps can be rapidly realised ; and

“ Considers that this action could be usefully assisted by the Greek Refugee Settlement Commission, notably in setting up villages for the reception of tuberculous cases and their families, along the lines of analogous installations already set up in other countries.”

During the fiftieth session of the Council, the Rapporteur for Health, M. Adatci (Japan), said:

“ I think that the Council will be happy to place at the disposal of the Greek Government the services of the Health Organisation and will communicate the Committee's recommendations to the Greek Refugee Settlement Commission. ” (Document C./50th Session/P.V.I(1).)

The Council adopted the recommendations of the Health Committee, together with the observations embodied in the Japanese representative's report.

2. EPIDEMIC OF DENGUE.

On the report to the Health Organisation of the League by the Greek Health Authorities that an unusual epidemic of dengue was occurring in Greece, a member of the Health Section was despatched to Athens, on the invitation of the national public health services, to assist taking in preventive measures.

On October 30th, the Health Committee heard from the member of the Health Section concerned a report on the epidemic. During March, the disease had become mildly epidemic and remained so until August, when a sudden widespread extension occurred, starting first in Athens and the Piræus and later spreading throughout Greece. During August and September 1928, some 86 per cent of the total population in Athens and the Piræus suffered from dengue, including 90 per cent of the personnel of the public health services, 83.5 per cent of the staff of the banks, 82.5 per cent of the employees of factories and business firms and 100 per cent of the inmates of prisons. Up to October 15th, 1928, there had been, as far as could be computed, 850,940 cases, with 1,378 deaths. Some of the cases were mild, but in the majority it was necessary for the patient to remain in bed for four or five days. In many cases, the symptoms differed from those considered classical for dengue.

He described the symptomatology and the unusual characteristics of this epidemic (document C.3.M.3.1929.III, pages 43 *et seq.*).

A special medical officer had been appointed to deal with the emergency in Athens, and later the following steps were taken:

1. Dengue was made compulsorily notifiable throughout Greece.
2. A circular was sent to all districts urging the isolation under a mosquito-net in hospital of new cases in each district for a period of four days.
3. A loan was obtained from the Government of 40 million drachmæ for urgent sanitary improvements.
4. In Athens, twenty-five dispensaries were opened, in various sections of the town, in which doctors treated the poor free of charge.
5. A law was drafted for the severe punishment of persons who failed to carry out the instructions for cleanliness and the prevention of water accumulations.
6. A circular was sent to all registrars of deaths requiring them to notify urgently by wire all deaths from dengue.
7. Tourist traffic visas were refused.

In addition, certain other measures were recommended, including the substitution of whole-time for the present part-time medical officers of health, the employment of visiting nurses and other permanent sanitary staff, the introduction of a system of disease notification, the installation of a system of sewerage, urgent measures to deal with the water supply, etc.

After a discussion on dengue in the Mediterranean area, and the presence and distribution of stegomyia, the vector of the disease, the Health Committee adopted the following resolution (document C.555.M.175.1928.III, Resolution XIII):

- “ The Health Committee,
“ Considering the importance of obtaining fuller information than is at present available concerning the distribution and prevalence of *Aedes aegypti* in Mediterranean countries,
“ Requests the Medical Director to enlist the co-operation of entomologists in carrying out a mosquito survey of these countries. ”

3. CO-OPERATION OF THE HEALTH ORGANISATION IN THE SANITARY REORGANISATION OF GREECE.

In connection with the dengue epidemic and the co-operation of the Health Organisation with the Greek Health Services in the campaign against it, the Greek Under-Secretary for Hygiene addressed a letter to the Medical Director, which was placed before the Health Committee at its thirteenth session.

This letter, after expressing appreciation for the assistance of the member of the Health Section sent to Greece, submitted certain suggestions and requests respecting the health policy of the Government. The following is a quotation from the letter :

“ The President of the Greek Council, M. Venizelos, has formed a Secretariat of Health, the control of which has been entrusted to me.

“ In my wish to justify the trust thus confided to me, I am requesting the collaboration of the League of Nations and of those colleagues who have already shown their sympathy with the development of my work.

“ I consider that one of the primary considerations of every leader should be the acquisition of detailed knowledge regarding the enemy with which he has to deal, and, knowing as I do the interest that your Organisation bears towards my country, I earnestly request your assistance by such means as may be at your disposition. I should suggest that, if you agree, this should take the form partly of an investigation into the morbidity of my country, and partly of the special instruction of personnel who might be sent abroad for this purpose. Furthermore, we should appreciate any suggestions as to the best means of undertaking a campaign for the improvement of the sanitary conditions of Greece. ”

Dr. A. Doxiadis, the Under-Secretary of State for Hygiene, mentioned the diseases which constitute special problems in Greece and regretted that the economic crisis prevented him from undertaking at the moment all the measures which might be desirable in the interests of preventive medicine.

The Health Committee adopted the following resolution (document C.555.M.175.1928. III, Resolution XIV) :

“ The Health Committee,

“ Having considered the letter addressed to it by the Under-Secretary of State for Health of Greece, asking for the collaboration of the League of Nations in the improvement of the Health organisation of Greece,

“ Declares its willingness to accede to this request, subject to the approval of the Council of the League of Nations ; and

“ Proposes that its President and permanent Vice-President, together with Professor Léon Bernard and Sir George Buchanan, should hold themselves at the disposal of the Council of the League of Nations and of the Greek authorities to give assistance, if so desired, in the matter of carrying out enquiries, and in giving the Greek Health Administration such advice as the situation may demand. ”

This resolution was presented to the Council on December 13th, 1928, by M. Quiñones de León, who read the following report (document C./53rd Session/P.V.4 (1)) :

“ In response to a request from the Greek Government in connection with the recent dengue epidemic, the Health Organisation placed the services of a member of the Health Section of the Secretariat at the disposal of the Greek Public Health Department as from September 1st, 1928. This co-operation proved successful.

“ The Greek Government, through the Under-Secretary of State for Public Health, has since written to the Health Committee asking the League Health Organisation for assistance in the reorganisation of the Public Health Service of Greece.

“ The Health Committee, having noted this letter, is prepared to accede to the request, subject to the Council's approval.

“ I consider that the Greek Government's request is in every way opportune. The difficult refugee problem, at first apparently insoluble, has been successfully met by the Greek Government in collaboration with the League.

“ The Council has already noted the extensive plan for the internal development of the country which constitutes the principal concern of the Greek Government. Amongst numerous problems, that of public health is obviously of vital importance to the economic reconstruction of the country.

“ In view of these considerations, I have the honour to ask the Council to consider the Health Committee's resolution regarding the co-operation of the League in the reorganisation of public health in Greece.

“ The Health Committee proposes that the President and the permanent Vice-President of the Committee, together with Professor Léon Bernard and Sir George Buchanan, as well as the Chairman of the Malaria Commission, should hold themselves at the disposal of the Council and of the Greek authorities with a view to studying the situation, and should furnish such suggestions and advice as may be required.

“ The details of this co-operation cannot be settled until after a discussion, which will, I hope, be opened by the representative of the Greek Government. At the close of the discussion, I propose to submit a draft resolution to the Council. ”

Dr. Doxiadis thanked the Rapporteur and the Health Organisation, and explained the reasons for his request.

The Council adopted the following resolution :

“ The Council :

“ Notes with satisfaction that the Greek Government, in its desire to increase the value of the contribution which it can make to the general improvement of health conditions, has invoked the assistance of the Health Organisation of the League ;

“ Approves the proposal of the Health Committee relative to the collaboration of the Health Organisation of the League of Nations in the reorganisation of public health in Greece, in accordance with the request of the Greek Government ;

“ And invites the Health Committee, in the light of the discussions before the Council, to put at the disposal of the Greek Government the various technical possibilities of collaboration of the Committee, including those of its technical Commissions, in order to ensure complete co-operation in the preparation as well as in the subsequent development of the plan thus evolved.”

The Health Organisation arranged for the investigation into morbidity and other sanitary matters mentioned in the letter of the Under-Secretary of State for Hygiene.

III. COUNTRIES IN THE PACIFIC.

1. SURVEY OF HEALTH CONDITIONS IN CERTAIN ISLANDS IN THE PACIFIC: PROPOSAL OF THE GOVERNMENT OF THE COMMONWEALTH OF AUSTRALIA.¹

This survey, to which reference will be found in previous reports, began at the end of October 1928. It was entrusted to Dr. Cilento and Dr. Hermant, whose services were placed at the disposal of the Health Organisation by the health administrations of the Commonwealth Government and of French Indo-China respectively. The enquiry is being confined to Papua, New Guinea, the New Hebrides, New Caledonia, the Solomon Islands and Fiji.

2. LETTER FROM THE PRIME MINISTER OF THE COMMONWEALTH OF AUSTRALIA REGARDING ACTION TAKEN ON THE RESOLUTIONS OF THE INTERNATIONAL PACIFIC HEALTH CONFERENCE HELD AT MELBOURNE IN DECEMBER 1926.

The resolutions adopted by the above Conference may be classified as follows :

1. Establishment of an Epidemiological Intelligence Service for the area known as “Austral-Pacific Regional Zone”.
2. Co-operation in quarantine measures.
3. Co-operation in laboratory research.

The Government of the Australian Commonwealth communicated these resolutions to the interested Governments, and the letter addressed to the Secretary-General of the League by the Prime Minister is based on the replies of these Governments.

In view of the general agreement expressed in these replies, the Government of the Commonwealth has taken steps to create the Intelligence Service contemplated in Resolutions 1 to 4 inclusive, and as the relevant resolution (4) entirely omits the question as to whether this new service must constitute an autonomous regional bureau within the meaning of Article 7 of the International Sanitary Convention or, on the contrary, must transmit its information through the Singapore Bureau, the Commonwealth Government has decided upon the latter course. Communications will be sent by telegram to Singapore and Washington and by post to Geneva and Paris.

The Commonwealth Government suggested that the League of Nations should authorise, for routine communications, direct communications between health administrations by application of Article 9 of the International Sanitary Convention of 1926.²

The general response to the resolutions relating to the adoption of practical quarantine measures to ensure a continuous and uniform treatment of all ships is satisfactory, and the Commonwealth Government hopes that the application of these recommendations will achieve good results.

With regard to research, the letter draws attention to the survey of certain Pacific Islands mentioned above.

During its thirteenth session, the Health Committee adopted the following resolution :

“ The Health Committee,

“ Having noted the contents of the letter from the Prime Minister of the Commonwealth of Australia and the replies received from the Governments represented at the International Pacific Health Conference held in Melbourne in 1926 relative to the resolution passed by that Conference;

“ Expresses its pleasure at the general agreement reached and at the establishment by the Government of Australia of an Intelligence Service for the Austral-Pacific Regional Zone ;

“ Welcomes the proofs shown by the Governments in that zone of their desire to collaborate with the Health Organisation of the League of Nations.” (Document C.555.M.175. 1928.III, Resolution XVIII.)

¹ Letter of March 10th, 1927.

² This article reads as follows : “ It is recommended that neighbouring countries should make special arrangements with the object of organising direct exchange of information between their principal administrative officers, both as regards territories having a common frontier and as regards territories having close commercial relations. Those arrangements shall be communicated to the Office international d'hygiene publique.”

IV. INDIA.

In December 1927, at the invitation of the Government of India, the President of the Health Committee attended the third session of the Advisory Council of the Eastern Bureau at New Delhi and the Congress of the Far-Eastern Association of Tropical Medicine at Calcutta. He also inaugurated the interchange in India of Far-Eastern public health officers.

The President arranged with the Government of India and its technical advisers the details of the visit to India which that Government had invited the Malaria Commission of the Health Organisation to make in the autumn of 1929.

The President also helped to draw up the programme for the co-ordination by the Eastern Bureau at Singapore of the researches and enquiries undertaken by the various institutions and administrations in the Far East. The Health Committee examined the recommendations made on the matter at the third session of the Advisory Council and emphasised as specially important the collection of information on the quarantine stations of the East, the continuation of the enquiry into the efficiency of oral vaccination, the investigations for determining the extent to which rats are responsible for the spread of plague in ports, and information on the seasonal prevalence of cholera and plague in all countries within the Bureau's sphere of work (document C.254.M.79.1928.III, Resolution 4).

Chapter VIII.

ASSEMBLY RESOLUTIONS AND VARIOUS INVESTIGATIONS.

I. ALCOHOLISM.

On the proposal of the delegates of Finland, Poland and Sweden, the Assembly at its ninth session adopted a resolution concerning alcohol, the second paragraph of which reads as follows (document A.72.1928):

“The Assembly . . . decides to ask the Council to request the Health Organisation of the League of Nations to collect full statistical information regarding alcoholism considered as a consequence of the abuse of alcohol, giving prominence, *inter alia*, according to the data available, to the deleterious effects of the bad quality of the alcohols consumed . . .

“It is understood that this resolution does not refer to wine, beer or cider.”

The Council at its meeting on September 26th, 1928, forwarded this resolution to the Health Committee “for its opinion and for a report on the scheme suggested”. The Health Committee considered that the collection of statistical matter would add nothing appreciable to existing knowledge of the evil effects of the abuse of alcohol. There is already considerable scientific and medical knowledge and literature on the deleterious physiological and pathological effects of methyl-alcohol and of alcoholic liquors which may be described as liquor of bad quality. Before, therefore, submitting a report to the Council on a plan of study, the Health Committee desires to obtain further information from the health administrations of Finland, Poland and Sweden. The Committee is especially anxious to obtain information as to the special lines of international enquiry, within the scope of the Assembly resolution, which are best adapted to supply the information of which these three administrations are especially in need.

The Health Committee instructed the Medical Director to ask the health administrations of Finland, Poland and Sweden for suggestions as to the best way of obtaining this information (document C.555.M.175.1928.III, Resolution I).

The Council agreed to this procedure (document C./53rd Session/P.V. 2. (1)).

II. YELLOW FEVER.

On April 25th, 1928, the Belgian Government wrote to the Secretary-General in regard to yellow fever in the estuary of the Congo, pointing out the danger of the threatened penetration of this disease by way of the estuary of the Congo and by the important lines of communication which converge on the centre of Africa. The request was made that the League should enter into negotiations with the various interested Governments for the purpose of concluding an arrangement and preparing a plan of action to be taken by these countries, namely, Great Britain, France, Portugal, representing their possessions in tropical Africa, and Belgium for the Belgian Congo.

At its twelfth session, the Health Committee offered its services to these Governments (document C.254.M.79.1928.III) and in his report to the Council the Japanese representative stated:

“If these Governments so desire, we shall be happy to place the services of the Health Organisation at their disposal for a work which seems of capital importance and which affects not only West and Central Africa but also the countries of the Mediterranean basin and of the East Coast of Africa and even of the Far East.” (Document C./50th Session/P.V.1(1), p. 9.)

III. NOMINATION OF ADVISERS TO THE HEALTH ADMINISTRATION OF THE FRONTIERS IN TURKEY.

On May 1st, 1928, the Turkish Government addressed a letter to the Secretary-General referring to the Declaration of July 24th, 1923, annexed to the Treaty of Lausanne which provides for the designation of candidates by the Permanent Committee of the Office international d'hygiène publique in agreement with the Health Committee, from which the Turkish Government would select three expert medical advisers to the health administration of the frontiers. The Turkish Government requested the Secretary-General to refer this matter to the Health Committee.

The Health Committee in May suggested to the Permanent Committee of the Office international the joint appointment of a Sub-Committee of ten to make the necessary designations. Five members were designated by the Health Committee to sit on the proposed Sub-Committee: Dr. Th. MADSEN, M. VELGHE, Dr. CANIERI, Dr. CHODZKO, Professor NAGAYO.

IV. WELFARE OF THE BLIND.

During the eleventh session, the Health Committee approved a proposal by Sir George Buchanan for obtaining information on measures for the welfare of the blind in different countries.

The Medical Director addressed a circular letter on January 27th, 1928, accompanied by a detailed questionnaire relating to the measures in force for the welfare of the blind, to the health administrations of fifty-six countries.

During 1928, the information requested was furnished by twenty-three countries¹ and five others had begun to collect it. A report will be prepared in 1929.

The International Labour Office informed the Health Organisation that the social aspect of this question was within its competence, and suggested that it might help the Health Section in studying it. This offer was accepted as regards examining the material forwarded by Governments and in preparing the note to the Health Committee.

V. DANGERS RESULTING FROM THE USE OF X-RAYS.

During its twelfth session, the Health Committee took note of a memorandum by Dr. Jitta and Dr. Van der Plaats, radiologist at Utrecht, concerning the dangers which may result from the use of X-rays.

The Medical Director, in accordance with the instructions of the Health Committee, has asked public health administrations for information on the laws or regulations on this subject and on action that has been or should be undertaken in order to obviate these dangers (document C.254.M.79.1928.III, p. 120, Resolution 16).

Health Authorities of nine countries² have replied that no special laws or regulations are at present in existence on the matter.

Special commissions to study the subject have been set up in Austria, Denmark, Germany, Greece and Norway. The Industrial Hygiene Division of the Department of Public Health of Australia is also conducting an enquiry. The proposals of the Swedish X-Rays and Radium Protection Committee regarding protective measures in radiological work are under consideration by the Directorate of Public Health and Medical Service in Sweden. The public health authorities of Norway and Germany have forwarded the legal Acts concerning the use of X-rays and the dangers arising from the reform.

Information received from England is to the effect that, although no statutory regulations on the matter are in force, most of the hospitals and responsible institutions accept in their practice the requirements recommended by the X-Rays and Radium Protection Committee.

VI. NUTRITION.

During the thirteenth session of the Health Committee, Professor Léon Bernard proposed the inclusion on the agenda of the question of nutrition (document C. H. 765).

He thought this problem should be dealt with by the Health Organisation on account of its international interest. He suggested, as a minimum programme, that the Health Organisation should collect the existing information, should establish contact between the national centres of investigation dealing with the question and perhaps enlist the help of some of the schools of hygiene with which it is in touch.

The question will be discussed at the next session of the Committee, and the Medical Director is preparing a memorandum (document C.555.M.175.1928.III, Resolution XVII).

¹ Australia, Austria, British India, Canada, Costa Rica, Czechoslovakia, Denmark, Germany, Greece, Haiti, Hungary, Irish Free State, Italy, Latvia, Luxemburg, Netherlands, New Zealand, Norway, Poland, Sweden, Union of South Africa, United States of America, Uruguay.

² Australia, Canada, Denmark, England and Wales, Greece, Japan, Poland, Sweden, Union of South Africa.

Annex I.

LIST OF THE CHIEF MEETINGS, etc., DURING 1928.

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| 1. Interchange of Public Health Officers in India (Delhi to Bombay) | January 1st to February 18th. |
| 2. Commission on Smallpox and Vaccination, Geneva | April 25th and 26th. |
| 3. Permanent Commission on Standardisation of Sera, Serological Reactions and Biological Products, Frankfort-on-Main | April 25th to 28th. |
| 4. Cancer Commission, Geneva | April 27th and 28th. |
| 5. Twelfth Session of the Health Committee, Geneva | April 30th to May 5th. |
| 6. Malaria Course in Hamburg | May 7th to June 13th. |
| 7. Conference of Medical Advisers to the Colonial Ministries concerning the preparation of the Second International Conference on Sleeping-Sickness, Paris | May 10th and 11th. |
| 8. Commission for the Study of Leprosy, Paris. . . | May 14th. |
| 9. Commission on the Fumigation of Ships, Paris . | May 14th. |
| 10. Laboratory Conference on the Serodiagnosis of Syphilis, Copenhagen | May 21st to June 4th. |
| 11. Interchange of Public Health Personnel for the Study of Rural Hygiene in various European Countries (Ljubljana to Geneva; Final Conference in Geneva, July 23rd-25th). | May 27th to July 25th. |
| 12. Malaria Course in Paris. | June 1st to July 12th. |
| 13. Field Work in connection with Hamburg Malaria Course, Italy | June 15th to July 13th. |
| 14. Sub-Commission of Experts charged with the Study of the Radiotherapy of Cancer, Geneva | June 18th and 19th. |
| 15. General Conference on Malaria, Geneva. | June 25th to 29th. |
| 16. Malaria Course in Rome | July 2nd to August 5th. |
| 17. Conference of Health Experts on Infant Welfare, London | July 3rd to 5th. |
| 18. Field Work in connection with Paris Malaria Course (Italy and Spain) | July 15th to August 13th. |
| 19. Field Work in connection with Hamburg Malaria Course, Spain | July 15th to August 13th. |
| 20. Sub-Commission for the Study of Occupational Cancer, London | July 19th and 21st. |
| 21. Field Work in connection with Rome Malaria Course, Italy | August 6th to September 15th. |
| 22. Field Work in connection with Paris Malaria Course, Kingdom of the Serbs, Croats and Slovenes and Italy | August 15th to September 13th. |
| 23. Commission on Smallpox and Vaccination, Geneva | August 22nd to 25th. |
| 24. Special Sub-Committee of the Sub-Commission of Experts charged with the Study of the Radiotherapy of Cancer, Paris | August 28th to 30th. |
| 25. Interchange of Public Health Officers in Italy (Turin to Geneva; Final Conference in Geneva, November 8th and 9th) | September 16th to November 9th. |
| 26. Meeting of Experts on Syphilis and Cognate Subjects, Geneva | October 8th to 10th. |

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| 27. Special Sub-Committee of the Sub-Commission of Experts charged with the Study of the Radiotherapy of Cancer, Stockholm | October 15th to 18th. |
| 28. Technical Conference for the Study of Vaccination against Tuberculosis by means of BCG, Paris. | October 15th to 18th. |
| 29. Thirteenth Session of the Health Committee, Geneva. | October 25th to 31st. |
| 30. Opium Commission of the Health Committee, Geneva. | October 27th. |
| 31. Second International Conference on Sleeping-Sickness, Paris | November 5th to 7th. |
| 32. Special Sub-Committee of the Sub-Commission of Experts charged with the Study of the Radiotherapy of Cancer, Munich | December 10th to 13th. |
| 33. Joint Commission on Health Insurance—Sub-Committee on Preventive Medicine, Geneva. | December 17th to 19th. |

Annex II.

MEMBERS OF THE HEALTH COMMITTEE; MEMBERS OF COMMISSIONS NOT PREVIOUSLY LISTED.

Health Committee.

The mandate of the members of the permanent Health Committee elected in 1923 having expired at the end of 1926, twenty-four members were elected or re-elected for a period of three years commencing on January 1st, 1927.

President:

Dr. Th. MADSEN, Director of the State Serum Institute, Copenhagen.

Vice-Presidents:

(*Ex officio*) M. O. VELGHE, Secretary-General of the Ministry of the Interior and of Health, Brussels; President of the Comité permanent de l'Office international d'hygiène publique.

(Elected for 1929) Dr. Witold CHODZKO, former Polish Minister of Health; Director of the State School of Hygiene, Warsaw.

(Elected for 1929) Professor Ricardo JORGE, Technical President of the Public Health Council, Lisbon.

Members:

Professor G. ARAOZ ALFARO, former President of the National Health Department, Buenos Aires.

Professor Léon BERNARD, Professor of Tuberculosis at the Faculty of Medicine, Paris; President of the Conseil Supérieur d'Hygiène at the French Ministry of Health, Paris.

Sir George BUCHANAN, Senior Medical Officer, Ministry of Health, London.

Professor J. CANTACUZÉNE, Professor of Bacteriology and Director of the Institute of Experimental Medicine, Bucharest.

Dr. H. CARRIÈRE, Director of the Swiss Federal Public Health Service, Berne.

Dr. Carlos CHAGAS, Director of the Oswaldo Cruz Institute, Rio de Janeiro.

Surgeon-General H. S. CUMMING, Chief of the United States Public Health Service, Washington.

Dr. J. H. L. CUMPSTON, Director-General of the Commonwealth Department of Health, Canberra (expert adviser).

Colonel J. D. GRAHAM, Public Health Commissioner with the Government of India, Delhi.

Dr. C. HAMEL, President of the Reichsgesundheitsamt, Berlin.

Dr. Alice HAMILTON, Professor of Industrial Hygiene at Harvard University, Cambridge (Mass.) (expert adviser).

Dr. N. M. J. JITTA, President of the Public Health Council of the Netherlands, The Hague.

Dr. A. LUTRARIO, former Director-General of Public Health, Rome.

- Professor NAGAYO, Director of the Government Institute for Infectious Diseases, Tokio (expert adviser).
Professor B. NOCHT, Rector of the University and Director of the Institute of Tropical Diseases, Hamburg.
Professor Donato OTTOLENGHI, Professor of Hygiene at the Royal University of Bologna.
Professor Gustavo PITALUGA, Professor of Parasitology in the Faculty of Medicine at Madrid.
Dr. L. RAYNAUD, Inspector-General of the Public Health Service of Algeria, Algiers.
Dr. M. TSURUMI, representative of the Public Health Service of Japan at the Japanese Embassy, Paris.
Dr. C.-E. A. WINSLOW, Professor of Public Health, Yale School of Medicine; member Public Health Council, State of Connecticut (expert adviser).

Secretary of the Committee :

Dr. L. RAJCHMAN, Medical Director.

COMMISSIONS.

The following members were added to certain of the Commissions of the Health Committee during 1928 :

Cancer Commission :

Dr. C. HAMEL, member of the Health Committee.
Professor NAGAYO, member of the Health Committee.

Commission on Smallpox and Vaccination :

Dr. C. HAMEL, member of the Health Committee.

Malaria Commission :

Professor SCHUFFNER, Director of the Tropical Section of the Koninklijk Koloniaal Instituut, Amsterdam (corresponding member and expert).

Commission on Education in Hygiene and Preventive Medicine :

Professor J. BEJARANO, Professor of Hygiene at the Faculty of Medicine at Bogotá (corresponding member and expert).

Opium Commission :

Dr. C. HAMEL, member of the Health Committee.

The following Commissions or Sub-Commissions which met during the year did not appear in the Annual Report of the Health Organisation for 1927 :

Joint Commission of Experts for the Study of the Relationship between Public Health Services and Health Insurance Organisations.

SUB-COMMITTEE ON PREVENTIVE MEDICINE.

*Medical Experts on Public Health Questions, nominated by the Health Organisation:*¹

Chairman :

Dr. L. HELJERMANS, Director of the Medical and Sanitary Service of the City of Amsterdam.

Members :

Professor J. PABISOT, Professor of Hygiene at the Faculty of Medicine of Nancy.
Dr. G. SEIFFERT, Medical Adviser to the Ministry of the Interior; Secretary of the Bavarian Federation for the Development of Public Health, Munich.
Dr. A. STAMPAR, Director of the Public Health Department of the Kingdom of the Serbs, Croats, and Slovenes, Belgrade.

¹ Two other members are still to be nominated by the Health Organisation of the League of Nations.

Medical Experts on Health Insurance, nominated by the International Labour Office.

- Dr. E. BRESKY, Chief Medical Officer of the Central Institute of Social Insurance, Prague.
Dr. R. BUREAU, Medical Adviser to the Union Nationale des Fédérations de Mutualités Socialistes de Belgique, at Ecaussines.
Dr. W. DUNCAN, Divisional Medical Officer, Ministry of Health Regional Medical Office, London.
Comm. Cesare GIANNINI, Chief Medical Officer of the National Social Insurance Fund, Rome.
Dr. H. KLUSZYNSKI, Medical Adviser to the Central Union of Polish Health Insurance Funds, Warsaw.
Dr. Walter PRYLL, Chief Medical Officer of the Berlin General Local Fund, Berlin-Charlottenburg.

Cancer Commission.

SUB-COMMISSION FOR THE STUDY OF OCCUPATIONAL CANCER.

Chairman :

Professor M. GREENWOOD, Professor of Epidemiology and Vital Statistics at the London School of Hygiene and Tropical Medicine, University of London.

Members :

- Dr. L. CAROZZI, Chief of the Health Service of the International Labour Office, Geneva.
Professor G. ROUSSY, Professor of Pathological Anatomy at the Faculty of Medicine of the University of Paris.
Dr. L. TELEKY, Chief District Medical Inspector of Factories, Düsseldorf.

SUB-COMMISSION OF EXPERTS CHARGED WITH THE STUDY OF THE RADIOTHERAPY OF CANCER.

Chairman :

Professor Cl. REGAUD, Director of the Radium Institute of the Curie Foundation, Paris.

Members :

- Dr. Comyns BERKELEY, Director of the Middlesex Hospital Cancer Charity (Gynæcological Service), London.
Professor A. DOEDERLEIN, Director of the University Gynæcological Clinic, Munich.
Dr. James HEYMAN, of the Radiumhemmet, Stockholm.
Professor W. LAHM, Director of the Laboratory Research Work of the State Gynæcological Clinic, Chemnitz.
Professor PESTALOZZA, Director of the Gynæcological Clinic, Rome.
Professor VAN ROOY, Director of the University Gynæcological Clinic, Amsterdam.

Corresponding Members and Experts :

- Dr. LACASSAGNE, of the Curie Foundation, Paris.
Professor VOLTZ, of the University Gynæcological Clinic, Munich.

Investigator :

- Dr. Janet E. LANE-CLAYPON, attached to the Departmental Cancer Committee of the Ministry of Health, London, for purposes of research work.

Joint Commission for the Revision of the "International List of Causes of Death".

Members nominated by the International Institute of Statistics.

- Dr. J. C. DUNLOP, Registrar-General for Scotland, Edinburgh.
M. Michel HUBER, Director of the Statistique Générale de la France, Paris.
M. Gunnar JAHN, Director of the Central Bureau of Statistics, Oslo.
Dr. N. M. J. JITTA, President of the Public Health Council of the Netherlands, The Hague; member of the Health Committee.

Members nominated by the Health Organisation.

Dr. Haven EMERSON, Professor of Public Health Administration, Columbia University, New York.

Professor C. GINI, President of the Central Statistical Institute of Italy, Rome.

Dr. E. ROESLE, Director of Medical Statistics, Reichsgesundheitsamt, Berlin.

Dr. J. H. C. STEVENSON, Technical Adviser to the Registrar-General of England and Wales.

Commission on the Fumigation of Ships.

Chairman :

Surgeon-General H. S. CUMMING, member of the Health Committee.

Members :

Sir George BUCHANAN, member of the Health Committee.

Colonel J. D. GRAHAM, member of the Health Committee.

Dr. N. M. J. JITTA, member of the Health Committee.

Professor B. NOCHT, member of the Health Committee.

M. O. VELGHE, Vice-President of the Health Committee.

Dr. C. L. PARK, Chief Medical Officer, Australia House, London.

Dr. P. G. STOCK, of the Ministry of Health, London.

Commission for the Study of Leprosy.

Chairman :

Dr. Carlos CHAGAS, member of the Health Committee.

Members :

Surgeon-General H. S. CUMMING, member of the Health Committee.

Colonel J. D. GRAHAM, member of the Health Committee.

Dr. Th. MADSEN, President of the Health Committee.

Professor NAGAYO, member of the Health Committee.

CONFERENCES.

Experts on Syphilis and Cognate Subjects.

Chairman :

Professor J. JADASSOHN, Director of the University Skin Clinic, Breslau.

Members :

Colonel L. W. HARRISON, of the Ministry of Health, London.

Dr. Th. MADSEN, President of the Health Committee.

Dr. Louis QUEYRAT, President of the Ligue nationale française contre le Péril vénérien, Paris.

Professor C. RASCH, Director of the State Hospital, Copenhagen.

Dr. J. H. STOKES, Professor of Dermatology and Syphilology, School of Medicine, University of Pennsylvania, Philadelphia; Chairman of the Scientific Committee of the Committee on Research in Syphilis, New York.

**Special Technical Conference for the Study of Vaccination
against Tuberculosis by means of BCG.**

THE BUREAU :

Chairman :

Dr. E. ROUX, Director of the Pasteur Institute, Paris.

Members :

Dr. Th. MADSEN, President of the Health Committee.

Dr. L. RAJCHMAN, Secretary *ex officio*; Medical Director of the Health Organisation of the League of Nations.

The Conference was divided into three Commissions, composed as follows :

BACTERIOLOGICAL COMMISSION :

President :

Professor BORDET, Director of the Pasteur Institute, Brussels.

Members :

Professor K. KRAUS, Director of the Sero-therapeutical State Institute, Vienna.
Professor NEUFELD, Director of the Robert Koch Institute, Berlin.
Dr. TSEKHOVITZER, Sanitary and Bacteriological Institute, Kharkoff.

Honorary Secretary :

Professor C. PRAUSNITZ, Director of the Hygiene Institute of the University, Breslau.

The Commission invited the following to relate their experiences with BCG and take part in the discussion :

Professor J. CANTACUZÈNE, Director of the Institute of Experimental Medicine, Bucharest ; and
Dr. A. REMLINGER, Director of the Pasteur Institute of Morocco, Tangier.

Also presented the results of his experiences at one of the meetings :

Mr. S. A. PETROFF, Bacteriological Laboratory of the Trudeau Institute, Saranac Lake, N. Y.

CLINICAL COMMISSION :

President :

Professor Léon BERNARD, Professor of Clinical Tuberculosis, Faculty of Medicine, Paris.

Members :

Dr. J. HEIMBECK, Physician at the Ullevål Hospital, Oslo.
Professor E. NOBEL, Pediatric Clinic of the University, Vienna.
Professor G. RONZONI, Director of the Institute for Tuberculosis, Milan.
Professor L. SAYÉ, Professor of the Faculty of Medicine, Director of the Service of Assistance to Tuberculosis Patients, Barcelona.
Professor A. SCHLOSSMANN, Director of the Pediatric Clinic, Düsseldorf.

Attended one meeting of this Commission and related the results of their experiences with BCG :

Dr. VAN BENEDEN, Bacteriological Institute of the University, Liège ; and
Dr. WEILL-HALLÉ, Director of the Ecole de Puériculture of the Faculty of Medicine, Paris.

VETERINARY COMMISSION :

President :

Professor J. NOWAK, Director of the Institute of Research in Human and Veterinary Medicine, Cracow.

Members :

Professor A. ASCOLI, Istituto vaccinogeno antitubercolare, Milan.
Dr. H. BERGER, Chief Inspector of the Veterinary Services of the Netherlands, The Hague ; Assisted by
Dr. FRENKEL, Veterinary Section of the State Hygienic Laboratory, Utrecht.
Professor VALLÉE, National Research Laboratory of the Ministry of Agriculture, Alfort (Seine).
Dr. ZELLER, Veterinary Section of the Reichsgesundheitsamt, Berlin.

Also attended the meetings of this Commission :

Professor GERLACH, Federal Institute for combating Cattle Disease, Mödling, near Vienna.

Took part in the proceedings of the Conference and of its Commissions :

Professor CALMETTE, Deputy-Director of the Pasteur Institute, Paris ; and
M. GUÉRIN, Chef de Laboratoire at the Pasteur Institute, Paris.

Annex III.
BUDGET OF THE HEALTH ORGANISATION FOR 1929.
(In Swiss francs.)

INTERNATIONAL HEALTH ORGANISATION	ESTIMATES FOR 1929			ESTIMATES FOR 1928			EXPENDITURE 1927		
	League contribution	Grant from International Health Division of Rockefeller Foundation	Total	League contribution	Grant from International Health Division of Rockefeller Foundation	Total	League contribution	Grant in from International Health Division of Rockefeller Foundation	Total
I. Health Committee, Secretariat and General Work of the Organisation	1,012,957	548,110	1,556,067	992,688	388,695	1,381,383			
1. Sessions of the Health Committee	60,000		60,000	60,000		60,000	35,200		35,200
2. Salaries of the Health Section	862,408		862,408	848,468		848,468	296,194		296,194
3. Travelling and removal expenses of the Secretariat	58,000		58,000	68,000		68,000	58,645		58,645
4. General printing and documentation	16,000		16,000	34,500		34,500	15,522		15,522
5. Cables, telegrams and telephones	18,000		18,000	18,675		18,675	16,800		16,800
6. Miscellaneous petty expenses and unforeseen contingencies	2,000		2,000	2,000		2,000	1,968		1,968
7. Unpaid liabilities in respect of previous years	6,554		6,554						
II. Intelligence, Technical and Research Work of the Organisation :									
1. Technical Committees and Sub-Committees, Conferences, Missions, work of experts and collective and individual studies	250,000	120,897	370,897	261,000	144,116	405,116	310,777	47,239	358,016
2. Salaries of the temporary staff		237,401	237,401		187,451	187,451		138,576	138,576
3. Publications, printing and documentation	70,000	45,768	115,768	45,000		45,000	51,213	92,812	144,025
4. Cables and telegrams	5,000		5,000			15,000	13,000		13,000
5. Miscellaneous and Unforeseen	5,000		5,000						
6. Contribution to Singapore Bureau	15,000		15,000	15,000					
III. Interchange of Public Health Personnel: Expenses in connection with a system of liaison between the various national services	150,000	139,549	289,549	150,000	57,128¹	207,128	114,382	292,756	407,138
	1,012,957	548,110	1,556,067	992,688	388,695	1,381,383	913,701	571,383	1,485,084

¹ During the year, the International Health Division of the Rockefeller Foundation increased the grant to Interchanges by \$25,000 = 129,565 Swiss francs. The figures shown for the years 1929 and 1928 are the estimates as approved by the Assembly. Since, however, the presentation of the budget has been slightly altered in 1929, the 1928 figures have been re-grouped in order to afford comparison. The 1927 expenditure has likewise been grouped under the headings adopted for 1929.

Annex IV.

BUDGET OF THE EASTERN BUREAU FOR 1929.

ESTIMATES FOR 1929 AS PASSED BY THE ADVISORY COUNCIL AND THE NINTH SESSION OF THE ASSEMBLY. ¹

		1929 Estimates	Expenditure in 1927
		Straits dollars	
I.	Staff Salaries and Allowances	55,560	50,035
II.	Travelling Expenses of the Staff, Expenses for the Co-ordination of Research	5,200	6,533
III.	Cables and Postage :		
	Straits dollars		
	Cables	13,200	
	Postage	500	
		18,700	18,419
IV.	Printing, Stationery and Equipment :		
	Printing	2,400	
	Stationery	650	
	<i>Weekly Fasciculus</i>	3,600	
	Periodicals	900	
	Equipment	180	
	Books of reference	300	
		8,030	6,189
V.	Rent, Electricity and Telephone :		
	Rent	3,000	
	Electricity	54	
	Telephone	166	
		3,220	3,205
VI.	Travelling Expenses of Members of the Advisory Council	5,500	
VII.	Miscellaneous :		
	Medical attendance to staff	200	
	Audit fee	300	
	Miscellaneous	2,300	
		2,800	1,882
		94,010	86,268

Annex V.

PUBLICATIONS ² OF THE HEALTH ORGANISATION DURING 1928.

I. SERVICE OF EPIDEMIOLOGICAL INTELLIGENCE AND PUBLIC HEALTH STATISTICS.

Periodicals.

1. *Weekly Bulletins* (bilingual). Nos. 97-148.
2. *Monthly Epidemiological Reports* (bilingual). Nos. 110-121 (approximately 40 pages each).

¹ The expenses of the Far-Eastern Bureau for Epidemiological Intelligence will be met, in 1929, by contributions from :

- (a) The Rockefeller Foundation (International Health Division) ;
- (b) Certain Governments ;
- (c) The League of Nations.

The following Governments are contributing towards the expenses of the financial year 1928 : China, Dutch East Indies, Federated Malay States, French Indo-China, Japan, Philippines, Straits Settlements.

² Unless otherwise stated, all the above documents have also a French edition.

Series.

1. *Statistical Handbooks.*

C.H. 669. — "Official Vital Statistics of Switzerland", by Dr. Marcel NEY, Director of the Federal Statistical Bureau, with the co-operation of Dr. H. CARRIÈRE, Director of the Federal Health Department at Berne.
1 volume. Size 18.5 × 24 cm. 88 pages. May 1928.

2. *Handbooks on the Organisation and Working of Public Health Services in Various Countries.*

C.H. 683. — "Public Health Services in New Zealand". Part II of this brochure gives information on the vital statistics of the Dominion of New Zealand, pages 43-84.
1 volume. Size 18.5 × 24 cm. 84 pages. July 1928.

3. *International Health Year-Book.*

C.H. 599. — "International Health Year-book 1927". (Third year.) Reports on the public health progress of twenty-seven countries in 1926.

1 volume. Size 18.5 × 24 cm. 801 pages. February 1928.

C.H. 733. — "International Health Year-book 1928". (Fourth year.) Reports on the public health progress of various countries in 1927. (In preparation.)

II. SPECIAL STUDIES AND INVESTIGATIONS.

(a) *International Commission for the Study of Sleeping-Sickness.*

C.H. 629. — Final Report of the League of Nations International Commission on Human Trypanosomiasis.

1 volume. Size 19.5 × 25 cm. 392 pages. April 1928.

C.H. 743. — Report of the Second International Conference on Sleeping-Sickness held in Paris, November 5th to 7th, 1928.

1 booklet. Size 19 × 25 cm. 90 pages. December 1928.

(b) *Malaria Commission.*

C.H. /Malaria/ 100. — Programme of the Malaria Course for 1928. (Third year.)

1 booklet. Size 16 × 23.5 cm. 31 pages. Mixed French-English-German-Italian. March 1928.

C.H. /Malaria/ 121. — Report on the Work of the Malaria Commission at the Conference held in Geneva, June 25th-29th, 1928.

1 booklet. Size 18.5 × 24 cm. 22 pages. July 1928.

(c) *Permanent Commission on Standardisation of Sera, Serological Reactions and Biological Products.*

C.H. 717. — Report of the Permanent Commission on Standardisation of Sera, Serological Reactions and Biological Products on the Conference held in Frankfort-on-Main from April 25th to April 28th, 1928.

1 fasciculus. Size 21 × 33 cm. 8 pages. May 1928.

C.H. 726. — Report on the Work of the Laboratory Conference on the Serodiagnosis of Syphilis held at Copenhagen, May 21st to June 4th, 1928.

C.H. 734. — Memorandum on Cardiac Drugs, Thyroid Preparations, Ergot Preparations, Filix mas, Suprarenal Preparations, Vitamins, Pituitary, Salvarsan, Oil of Chenopodium, Insulin, by Professor KNAFFL-LENZ (Vienna).

1 volume. Size 15.5 × 24 cm. 69 pages. August 1928. (English only.) (French in preparation).

(d) *Syphilis and Cognate Subjects.*

C.H. 750. — Report on the Meeting of Experts on Syphilis and Cognate Subjects held at Geneva, October 8th to 10th, 1928.

1 fasciculus. Size 21 × 33 cm. 7 pages. October 1928.

(e) *Commission on Smallpox and Vaccination.*

C.H. 739. — Report of the Commission on Smallpox and Vaccination on the Session held at Geneva from August 22nd to 25th, 1928.

1 fasciculus. Size 21 × 33 cm. 12 pages. September 1928.

(f) *Commission of Expert Statisticians.*

C.H. 730. — "Essai d'une Statistique comparative de la morbidité devant servir à établir les listes spéciales des causes de morbidité", par le Dr E. ROESLE, Chef du Service des statistiques médicales au « Reichsgesundheitsamt » de Berlin.

1 booklet. Size 18.5 × 24 cm. 117 pages. December 1928. (French only.)

(g) *International Rabies Conference.*

C.H. 581 (1). — Reports on the Work of the International Rabies Conference held at the Pasteur Institute, Paris, from April 25th to 29th, 1927; organised by the Health Organisation of the League of Nations.

1 volume. Size 16 × 24 cm. 171 pages. January 1928.

(h) *Interchange of Public Health Personnel.*

C.H. 691. — "Health Organisation in British India."

1 volume. Size 18.5 × 24.5 cm. 388 pages. March 1928. (English edition only).
(French in preparation).

C.H./E.P.S./136. — "Collective Study Tour organised by the Health Organisation of the League of Nations in the Baltic and North Sea Ports from September 12th to October 13th, 1926."

1 volume. Size 18.5 × 24 cm. 17 pages. July 1928.

C.H./E.P.S./144. — "L'Hygiène publique en Italie." — Forty-eight lectures given in Italy to the Public Health Officers of nineteen countries during the Public Health Interchange organised by the Health Organisation of the League of Nations from September 16th to November 10th, 1928.

1 volume. Size 13 × 20 cm. 308 pages. August 1928. (French.)

(i) *Health Experts on Infant Welfare.*

C.H. 737. — Report on the Conference of Health Experts on Infant Welfare held in London on July 3rd, 4th and 5th, 1928.

1 fasciculus. Size 21 × 33 cm. 6 pages. September 1928.

(j) *Meeting of Experts for the Study of Vaccination against Tuberculosis by the BCG Vaccine.*

C.H. 745. — Report of the Technical Conference for the Study of Vaccination against Tuberculosis by the BCG Vaccine, held in Paris, at the Institut Pasteur, from October 15th to October 18th, 1928. (In course of preparation.)

III. SPECIAL STUDIES.

C.H. 681. — "The Food of Japan", by Egerton Charles GREY.

1 volume. Size 16 × 24 cm. 161 pages. July 1928. (English only.) (Out of print.)

IV. REPORTS, MINUTES OF SESSIONS OF HEALTH COMMITTEE AND CONSTITUTIONAL QUESTIONS.

A. *Geneva Office.*

1. *General Work.*

A.10.1928.III (C.H. 682). — Annual Report of the Health Organisation for 1927.

1 fasciculus. Size 21 × 33 cm. 60 pages. February 1928.

2. *Health Committee Sessions.*

C.579.M.205.1927.III. — Minutes of the Eleventh Session of the Health Committee, held at Geneva from October 28th to November 3rd, 1927.

1 volume. Size 21 × 33 cm. 181 pages. January 1928.

C.254.M.79.1928.III. — Minutes of the Twelfth Session of the Health Committee, held at Geneva from April 30th to May 5th, 1928.

1 volume. Size 21 × 33 cm. 125 pages. July 1928.

C.555.M.175.1928 (C.H. 769 (I)). — Report to the Council of the League of Nations on the Work of the Thirteenth Session of the Health Committee, held at Geneva from October 25th to October 31st, 1928.

1 fasciculus. Size 21 × 33 cm. 46 pages. November 1928.

B. *Far-Eastern Bureau.*

C.179.M.55.1928.III (C.H. 705). — Annual Report for 1927 and Minutes of the Third Session of the Advisory Council, held in New Dehli, from December 26th to 29th, 1927.

1 fasciculus. Size 21 × 33 cm. 67 pages. April 1928.

②

LEAGUE OF NATIONS

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 9. Work of the Health Organisation — Report of the Second Committee to the Tenth Assembly. 139-141 p.
 10. Health Organisation — Permanent Commission on Standardisation of Sera, Serological Reactions and Biological Products — Memoranda on the International Standardisation of Therapeutic Sera and Bacterial Products by Professor C. Prausnitz (Breslau).
-

[Distributed to the Council
and the Members of the League.]

Official No. : C. 246. M. 85. 1929. III.

Geneva, July 1929.

LEAGUE OF NATIONS

HEALTH COMMITTEE

MINUTES

OF THE

FOURTEENTH SESSION

Held at Geneva from May 2nd to 8th, 1929

Series of League of Nations Publications

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LIST OF MEMBERS.

The following members were present at the session :

Dr. Th. MADSEN, Director of the State Serum Institute, Copenhagen, *President*.

Dr. Witold CHODZKO, former Polish Minister of Health ; Director of the State School of Hygiene, Warsaw, *Vice-President*.

Professor Ricardo JORGE, Technical President of the Public Health Council, Lisbon, *Vice-President*.

Professor Léon BERNARD, Professor of Tuberculosis at the Faculty of Medicine, Paris ; President of the Conseil supérieur d'hygiène at the French Ministry of Health, Paris (attended the meetings from May 6th).

Sir George BUCHANAN, Senior Medical Officer, Ministry of Health, London.

Professor J. CANTACUZÈNE, Professor of Bacteriology and Director of the Institute of Experimental Medicine, Bucharest.

Dr. H. CARRIÈRE, Director of the Federal Public Health Service, Berne (attended the meetings from May 4th).

Surgeon-General H. S. CUMMING, Chief of the United States Public Health Service, Washington. D.C.

Dr. C. HAMEL, President of the Reichsgesundheitsamt, Berlin.

Dr. N. M. J. JITTA, President of the Public Health Council of the Netherlands, The Hague.

Dr. A. LUTRARIO, former Director-General of Public Health, Ministry of the Interior, Rome.

Professor B. NOCHT, Rector of the University and Director of the Institute of Tropical Diseases, Hamburg.

Professor D. OTTOLENGHI, Professor of Hygiene at the Royal University of Bologna.

Dr. M. TSURUMI, representative of the Public Health Service of Japan at the Japanese Embassy, Paris.

Dr. C. E. A. WINSLOW, Professor of Public Health, Yale School of Medicine ; Member of the Public Health Council, State of Connecticut.

Dr. L. RAJCHMAN, Medical Director, Secretary of the Committee.

Dr. C. L. PARK, Chief Medical Officer, Australia House, London, represented Dr. Cumpston.

The following members were absent :

Professor G. ARAOZ ALFARO, former President of the National Health Department, Buenos Aires.

Professor Carlos CHAGAS, Director of the Oswaldo Cruz Institute, Rio de Janeiro.

Colonel J. D. GRAHAM, Public Health Commissioner with the Government of India, Delhi.

Dr. Alice HAMILTON, Professor of Industrial Hygiene at Harvard University, Boston, Mass.

Professor NAGAYO, Director, Government Institute for Infectious Diseases, Tokio.

Professor G. PITTALUGA, Professor of Parasitology, Faculty of Medicine, Madrid University.

Dr. L. RAYNAUD, Inspector-General of the Health Services, Algiers.

M. O. VELGHE, *Vice-President (ex officio)* ; President of the Comité permanent de l'Office international d'Hygiène publique, Paris ; Secretary-General of the Ministry of the Interior and of Health, Brussels.

The following also attended the session of the Committee :

Dr. G. ABT, Director of the Office international d'hygiène publique, Paris.

Dr. B. BORČIĆ, Director of the State Institute of Health, Zagreb.

Dr. CAROZZI, Chief of the Health Service, International Labour Office.

Dr. M. MIYAJIMA, Member of the Kitasato Institute, Tokio ; Professor of the Faculty of Medicine, Keio University, Tokio.

FIRST MEETING.

Held on Thursday, May 2nd, 1929, at 11 a.m.

President : Dr. Th. MADSEN.

415. **Opening of the Session.**

The PRESIDENT, in welcoming the members, regretted the absence of M. Velghe, who was ill. Colonel Graham, Dr. Alfaro, Dr. Chagas, Dr. Raynaud and Dr. Alice Hamilton were also prevented from attending the session. It was expected that Dr. Carrière, Professor Léon Bernard and Dr. Pittaluga would arrive shortly. Dr. Park was replacing Dr. Cumpston. The President welcomed also Dr. Abt, who was representing the Office international d'Hygiène publique, and Dr. Borčić, who had participated in the work of the experts in Greece.

416. **Adoption of the Agenda.**

The PRESIDENT submitted the agenda.

On his proposal, *the Committee decided* that M. Velghe should be temporarily replaced by Dr. Ricardo Jorge on the Far-Eastern Commission.

The agenda was adopted. (Annex 1).

417. **Examination of the Report of the Medical Director.**

I. COUNCIL DECISIONS.

The PRESIDENT said that the Committee would begin the discussion on the report of the Medical Director (Annex 2).

With reference to paragraph 4, Dr. RAJCHMAN desired to congratulate Sir George Buchanan on the happy result of the action which he had taken in regard to the publication of the Committee's Minutes.

Sir George BUCHANAN presumed that, as the result of the Council's decision to approve the printing of the Committee's Minutes, no report of the discussions would in future be issued.

Dr. RAJCHMAN replied in the affirmative.

II. CURRENT WORK OF THE HEALTH SECTION.

Chapter I. — Service of Epidemiological Intelligence and Public Health Statistics.

• Dr. JITTA desired to congratulate Dr. Rajchman and the President of the Office international for the effective manner in which the two organisations had co-operated in regard to the issue of the Record. It had been of the greatest use, especially throughout the epidemic of influenza, and also in regard to the information it had furnished concerning the cases of smallpox found on board an English vessel and which had resulted in a small outbreak in England. The matter had aroused the attention of public opinion, and the Health Service for which he was responsible had been able to supply information within two days of the publication of the Record at Geneva.

Dr. ABT said that the manner in which the Office international and the Health Section of the Secretariat were co-operating was entirely satisfactory. No difficulties had arisen in regard to the regulation of a certain number of small points of difference. It was hoped that this co-operation would continue and he felt no doubt as to its useful results. He would, however, take the opportunity of pointing out that the burden on the Office was perhaps heavier than that upon the Health Section owing to the great speed with which it was necessary to draft the communications from the Office international. Information not infrequently arrived at 5 p.m. on Wednesdays and had to be sent to Geneva in time for printing on the following day. While no insuperable difficulty had hitherto been encountered in this respect, the system could scarcely be described as logical or easy of application. It was, however, inevitable, owing to the basis on which the co-operation between the two organisations had been established.

Sir George BUCHANAN was glad to note that the arrangements made between the Health Section and the Office international had achieved a good deal. It was quite possible that further arrangements would enable the system to be adjusted even more conveniently than was at present the case. On further examination, a number of improvements would certainly emerge, and he hoped that any further development would be in the direction of simplification and reduction in the amount of detail sent out from Geneva. The Public Health Department of Great Britain received much information which it considered to be needlessly duplicated. A little further investigation therefore into the method of co-operation and further experience would, he hoped, lead to simplification, especially in the matter of daily reports. His colleague, Colonel James, who dealt with intelligence work, was absent in Africa, and he would prefer not to make any concrete suggestions till his return. It was advisable then that the matter should be discussed in a friendly exchange of views between the Office international and the Health Section. He made these observations merely because he did not wish it to be thought that, in accepting this part of the report, he took the view that the arrangements described in it were to be regarded as incapable of further improvement.

Dr. RAJCHMAN replied that no one more than himself and his Section desired further improvement to be made. Any suggestions sent by Colonel James, or by any other member of the Committee, would be carefully considered.

Sir George BUCHANAN said that he would be happy to put forward suggestions when they could be formulated more definitely. It was impossible for him to do so during the present session.

Eastern Bureau at Singapore.

No observations.

Co-operation with the Office international d'Hygiène publique.

No observations.

The Alexandria Bureau of the Sanitary, Maritime and Quarantine Council of Egypt.

The PRESIDENT proposed that Dr. Gilmour, the new Chairman of the Sanitary, Maritime and Quarantine Council of Egypt, should be invited to attend the meetings of the Committee.

Sir George BUCHANAN, while having the greatest respect for Dr. Gilmour and the greatest admiration for the work of the Council of which he was the Chairman, did not think that it would be in order to invite him to become a member of the Committee. He did not think there was any reason for so doing.

Dr. Gilmour's position in regard to the Committee of the Office international was quite a different matter, because the Quarantine Board possessed definite obligations toward the Office under the International Sanitary Convention. If an invitation were extended by the Committee to Dr. Gilmour, similar invitations would have to be sent to the Chairmen of a large number of other organisations of varying importance. He suggested, therefore, that the proposal of the President should be reduced to writing, circulated to members and considered at a subsequent session.

The PRESIDENT explained that he had in no way intended to propose the addition of a new member to the Committee, but merely to ask the Chairman of the Sanitary, Maritime and Quarantine Council for Egypt, which was a very important organisation, to co-operate with the Committee, if he so desired. His co-operation would be of the greatest use, and the President would point out that similar co-operation had been forthcoming from the President of the Pan-American Bureau and from the President of the Office international.

Sir George BUCHANAN enquired whether, if Dr. Gilmour attended the Committee, his expenses would be paid.

Dr. RAJCHMAN said that that question would not arise for the Health Committee.

Sir George BUCHANAN disagreed. If the Committee merely informed Dr. Gilmour that, should he be present in Geneva, the Committee would be pleased to see him at any of its meetings, then there was no objection to be made. If, however, an official invitation were sent him, it would be necessary to invite other distinguished persons from other organisations, and the League would have to pay their expenses. Such action on the part of the League would be equivalent to putting them, to a certain extent, in an official position and would create charges which he thought were unnecessary.

The PRESIDENT considered that Sir George Buchanan had exaggerated the importance of his suggestion. He had only desired to make it possible for the Committee to establish personal contact with a very important representative of a very important organisation.

Dr. RAJCHMAN pointed out that Major Thomson had been invited to attend a session of the Committee but had been unable to do so for personal reasons. A precedent had therefore been created.

Sir George BUCHANAN said that if no expenses were to be paid and no official position was in question — if, in fact, it was only an intimation to Dr. Gilmour that, if he were present in Geneva, the Committee would be pleased to welcome him at its meetings — he had no possible objection.

The proposal of the President was adopted.

Pan-American Sanitary Bureau at Washington.

No observations.

The Commission of Expert Statisticians.

Adjourned to a later meeting in the session.

Chapter II. — *System of Liaison with the Health Administrations of the Various Governments.*

Dr. LUTRARIO reminded the Committee of the initiative taken by the International Institute of Agriculture in previous years to ensure co-operation between certain international organisations and the Institute. The first meeting for the consideration of the subject had been held in the previous year in Rome, and had been attended by delegates from seventeen of the international institutes which had been invited to send representatives. Dr. Lutrario had acted as delegate both of the Office international d'Hygiène publique and of the Health Committee. He had prepared a scheme for co-operation between the Health Organisation of the League and the International Institute of Agriculture, but this report was at present being reneographed, and he would therefore ask the President to be good enough to postpone the discussion of this matter until the members of the Committee had had time to study his report.

Professor OTTOLENGHI observed that, when attending the Congress on Occupational Diseases at Lyons, and later again in Italy, he had met the participants in the industrial hygiene collective study tour, who had expressed themselves as very well satisfied with their work, and with what they had seen. Their work had been greatly facilitated by the smallness of their numbers. He congratulated Dr. Gaal, to whom the arrangements for the tour had been entrusted, and he wished to extend his congratulations to Dr. Rajchman as well for the very satisfactory results obtained.

Dr. CHODZKO expressed his congratulations to the Health Section and its Director on the progress made in the matter of collective tours. He noted with particular interest the scheme for the study tours in connection with rural hygiene, and also with the milk supply, which was closely bound up with the question of rural hygiene. He was particularly glad to observe that the Health Organisation proposed to go into the question of rural hygiene thoroughly, because he personally regarded rural hygiene as a security for the survival of the white race. He noted from the Director's report that a special study had been made during the visit to Denmark of "the voluntary system of health insurance which has contributed to the present high development of rural hygiene in Denmark".

Dr. Chodzko had himself remarked upon the truth of this statement when he had visited Denmark a few years previously. That being so, he wished to lay particular emphasis upon the necessity for the development of health insurance in the interests of the European populations. He regretted that the collective tour in Germany and Austria for the study of relations between the health insurance organisations and the public health services had been confined to certain large towns, and that it had not been possible to make any enquiry into the connection between health insurance and rural hygiene. Great developments had taken place in this field in Western Poland, where dispensaries for the rural population had been set up by the health insurance organisations. The population had expressed their keen satisfaction at this movement. He would therefore suggest that, in future tours of study dealing with the question of health insurance, closer attention should be paid to the effect of health insurance upon rural hygiene. The question was by no means simple, and it had been noted that in Poland the movement was a very slow one. It would therefore be well to pay special attention to the problem of speeding up the movement.

Dr. Chodzko associated himself with Professor Ottolenghi's remarks concerning the benefit derived by the participants in the industrial hygiene study tour.

Dr. TSURUMI requested the Committee to examine once again the possibility of holding a conference to enquire into the situation of the Far Eastern ports. He reminded the Committee that the principle of a conference had been accepted two years previously. The conference would facilitate the application of the International Sanitary Convention.

Sir George BUCHANAN thought that consideration of Dr. Tsurumi's suggestion should be postponed until Colonel Graham could attend one of the Committee's future sessions.

With regard to the proposed study of the milk question, he thought that it would be convenient to have certain preliminary suggestions or consultations as to the scope of the enquiry, the sort of personnel who would participate in it, and the nature of the subjects to be investigated.

All questions connected with the milk supply were extremely difficult, and sometimes involved political and administrative problems with which agricultural and commercial interests were bound up. Members of the Committee might be able to make valuable suggestions if they were informed of the programme before it was finally adopted.

In regard to the interchange on housing, Sir George Buchanan presumed that the individual missions to be sent in advance would consist of members of the Secretariat. If so, the proposal was an excellent one. If, on the other hand, it was intended to select and send outside experts to Great Britain, he would be glad if the British Government authorities concerned could be informed in advance.

Surgeon-General CUMMING enquired whether the proposed milk study included field studies or would merely consist of the collection of information.

Dr. RAJCHMAN thanked Professor Ottolenghi for his observations, which he would transmit to the official in the Secretariat who had organised the industrial hygiene collective study tour. He also expressed his gratitude to Dr. Chodzko.

The Health Section realised the importance of health insurance in regard to rural hygiene, and in future years would certainly endeavour to carry out in other countries what was being done in the present year in Denmark, in order to bring out the importance of this question. He would observe, however, that the same facilities for studying the problem were not met with in all countries alike. The matter had been studied in the previous year in the course of the enquiry into rural hygiene in Germany and Austria. If it had been proposed to limit the study of the relations between the health insurance organisations and the public health services to certain towns in Germany and Austria in the present year, that was solely because those towns had been taken as model towns and because the object was to enquire into the methods of co-operation existing between the health insurance organisations on the one hand and the public authorities on the other hand.

In reply to Dr. Tsurumi's observations, Dr. Rajchman would support Sir George Buchanan's suggestions that it was essential to wait for the opinion of the Chairman of the Advisory Committee at Singapore.

In reply to Sir George Buchanan's observation, Dr. Rajchman feared that no funds would be available in the following autumn for the organisation of the enquiry into the milk supply. It would be difficult to go further until the position had been ascertained as to the credits earmarked for international collaboration in the current year. Were the interchange to be held in England, the Secretariat would of course give due notice to Sir George Buchanan, and would be grateful for his suggestions.

The enquiry into housing would probably likewise be precluded for the same financial reasons in the current year. If it were possible to hold the interchange, and outside experts were invited to take part in it, the Governments would of course be consulted. While, therefore, it was not expected that the milk supply study group could be arranged until the following year, it was to be hoped that it would eventually be able to visit the United States of America and to make field studies as well, in order to witness the actual operations in that country.

Surgeon-General CUMMING said that he would be glad to facilitate the tour of the group in the United States.

The PRESIDENT greatly regretted the necessity for postponing the study of the milk supply until the following year, since it was a matter of the utmost importance to many countries in Northern Europe, as well as to the United States. So great was the number of infectious diseases carried by milk that this question necessitated urgent study on the part of the Health Organisation, especially in view of the political and commercial considerations involved. Dr. Madsen recalled that, when the question had been first discussed in the Committee, it had been examined by the different members in a number of different ways. The Committee had debated the possibility of co-operation with the veterinary authorities, and Dr. Madsen had been interested to note the different views that had been expressed. He agreed with Surgeon-General Cumming that a field tour was essential, and he hoped that it would be possible to extend such a tour to the United States, where particular attention had been paid to the whole problem.

III. TECHNICAL SECRETARIAT OF COMMISSIONS AND CONFERENCES.

I. *Malaria Commission.*

Dr. LUTRARIO observed that this was perhaps the first occasion on which the Committee had received no report from the Malaria Commission itself. This omission was due to the fact that the programme adopted at the last session in June was so vast in scope that it had been difficult to deal with all the subjects involved. It had been necessary first to get into touch with the various malariologists present at the session, who in many cases lived in widely separated places, so that correspondence was slow. However, the preparatory stage was now over and it was hoped soon to undertake the actual work itself. The Malaria Commission, which had already rendered signal service by drawing up a number of principles, would certainly continue its fruitful work.

Dr. RAJCHMAN said that, since his report had been drawn up, a fourth course on malariology had been organised by Dr. Andrew Balfour, which would be held in London from the end of May to the end of June. The course would be attended by six students.

The Medical Director offered the Secretariat's apologies for having been unable to give the Malaria Commission all the assistance it might have required, but reminded the Committee that the Secretary of the Commission, Dr. Mackenzie, had remained in Greece practically uninterruptedly ever since October in the previous year. The work of Secretary had been handed over to Dr. Biraud, who had much other work to do in addition. He was happy to say that the Malaria Commission would now have the assistance of Professor Ciuca, who would take up the duties of Secretary of the Commission and would devote the whole of his time to its work.

Sir George BUCHANAN said that Dr. Andrew Balfour was seriously ill, and would probably be unable to take part himself in the malariological course. He had no doubt other arrangements would be made, but suggested that the Health Section should make enquiries. He asked how many participants would join in the study tour in India.

Dr. RAJCHMAN replied that there would probably be five, and certainly not more than six. The number depended on the funds available.

Dr. LUTRARIO expressed his gratification at the nomination of Professor Ciuca as Secretary of the Malaria Commission. While all members would agree that the various secretaries of the Commission had worked hard and proved their competence, it was extremely valuable to have someone in the Secretariat who could devote his whole time to the work of the Commission, because the latter's studies had reached a very high stage of development.

Dr. JITTA pointed out that malaria was prevalent in the Dutch East Indies, and that much work had been done to fight the disease in those territories. He would ask the Chairman of the Malaria Commission and the Director of the Health Organisation to consider the possibility of extending the study tour in British India to the Dutch East Indies.

Dr. RAJCHMAN replied that the question of extending the tour to the Dutch East Indies was one of finance. It had been examined with great care both by the Health Section and by Colonel Graham, Colonel Christophers and Colonel James, who had considered whether it would be possible to shorten the tour in India, in order to make one month, or one month and a-half, available for the extension of the study. After the most careful consideration, the conclusion had been reached that it would be useless to extend the tour to the Dutch East Indies unless six weeks at least could be given to those territories. It had been found quite impossible to prolong the tour.

The question had first been raised by Dr. Schüffner, and, to its great regret, the Health Section had had to reply that it was impossible to curtail the visit to India, or to prolong the tour by a month or a month and a-half. If, however, by any extraordinary stroke of luck, the financial position improved by the end of the year, when the group would be in Bombay, and if the group were prepared to remain another six weeks in the East, the Section would do its best to facilitate the extension of the tour.

Dr. JITTA thanked Dr. Rajchman for his reply.

II. *Commission of Health Experts on Child Welfare.*

On the proposal of the PRESIDENT, it was decided to postpone the consideration of this chapter until the following Saturday, when Professor Léon Bernard and Professor Debré would be present.

III. *Leprosy Commission.*

Dr. RAJCHMAN observed that the Secretariat had received a first letter from Dr. Burnet in Venezuela, stating that his tour was very interesting and a little fatiguing, owing to the difficult communications. Dr. Burnet was now at Bogotá, and would probably leave for Ecuador at the end of the week.

Surgeon-General CUMMING said that, if the Medical Director would be good enough to give him information concerning Dr. Burnet's mission, he, as a Member of the Pan-American Bureau, might be able to facilitate Dr. Burnet's tour of the leprosy stations in Latin America.

Dr. RAJCHMAN pointed out that the mission of Dr. Burnet had been discussed in some detail at the previous session. He had gone to Latin America to obtain information upon the incidence of leprosy, upon the methods of treatment, and the methods of isolation, these being the three subjects included by the Leprosy Commission in its agenda at its first meeting in Paris. Dr. Burnet would, in the course of his work, naturally, have to consider at the same time the general sanitary position in the countries visited, but upon that question he would have no time to acquire anything except quite general impressions, which he would submit to the Health Committee in the following year.

Surgeon-General CUMMING said that he would be glad to take up the matter in private conversation with Dr. Rajchman.

Dr. TSURUMI asked whether it would not be possible for Dr. Burnet to extend his enquiry to Japan. Secondly, he wished to know whether the Leprosy Commission was to meet during the present session or not, since he had in his possession much valuable information concerning leprosy in Japan.

Dr. RAJCHMAN replied that it would be very interesting to contemplate the possibility of extending Dr. Burnet's tour to the Far East in 1930, but that was a matter for the decision of the Leprosy Commission. It would be a little difficult to convene a meeting of the Leprosy Commission in the absence of its Chairman, Dr. Chagas, and of Colonel Graham. Further, there was no material, for the moment, for the Commission to consider.

Dr. WINSLOW suggested it would be valuable if Dr. Burnet could get into touch with Dr. Huizenga, who was making an enquiry into leprosy in the Far East on behalf of the American Mission to Lepers.

SECOND MEETING.

Held on Friday, May 3rd, 1929, at 10.45 a.m.

President : Dr. Th. MADSEN.

The PRESIDENT welcomed Dr. Carrière and M. Tixier.

Dr. RAJCHMAN informed the Committee that he had received a letter from Dr. Raynaud, who expressed regret that his duties prevented him from participating in the work of the session.

418. Examination of the Report of the Medical Director (Continuation).

IV. *Permanent Commission on Standardisation of Sera, Serological Reactions and Biological Anti-Tetanic Serum.*

The PRESIDENT asked whether the new anti-tetanic unit, which had been officially adopted in England and Germany, had been adopted in other countries.

Dr. TSURUMI said that endeavours were now being made in Japan to give effect to the decisions of the Frankfort Conference. It would be difficult for him to give further explanations at the moment.

The PRESIDENT thought that the Health Administrations should be requested to use their best endeavours to introduce this international unit in the various countries, as had already been done in Germany and England.

Anatoxin.

The PRESIDENT asked for information on the situation in the United States with regard to standardisation.

Surgeon-General CUMMING replied that considerable efforts had been made towards standardisation, but that he could give no details at present.

Scarlet-fever Serum.

Dr. TSURUMI informed the Committee that a Japanese scientist had claimed to have succeeded recently in standardising scarlet-fever serum.

Surgeon-General CUMMING said that important work had been done in the United States of America on this subject. It was, however, considered that the problem of standardisation of scarlet-fever serum was not yet solved, and it was improbable that it would be solved in the near future.

Professor CANTACUZÈNE agreed with Surgeon-General Cumming. Before a standardisation of scarlet-fever serum could be contemplated, the specificity of that serum would have to be demonstrated, and much remained to be done in this direction. It was difficult to estimate the efficacy of such a serum in countries where scarlet fever occurred in a mild form — for instance, in the United States of America. The numerous experiments which had been made in Roumania in centres of hypertoxic scarlet-fever showed that so-called anti-scarlet-fever serum, although of assistance in forms of the disease of no more than ordinary gravity, produced no effect in the malignant forms; in this respect it was inferior to convalescents' serum. The etiological problem of scarlet-fever itself was far from being solved. It was probable that, in the development of this disease, a pathogenic agent other than the streptococcus was operative. It was therefore altogether premature to speak of a standardisation of scarlet-fever serum, and to do so would be to incur the danger of appearing officially to endorse, as it were, an idea which was obviously a vague one.

Standardisation of Biological Products.

Dr. CHODZKO drew attention to the subject of vitamins. He recalled how popular vitamins were at the present time. Their daily use might have become beneficial, had not one of the results of this popularity been that several specific products with vitamins as a basis had been placed on the market. Most of these industrial products could not be regarded as having any scientific basis.

All kinds of vitamin products were to be found on the market, for instance : (1) vitamin extracts mixed with flour, sugar or some other nutritive substances ; (2) vitamin extracts associated with certain mineral salts ; (3) vitamin extracts of varying purity and concentration ; (4) curative oils (containing vitamins A and D) ; (5) certain radiated food substances and chemical products.

Products of this kind should be placed under the supervision of the competent offices before being placed on the market.

Above all, restrictions should be placed on the misuse in trade of the term "vitaminised". Where the complete absence or insufficient content of vitamins in an industrial product was proved by analysis, the manufacturer should be required to discontinue the use of the term "vitaminised". Moreover, manufacturers should be compelled to state on the label the date of sale of radiated products, which lost their special qualities after a time.

The methods followed in England, the United States of America and France in estimating the content of vitamins in these products had proved efficacious.

The biochemical section of the State Hygiene College at Warsaw, directed by Professor Lelesz, had examined these methods and had published a brief guide in order to facilitate analyses of Polish vitaminised products. The same section had also taken steps to obtain legislative sanction for certain of these methods contained in the Polish pharmacopœia.

There were, moreover, certain other important questions which had been discussed but for which no final solution had been found, for instance :

(1) the correspondence between the results noted in the case of animals and those which would be obtained in man ;

(2) the determination of the daily doses to be given to animals in experiments of this kind ;

(3) the question whether it was justifiable to subject animals extremely sensitive to a specific under-nourishment in order to estimate the value of products intended for human consumption.

The research undertaken by the British Accessory Food Factors Committee with a view to determining the radiated ergosterol standard as an activity unit of vitamin D might help to facilitate the valuation of radiated industrial products.

All experimental methods should be based on thorough knowledge obtained from the latest scientific research, in order that the industrials who were prosecuted might be either acquitted or condemned. It might, therefore, easily be realised how indispensable it was that the adaptation of experiments on which new legislation was to be framed should be prudently directed.

Dr. Chodzko said that he would submit a draft resolution on this subject.

Dr. CARRIÈRE supported Dr. Chodzko's proposal. He thought that this question of vitaminised products was an important one. It was intended, in Switzerland, to submit radiated products to the Foodstuffs Supervisory Services. The question of the method of supervision which Dr. Chodzko had raised was, however, a somewhat delicate one, for the results obtained from animals could not be regarded as the sole basis. On the other hand, in view of the development at the present time in the production of vitaminised substances and the constant cases of fraud in connection with these foodstuffs, it was becoming absolutely indispensable to discover some method of control. Dr. Carrière wished to ask Dr. Chodzko to cover in his draft resolution not only vitamin D but all vitamins.

Dr. JITTA said that he would also support the draft resolution proposed by Dr. Chodzko. The question of the supervision of radiated food products was of importance to all countries, but was particularly important in his own country, where vitaminised breads, vitaminised chocolate, etc., were manufactured. It was known that vitamins ceased to be active after a certain time. It would be desirable to know, on the other hand, whether vitamins incorporated in foodstuffs by artificial means gave the same results as natural vitamins.

He asked Dr. Chodzko to take account in his resolution of the two aspects of the question — the health aspect with which the Health Committee was concerned, and the commercial aspect which, although it did not come exactly within the purview of the Committee, should not on that account be neglected, for there was at present considerable competition between foodstuffs which were vitaminised in varying degrees and other foodstuffs of the same kind.

Dr. TSURUMI also expressed approval of Dr. Chodzko's proposal.

The PRESIDENT recalled that the question of the standardisation of vitamins had already been studied by the Permanent Standardisation Commission. He pointed out that the main question, that of establishing an appropriate method of control, was not altogether an easy one. The question appeared in a somewhat different light to the Standardisation Commission, for the object of that Commission was to standardise the vitamins themselves.

V. *Joint Commission of Public Health and Health Insurance.*

Sub-Commission on Preventive Medicine.

Professor WINSLOW said that, since the report of the Sub-Commission on this question had not yet been submitted, he would give a brief statement on the study tour of the Sub-Commission in Central Europe. He wished to take this opportunity of expressing the satisfaction felt on all the participants in the tour and their gratitude for the hospitality shown to them in Germany and Austria. He also wished to say how greatly the members of the Sub-Commission had appreciated the arrangements made for them by Dr. Biraud and the members of the Health Organisation, who had provided for their comfort in every detail. At the end of the tour the Sub-Commission had adopted a

series of resolutions, which would be submitted to the Health Committee. The Sub-Commission, while recognising that conditions obtaining in Germany and Austria presented the greatest interest for most European countries, had considered that it would, nevertheless, be desirable to include in a future tour other countries, such as Great Britain and Denmark, the Kingdom of the Serbs, Croats and Slovenes and the Union of Soviet Socialist Republics, with a view to the study of relationships of another type between health insurance and public health. Professor Winslow added that a visit to Denmark would provide an opportunity for the study of rural hygiene in that country, as Dr. Chodzko had suggested.

Dr. CHODZKO, referring to paragraph 2 of document C.H./SH-AM/8(1), "The Training of Medical Practitioners in Preventive Medicine", drew attention to the terms "preventive medicine" and "social medicine" and noted that a compulsory training of students in preventive medicine ("médecine sociale") was recommended. He would like to know the exact meaning of the term "médecine sociale". This term was not synonymous with "social hygiene". He further thought that it would be necessary to combine two terms in the French text and to say "médecine et hygiène sociales". Similarly, Dr. Chodzko asked that, to the concluding words of the second paragraph, "in co-operation with institutions of preventive medicine" there should be added the words, "and with institutions of social hygiene", in order that it might be made clear that the Committee had not in mind merely organisations for sickness insurance.

He noted with pleasure that the Commission for the Teaching of Hygiene had been requested to draft a programme of instruction in preventive medicine ("médecine sociale"), and referred to the experiments already made in this connection at the State Hygiene College at Warsaw. To recommend that clinical instruction should have a bias in the direction of preventive medicine ("médecine sociale") was, however, to require a general modification of the programmes for the teaching of medicine. This was an important reform and one which would have to be approached with prudence. It was already being widely discussed in the German medical Press, and it would be desirable to stimulate public discussion of such an interesting problem. The reform in the teaching of medicine that had been effected two years previously in Poland had been insufficient and the decision to introduce this reform had, moreover, only been taken by the principals of the medical faculties. The German method, whereby the problems discussed in public enabled public opinion to express itself on the subject, seemed preferable to piecemeal reforms.

Sir George BUCHANAN, referring to the section relating to the training of medical practitioners in preventive medicine, thought that all his colleagues would accept the recommendations contained in the first paragraph of this section. He did not think, however, that the proposal of the Sub-Committee mentioned in the second paragraph could be regarded as judicious. The drafting at Geneva of a programme for the teaching of preventive medicine would be a dangerous instance of excessive centralisation. Such a programme would either merely consist in a series of generalisations and be of no practical use, or it would tend to stifle the spirit of individual initiative in teaching which had hitherto been the principal source of progress. It seemed preferable that the Health Committee should restrict its collaboration merely to the supplying of advice and general data.

He asked Dr. Rajchman to be good enough to make a statement with regard to the future work of the Sub-Committee on Preventive Medicine.

Professor OTTOLENGHI shared the doubts of his colleagues with regard to the term "training of medical practitioners in preventive medicine". He doubted whether there was any necessity for the Health Committee to take the initiative in drafting a programme of instruction in preventive medicine. Would it not be sufficient if the Committee were to restrict itself to recognising the necessity of such instruction? In his opinion, the question was one which came within the purview not so much of the Health Committee as of the Commission for the Teaching of Hygiene. The term "médecine sociale" was not very fortunate, and it would seem that a better definition was needed, for the subject was a very complicated one, certain aspects of which related to clinics, others to hygiene and others to insurance etc.; this would be realised if the newspaper articles and the more recent works on preventive medicine published in Germany were studied.

Professor Ottolenghi also asked for details regarding paragraph 3, "Public Health Equipment". Reference was there made to the need for creating special establishments, placing at the service of the community "every means of prevention, etc." Did this reference include establishments other than the hospitals, dispensaries and other similar institutions already existing in all countries with modern organisation, and, if so, what were these establishments? Most probably what the Commission really had in mind was an improvement of the health institutions, in order that each of these institutions might be able to give treatment, assistance and prophylaxy.

Professor CANTACUZÈNE associated himself with Professor Ottolenghi's point of view. The term "médecine sociale", which was now so commonplace, was far from having an exact meaning, and the scope of the term was very vague. The definition adopted in Germany, which restricted the term to problems in connection with health insurance, had, at any rate, the merit of being exact. The teaching of hygiene, as well as the different systems of health legislation, would gain greatly by an exact definition. The Commission on Education might perhaps be entrusted with the task of drawing up this definition.

With regard to the teaching of preventive medicine, Professor Cantacuzène agreed with Sir George Buchanan in thinking that the programmes of such teaching should vary in the different countries.

Dr. RAJCHMAN gave certain explanations with regard to the procedure. The results of the study undertaken by the Sub-Commission on Preventive Medicine would be submitted at its next session to the Joint Commission by which the Sub-Commission had been set up. It had been considered that a certain number of the facts that had been noted would interest the Health Committee, and those facts had therefore been submitted to it separately. There was no question of any attempt at Geneva to draft a programme of instruction in preventive medicine for the whole world; moreover, the Health Committee, which should come to a decision on this subject, would refer the question to the Commission on Education, which would in turn present suggestions.

With reference to the second proposal, that the Commission on Education should be requested to define the term "médecine sociale", Dr. Rajchman thought that this would be asking the Commission to undertake a Herculean task. The Sub-Commission on Preventive Medicine had met some months previously and had heard several statements, which had not helped to make the idea of "médecine sociale" any clearer.

The question of the reform of medical studies was obviously a burning one and was being much discussed. Certain Governments, and in particular the Greek Government, had realised the need of bringing about a reform in medical teaching. It was clear that a study of such a reform should be initiated.

In reply to the question relating to the future work of the Sub-Commission which had just completed its study tour, and whose report was awaited, Dr. Rajchman said that he did not think that this Sub-Commission would hold a further session in the present year, for financial reasons. He was convinced that Professor Winslow's observations would be taken into account when the programme of future study tours was being drawn up.

In reply to the observation relating to public health equipment, Dr. Rajchman explained that this question would be discussed by the Joint Commission, which would submit a report. There would, therefore, be no point in considering its details at present. It was intended that special establishments should be placed at the disposal of the public health services, but that these establishments should not be specified. The main point was to stress that it was indispensable, in the practice of preventive medicine, that the population should be enabled to benefit by the most recent scientific study and the progress of modern medical technique. The report of the Joint Commission would indicate all the details of the development of this idea.

VI. *Opium. Application of Articles 8 and 10 of the International Convention of February 19th, 1925.*

The PRESIDENT said that this question would be examined at the meeting on May 6th.

VII. *Commission on the Fumigation of Ships.*

Surgeon-General CUMMING said that he would circulate copies of a memorandum which he had prepared on this question and which contained his report, the correspondence with the authorities of various ports, an account of experiments made with various methods of fumigation, an account of the accidents which had occurred and a note on the literature of the question.

He proposed that the next session of the Commission should be held in Paris.

The PRESIDENT thanked Surgeon-General Cumming on behalf of the Committee for the important work which he had done on this subject.

VIII. *Commission of Experts on Syphilis and Cognate Subjects.*

Surgeon-General CUMMING read the following memorandum by the Washington Public Health Bureau on the organisation of the research in the United States of America into the question of syphilis:

"A great stimulus has been given to syphilis research by the organisation in New York City of a Committee on Research in Syphilis, Incorporated, in the early part of 1928. Representatives from the Public Health Service and from other organisations and institutions interested in syphilis research participated in the organisation of this Committee.

A minimum contribution of half-a-million dollars was pledged by a group of philanthropists over a period of five years. This has been supplemented recently by a fund of \$25,000 for special clinical studies. The gentlemen who have so generously made available funds for research in this important public health problem have indicated that they do not wish to be limited by national boundaries, but desire to make grants to the best qualified workers to be found without regard to where they may be located.

"At the beginning of the present year, the Public Health Service was asked to accept the direction and management of the research affairs of the Committee through Assistant Surgeon-General Parran. This method of co-operation on the part of the Government with a private organisation represents an experiment in the co-ordination of official and volunteer effort in this field. Such an arrangement would seem to be of mutual advantage to both agencies.

“ Grants have been made or voted by the Committee totalling \$65,000 for various aspects of syphilis research. The clinical studies which are being organised will be harmonised with the proposed international inquiry into the results of the treatment of syphilis under the auspices of the League of Nations.

“ The Committee on Research in Syphilis in the United States had planned a more detailed and exhaustive study among a small group of clinics in the United States embracing the same field as was proposed by the Health Organisation of the League. The directors of several of the leading clinics met with the Public Health Service on January 5th and 6th, 1929, to outline the scope of the American enquiry and to plan for co-operation with the League of Nations. The clinics which are participating in this study are: Western Reserve University, Dr. N. H. COLE; Johns Hopkins University, Dr. J. Earle MOORE; Mayo Clinic, Dr. Paul A. O'LEARY; University of Pennsylvania, Dr. John H. STOKES; and the University of Michigan, Dr. U. J. WILE. A report of the Washington Conference was forwarded to the League on January 12th. At this time the donors of the Committee on Research in Syphilis indicated a primary interest in laboratory as contrasted with clinical problems and were unwilling to support any extensive clinical studies. It appeared likely, therefore, that the more exhaustive American study must be omitted, but the directors of clinics were willing to co-operate with the Public Health Service and the League if the cost of the labour involved in transcribing case records could be furnished by the League (estimated at \$5,000 for 10,000 records).

“ At about this time the Committee on Research in Syphilis was re-organised, and Assistant Surgeon-General Parran of the Public Health Service was given the management of the research affairs of the Committee.

“ For a time it appeared that no clinical studies could be conducted, in the absence of American support and if funds from the League, sufficient to bear the cost of assembling the data, were not forthcoming. One of the clinic directors (Dr. O'Leary), however, succeeded in securing a special fund for the execution of the co-operative clinical programme.

“ The following is the present stage of the syphilis enquiry in this country :

“ 1. Five of the leading clinics in this country are to co-operate in a retrospective enquiry of the results of the treatment of syphilis, starting with early syphilis and later extending the enquiry to include other phases of the disease.

“ 2. The directors of clinics are of the opinion that the League of Nations blank form is not sufficiently detailed to supply them with the information they deem essential to such a study in the United States of America.

“ 3. The cost of the American studies and of other studies of clinical problems in this group of clinics is being borne by a special fund of \$25,000 for the first year, with the prospect of continued support in succeeding years, and is being administered under the chairmanship of Dr. Parran.

“ 4. If the clinics participate with the League of Nations on an international scale, it will be necessary to transcribe the records from the more detailed American form to the condensed League form.

“ 5. The cost of such transcription will approximate 20 cents per case record, which cost will be over and above the cost to the clinics of making the initial abstract and record of the case on the American form.

“ 6. The securing of the special grant for co-operative clinical studies will make possible, however, the reduction of the estimate of \$5,000 previously made (letter of January 12th) as the amount necessary from the League of Nations to ensure American participation.

“ 7. The \$2,000 originally estimated from the League will be sufficient to reimburse the clinics for the added cost of co-operation with the League. ”

Sir George BUCHANAN thought that the scope of the research must depend upon the available funds. The number of cases and individual records to be examined had to be made proportionate to these funds, and consequently everything depended on a good selection of material at the start. It would be undesirable to collect an excess of data, blocks of which had to remain unused on account of the lack of funds for their analysis. He thought, therefore, that any resolution now taken on this subject should be couched in general terms.

He added that it should be borne in mind that this was a special enquiry for the League's purposes, and that individual Governments could not be expected to undertake any great expenditure as a contribution to this work of analysis.

Dr. RAJCHMAN gave a chronological account of the successive steps in the enquiry. The experts directed by the Health Committee to make a systematic enquiry into the results obtained by the various methods of treatment of syphilis during the preceding ten years, after holding several meetings and after making a very painstaking preliminary study, had come to the conclusion that the enquiry should be directed according to a pre-arranged plan which they outlined. They had considered that the best method would be the experimental one, extending over a period of five years, during which it would be possible to follow the course of individual cases of treatment. The Committee had, however, requested them to examine the possibility of undertaking a retrospective study of the results obtained in the treatment of syphilis during the preceding ten years. The experts had come to the conclusion that such retrospective study might be undertaken, provided that

- (1) application were made only to the best clinics in the world ;
- (2) that the number of cases studied was limited ;
- (3) that the number of cases studied should, nevertheless, be sufficient to enable reliable conclusions to be drawn.

After discussion, the experts gave it as their opinion that sixty thousand would be sufficient, and that the study should be restricted at the outset to Germany, Great Britain and the United States, and should then be extended to France. The study had been begun in Germany and had related to 10,000 cases. It had also been begun in Great Britain, and its organisation in France had made good progress. In America, a difficulty had been encountered. Dr. Stokes, Chairman of the Special Committee, who had approved the plan of the enquiry, had resigned his post. It had long been wondered who was the proper person to receive correspondence concerning this enquiry. The news that the Chairmanship of the Committee had been conferred on Dr. Parran had been welcomed, but Dr. Parran's illness had occasioned a further interregnum. This was the explanation of the relinquishment by the Health Organisation of its customary procedure of always corresponding with the Surgeon-General.

A financial difficulty had also arisen. It had been difficult for the experts to estimate the cost of the enquiry in advance. A first estimate of 10,000 dollars had been afterwards found inadequate, the cost amounting to twice that sum. It had therefore been necessary to make some changes in the programme. Finally, Colonel Harrison had made a proposal which considerably restricted the field of the enquiry. This suggestion had necessitated a further consultation of the experts, but it had been accepted, and it had been possible for the enquiry to begin.

Dr. Rajchman pointed out that financial assistance was not to be expected from Governments, but rather from the private organisations. Dr. Jadassohn, Chairman of the group of experts which was to proceed to the United States, might arrange to meet Dr. Stokes and Dr. Parran and profit by their experience of the subject.

Surgeon-General CUMMING thought that the question was a very important one. If it were possible to complete the organisation of the enquiry in the space of two or three years, it might be considered that a valuable result had been obtained.

THIRD MEETING.

Held on Saturday, May 4th, 1929, at 10 a.m.

President : Dr. Th. MADSEN.

419. Examination of the Report of the Medical Director (Continued).

II. Commission of Health Experts on Child Welfare (Continuation).

Professor Debré, Paris, came to the table of the Committee.

Professor DEBRÉ submitted the report of the Commission (Annex 3) and made the following statement :

On the proposal of the Netherlands delegation, the sixth Assembly adopted the following resolution :

“ The Assembly :

“ Considering that the Council, in accordance with a resolution of the fifth Assembly, invited the Health Organisation of the League to consider any measures within its competence which it would be desirable and practicable to undertake for the protection of children from the hygienic point of view ; and

“ Convinced of the importance of this form of child welfare work :

“ Decides to request the Health Organisation to investigate infant mortality from the point of view of feeding in infancy ;

“ Requests the Council to instruct the Health Committee to undertake this investigation and to enquire into the advisability of constituting a sub-committee which would be able to call upon the co-operation of specialists in various countries in questions concerning child hygiene and which would be requested to initiate the investigation of this and of any other questions connected with child hygiene the consideration of which might be deemed expedient. ”

To give effect to this resolution, the Health Committee, during its sixth session, instructed the Medical Director to ask a small number of experts or public health administrations to indicate the way in which they considered the Health Organisation could best undertake the international enquiry.

The following experts were asked to co-operate with the Health Committee :

Dame Janet CAMPBELL (Great Britain).
Professor Arthur COLLETT (Norway).
Professor Robert DEBRÉ (France).
Professor GINI (Italy).
Professor GORTER (Netherlands).
Professor PIRQUET (Austria).
Professor ROTT (Germany).

During the work of this Commission, one of the most distinguished of its members, Professor Pirquet, died suddenly, to its very great regret. Professor Pirquet's clarity of thought, his universally acknowledged competence and his passionate devotion to public welfare were of the highest value to the Commission. His place was taken by Professor Nobel.

The chair of the Commission was taken by Dame Janet Campbell. The Commission greatly appreciated the part taken in its work by Dr. T. Clark, of the United States, although his country did not participate in the enquiries which the Commission set on foot.

The first meeting was held at Geneva on September 27th, 28th and 29th, 1926, and the Commission first studied the possibility of carrying out a comparative enquiry into infant mortality in Europe and in other countries of the world, both in districts where infant mortality is high and in districts where it is low, the enquiry to deal, in particular, with certain determined causes, such as the social and health conditions of the people, the method of feeding and the infant welfare organisations in the districts.

At that first meeting, the Commission immediately realised that it would be of no interest to renew statistical enquiries into infant mortality on the lines of those which had been carried out on numerous previous occasions. It was struck by an indication supplied by Professor Gorter, who recalled that in 1908 every child born at The Hague was examined over a period of twelve months, that it had been visited by nurses every month, and that it had thus been possible to obtain a very accurate survey of the method of feeding, of the general conditions of life and the causes of death. This system had made it possible to carry out a very remarkable enquiry, such as could never have been achieved by mere statistical data. The result of that enquiry had, in fact, made it possible to discover what efforts should be made in order to reduce infant mortality at The Hague.

With this example before it, the Commission took the view that it should carry out, not only a statistical enquiry, but also a critical clinical and medical enquiry, in order to discover why a certain number of infants died each year in any particular country, district or town.

To achieve this object, the Commission decided to choose in the different countries represented upon it a number of districts, both rural and urban, some with a low and others with a high mortality. Each country was, in principle, to study two rural and two urban districts, each district representing a population of about 100,000.

The most important point was to establish uniformity of method, in order that, technically, the different investigations might be as closely identical as possible, and that consequently the results might be fully comparable, one of the main objects being to have a detailed and minute enquiry into each case of death so as to ascertain whether death had been avoidable and in what manner it could have been avoided.

During the preliminary discussion, Professor Rott pointed out that, to be complete, the enquiry would have, in fact, to cover the death of children born alive throughout the whole period of the enquiry. Only such an investigation would make it possible to determine the index of risk; that is to say, the figure showing proportionately the chances of death due to the various demographic and social factors, as well as to the various methods of feeding.

The Commission took the view that this enquiry, concerning not only dead children but also living children in the districts investigated, would be extremely interesting and useful, but the difficulties of execution and the high cost involved prevented the Commission from undertaking it except in Germany and in one small French district, Vanves. The results of the enquiry into living children have not yet been collected.

Every member of the Commission, therefore, carried out a preliminary investigation into the infant-mortality statistics in his own country, and then chose the districts which appeared to him most likely to furnish interesting results and in which the enquiry could be carried on in the best conditions. The districts chosen by the experts were discussed at a

subsequent plenary meeting. Changes were made as a result of certain criticisms which were exchanged or because in certain sectors, a Paris arrondissement and an English county, the co-operation of the medical practitioners appeared difficult to obtain.

In order to achieve a uniform method, to gauge the value of the enquiry, to measure its difficulties and to forecast the possibility of success, the members conducted a sort of trial investigation in several countries, but without registering the results, and only with a view to preparing the actual enquiry.

The interest and value of the enquiry immediately became apparent. An appreciable difference was found between the diagnoses made as a result of the close investigations of the experts and those furnished by the official statistics. The statistics often gave only a symptom, an important or terminal morbid trouble rather than the disease which constituted the actual cause of death. The experts realised that they could obtain definite information from the doctors and health administrations by means of close questioning and by carrying out extremely detailed enquiries. The difficulties encountered were very great. They resulted, in the first place, from a certain lack of skill on the part of some of the doctors in so far as infant pathology was concerned, hence the uncertainty, obscurity and inadequacy of many diagnoses. In many cases also the doctor had been called in too late and had only arrived when the infant was on the point of death or dead.

The investigators had been well aware that their task was very difficult and that they were trying to solve one of the hardest problems in medicine — the cause of the often swift death of very young children. This is all the more true when they were also investigating the cause of death of still-born children. Great moral difficulties were also encountered, for the investigators had to obtain their information from parents who had just lost a child, often a very delicate task, as may well be imagined.

Despite everything, however, the Commission decided that the enquiry could be carried out with sufficient chances of success provided :

First, that its principles were strictly defined,

Second, that the methods of enquiry were settled in detail,

Third, that an adequate number of more or less specialised investigators were employed in each country ; and

Fourth, that all results were communicated by each investigator to his colleagues during meetings organised in the course of the enquiry, so that individual experience benefited all.

The principles can be stated in a few words.

First, the investigators were to study in detail, in the districts chosen, every case of death whether of a child born alive or of a still-born child. Each case was to be interpreted and studied as a single unit. In each case, as accurate a diagnosis as was possible of the medical cause of death was to be made, by collecting all the clinical, epidemiological, serological and, if possible, post-mortem information.

It was further realised that the enquiry would be incomplete if it did not also cover the cause of the disease which had killed the infant, which meant the examination of the moral and social factors resulting in death in infancy.

The following example will suffice to show the manner in which the experts had thought the enquiry should be conducted. An infant died of digestive troubles when in the care of a nurse to whom it had been sent by its mother, who was a working-woman in a neighbouring town. The death of the child had a pathological cause, namely, digestive troubles ; a social cause, namely, the material situation of the mother ; and a health cause, the lack of care shown by the nurse. For the enquiry to be of value, all these causes must be detected and placed in their proper relation.

Second, as to the methods of enquiry, the Commission drew up detailed questionnaires covering medical and social information of the most diverse kinds. The investigators received instructions commenting and explaining these questionnaires. The Commission drew up a list of medical diagnoses established in a logical order to correspond with the present stage of medical knowledge concerning infant pathology. Similar work was done in order to classify the causes of still-birth.

In the third place, investigators were chosen and trained in each country. They were familiarised with the principles adopted and their action was co-ordinated in each country by the expert member of the Commission, who directed the enquiry. The efforts of the investigators were directed, on one hand, towards the revision of the diagnoses furnished by the doctors in attendance, this revision being carried out by skilled children's doctors, attached as investigators to each of the experts. A large number of diagnoses was elucidated or completed. A kind of revision of the diagnoses of death furnished to the investigators was thus carried out in each country, in accordance with the most modern ideas. The health and social enquiries were co-ordinated in the same way as the medical.

In the fourth place, the results obtained had in the end to be co-ordinated. That task was carried out at successive meetings at Paris, Vienna, London, and Rome, during which each investigator laid his results before the Commission ; all the investigators derived great benefit from the observations of their colleagues. This successful collaboration owed much to the journeys made by the investigators in the districts chosen in foreign countries, to the excellent system of liaison established between them all, thanks to the visits and reports of Professor Olsen, who was instructed by the Secretariat to co-operate with the Commission, as well as to the very valuable advice offered by the Medical Director. The credits placed at the disposal of the Commission made it possible to fulfil the task entrusted to it by the Health Committee.

Thus it was possible, in twenty-six districts in Europe — urban or rural — to carry out, on absolutely uniform lines, an enquiry covering all children under one year of age who died during a period of twelve months. The same questionnaire, the same instructions, the same types of diagnoses were used throughout, while there was the closest possible cohesion between principles and doctrine, the value rather than the number of the results obtained being the first consideration, in order to discover, in each class of districts, the number of avoidable deaths and the ways in which they could be avoided.

The following districts were chosen :

Great Britain :

Rural districts : Oxfordshire.
 Staffordshire.
Urban districts : Croydon.
 Sunderland.

Norway :

Rural district : Hedmark.
Urban districts : Oslo, West and East.

The Netherlands :

Rural districts : Emmen.
 Hoensbroek.
Urban districts : Leyden.
 Dordrecht.
 Breda.
 Maestricht.

France :

Rural districts : Lochois and Chinonais, in Touraine.
 Pays de Caux and Pays de Bray, in Normandy.
Urban districts : Plaisance (district of Paris).
 Small town of Vanves in the Paris suburbs.

Germany :

Rural districts : Lippe.
 Mecklenburg-Strelitz.
Urban districts : Augsburg.
 Cassel.

Austria :

Rural districts : Gmunden.
 Schärding and Engelhortszell.
Urban districts : Vienna Fifth, Seventh and Eighth Wards (First District)
 and Tenth Ward (Second District).

Professor Debré then briefly summarised the results in each country. He also laid on the table of the Commission the full dossiers regarding the enquiry.

During the period of twelve months the deaths of 7,503 infants had been investigated, of which 5,147 had been live births and 2,356 still-births.

Norway.

In the urban district of Oslo, the birth rate had greatly diminished since 1900, having fallen from 35 per thousand to 9.68 in 1926. The infant death rate had not greatly diminished since 1900. At the moment, there was a good deal of unemployment, and the general housing conditions were not very satisfactory. Sickness insurance had existed in the country since 1909.

In West Oslo, the birth rate was 7 per thousand, and the mortality the lowest. Enquiry had been conducted into 21 infant deaths, of which 12 had been premature. Diseases of the respiratory organs were ranked first amongst the causes of these deaths; next came obstetrical traumatism and congenital malformation. It should be noted that no death had been caused by digestive troubles or any specific infectious diseases.

In East Oslo, 41 out of 1,653 children had been born dead; only 1 death had been due to digestive troubles. Respiratory diseases had caused 23 deaths.

The district of Hedmark was inhabited by peasants still rather superstitious despite the high level of education, which was much appreciated. In this district, too, unemployment had been rife since the autumn of 1921. The general standard of living was fairly high, but the consumption of coffee had become very great, and was an abuse. The birth rate had risen between 1916 and 1920, but had fallen since, and was at the moment 20.7 per thousand. Infant death rate had declined. There had been investigated 140 infant deaths, of which a very small proportion only had not been breast-fed, as breast-feeding was general throughout the district. In 52 of the cases, the cause of death had not been discovered. Digestive troubles had accounted for only 7; on the other hand, respiratory troubles had carried off 42.

Great Britain.

The urban district of Sunderland was inhabited almost entirely by the working classes. Unemployment was very heavy and the housing conditions especially bad. Despite this, the death rate was average. The enquiry had covered 476 cases, of which 144 had been cases of dead-birth. In 349 of the cases, the housing conditions had been bad. Out of 157 deaths, 88 had been due to respiratory diseases. Syphilis had accounted for 47.

Croydon, which had been chosen for its contrast with Sunderland, showed a birth rate of 15.3 per thousand and an infant death rate of 5 per cent. The general conditions of life were fairly good. The enquiry had covered 275 cases, of which 109 had been born dead. Thirty-five deaths had been due to respiratory diseases.

Of the rural districts examined, Staffordshire had a high death rate, partly owing to the industrial nature of the country. There had been investigated 180 deaths, of which 67 were still-births. Forty-four deaths had been due to respiratory diseases.

In Oxfordshire, infant mortality was 5.5 per thousand and general mortality 11.6. There had been examined 156 cases, of which 65 had been born dead. Twenty-four had been due to respiratory diseases.

Austria.

In the rural district of Schärding, the population was entirely peasant; of the children born, 4 per cent were born dead. Infant mortality in Gmunden had been 11.8 per cent in 1927, and in Schärding 20.4 per cent. More deaths had been due in these districts to digestive troubles than to other causes. Respiratory diseases and obstetrical traumatism came next. In general, in those districts the health organisation was not very good.

In regard to the urban districts of Austria, Vienna had been chosen and the difference between the Tenth Ward of the city, where housing conditions were very bad, and the Sixth, Seventh and Eighth Wards was most striking. The Tenth Ward possessed the greatest infant mortality, the other three wards the lowest. Death was mainly due to respiratory diseases (40 per cent). Next came acute specific infectious diseases (9.5 per cent). Of the infants, 32.2 per cent had been born prematurely. In general, it might be said that bad housing conditions and lack of medical care and nursing played a large part in the causes of the infant mortality of Vienna.

The Netherlands.

The enquiry in the Netherlands had been very carefully carried out. At Dorcredht, an urban district, and Leyden, also an urban district, the number of cases enquired into had been 39 and 50 respectively. A remarkable fact was the absence of digestive trouble as a cause of death. The most important cause was diseases of the respiratory organs. Of the total number of deaths in the two towns, 36 per cent had been due to infectious diseases, and in 12, whooping-cough and measles had been the predisposing cause. In general, it could be concluded that nearly all deaths, except those occurring in the first week of life, had been due to infectious diseases, in which whooping-cough and influenza had played the most important part. In Breda, the number of cases enquired into had been 828, of which 50 had died. Infectious diseases accounted for 20. In Maastricht, there had been 89 deaths out of 1,411 children born. The birth rate was 23.6 per thousand. Infectious diseases had accounted for 21.3 per cent.

In the rural districts, Emmen was the poorest. The inhabitants were mainly peat-cutters. Housing conditions were bad. The birth rate was 31.5 per thousand and the infant mortality was 6.4. The main causes of death had been infectious diseases, mainly of the respiratory organs. Though the data in regard to dead-birth had been very insufficient, both in the rural and urban districts, diagnoses of the cases of children dying in the first week of life had been very accurate.

Germany.

In the urban district of Augsburg, the enquiry had concerned 334 deaths, 75 of which were still-births. The social services were well organised. Death had been due in 25 cases to digestive troubles; whooping-cough had accounted for 18.

In Cassel, enquiry had been carried out into 330 cases of death, of which 116 were still-births. Digestive troubles had been the greatest cause of death.

Of the rural districts, in Mecklenburg-Strelitz enquiry had been carried out into 358 deaths, of which 99 were still-births. Digestive troubles had accounted for 44 deaths.

In the State of Lippe, the enquiry had concerned 277 deaths, of which 95 were still-births. Of the total mortality, 24 per cent was due to respiratory diseases.

France.

In the urban district of Plaisance, the infant mortality was 8.2 per cent. Housing conditions were deplorable. The population was poor but not needy, and the general conditions of the food supply good. There had been investigated 150 cases of death of which 26 had been born dead. Digestive troubles had accounted for 23 deaths, acute infectious diseases for 21, and diseases of the respiratory organs for 19. It had been noted that the main cause of death (digestive troubles) was due to the small amount of breast-feeding, and the second cause of death (infectious diseases) mainly to bad housing conditions (over-crowding).

Of the rural districts, the Pays de Caux and the Pays de Bray were inhabited by a Norman population, very hard-working and independent. They were, however, superstitious and prejudiced, as was seen by the number of unskilled women (*matrones*) who were called in in the place of doctors or midwives. The food of the population was generally good, and their circumstances of life fairly easy. They were, however, of an avaricious temperament, and breast-feeding was rare, the women refusing to interrupt their work in fields or dairy in order to suckle and look after their infants. The enquiry had concerned 652 cases, of which 492 had been born alive and 160 born dead. The proportion of avoidable diseases had been found to be 36 per cent in the Pays de Bray and 26 per cent in the Pays de Caux, of which digestive troubles had accounted for 91, infectious diseases for 71, respiratory diseases for 42, tuberculosis for 33 and syphilis for 27.

In the rural district of Indre and Loire, on the other hand, infant mortality had been found to be low. The inhabitants were intelligent and well-educated. Houses and food were good; poverty was extremely rare. The total number of deaths investigated had been 66. Infectious diseases, including whooping-cough, tuberculosis and syphilis, had accounted for 13. The number of children born dead had been 31. The comparatively high proportion of deaths from digestive troubles (6.6 per cent) was to be noted.

Professor Debré then turned to the conclusions of the enquiry. It would be seen at once that four tables had been prepared, classifying the districts according to their infant mortality rates. In the rural districts, the lowest infant mortality, varying from 3 to 4.9 per cent, had been found in the district of Hedmark (Norway) and Oxfordshire (England); the highest, of 10 per cent and over, in Hoensbroek (Netherlands), Gmunden (Austria), Strelitz (Germany), and Schárding (Austria).

Of the urban districts, West Oslo (Norway), Leyden and Dordrecht (Netherlands), and the Sixth, Seventh and Eighth Wards of Vienna had the lowest mortality — 3 to 4.9 per cent. The highest infant mortality, 10 per cent and over, was found in the Tenth Ward in Vienna.

The Commission had examined the most important problems in each of these classes. It had noted that, in the rural districts with a low infant mortality, about two-thirds of the deaths had been caused by premature birth, still-birth or obstetrical traumatism. Next came respiratory affections, and only a few deaths from digestive disturbances were to be observed. In districts with a moderate infant mortality, the same phenomenon had been discovered, with the exception that deaths from digestive disturbances were of greater importance.

In rural districts with a high and very high infant mortality, the main causes of death had been digestive disturbances and acute specific infectious diseases. The same conclusions held true for the urban districts.

The Commission had closely considered the causes of infant mortality as shown by the enquiry. Its conclusions were contained on pages 4 and 5 of the report, under five headings. It had noted that variations in the birth rate did not appear to influence the infant mortality rates, some districts with a low mortality having low birth rates and others high birth rates.

While the data which it had collected on housing and social conditions had furnished information of value, it had not been found possible to compare such information owing to the many complicated factors involved. It desired that this part of the problem should be further studied.

Professor Debré then passed to the recommendations of the Commission, which were set out on pages 5, 6 and 7 of the report. It had laid special stress on medical research owing to the fact that the causes of prematurity and still-birth were still very obscure. The practical suggestions which it had recommended were the medical supervision of pregnant women, social and legislative measures for pregnant women, special measures to be taken during confinement, and for the prevention of death during the first days of life. The Commission also recommended a continuous campaign against respiratory diseases and acute specific infectious diseases, and the adoption of special measures against digestive disturbances. The general measures which it would recommend were the education of the public in hygiene, the education of physicians and midwives in hygiene, and the supervision of infancy by public health nurses.

In view of the results secured by the enquiry, the Commission had recommended that the health administrations of the various countries should carry on studies of a similar character to serve as a basis for the establishment and application of preventive measures. On account of the interest aroused, the Commission had also recommended that the investigators should furnish periodical information on the progress achieved in the various districts.

In conclusion, Professor Debré emphasised the great interest which the enquiry had aroused, especially in teaching and municipal circles. He urged that the conclusions of the enquiry should be made as widely known as possible.

The PRESIDENT congratulated the experts and Professor Debré on the work they had accomplished and was sure that all the members would disagree with the Rapporteur's statement that the results obtained were not considerable. The report on the work of the Commission would most certainly appeal to administrators and all others concerned in the health of infants.

Sir George BUCHANAN associated himself cordially with what the President had said as to the value of Professor Debré's statement. All members of the Committee must deeply regret the loss to medicine and to the science of pediatrics occasioned by the death of Professor Pirquet.

The great value of the report of the Experts' Commission was that it would form, as it were, an activator for fresh enquiries in all countries, and in particular would stimulate national activities in a direction in which much still remained to be done by administrations and voluntary agencies.

The report indicated that the same primary causes of disease were found operating, though in different degrees, in good districts and in bad districts in all the countries visited. The practical lesson of the report was simple : one should, in each area under examination, ascertain which of these different causes was specially operative and then take national or local action on the basis of the information obtained. If the conclusions of the report contained nothing that was very new, the report itself furnished a new stimulus to the application of those conclusions which were universal.

He had little difficulty in accepting most of the conclusions of the experts. He felt, however, some doubt as to the general applicability of the measure recommended in paragraph (c) of Section V, referring to the provision for pregnant women of legislation prescribing compulsory absence from work, a subsistence allowance before and after confinement and an allowance for breast-feeding. It was true that these recommendations were already contained in the Washington Convention, but the question whether it was desirable to make rules of this sort applicable to all countries by means of an international convention had not yet been decided. In Great Britain, for instance, the Convention had not been ratified, and it might be held that the question of a subsistence allowance before and after confinement was a national matter and raised political questions outside the scope of the expert enquiry of the Health Organisation.

In conclusion, he asked also for further information concerning the action to be taken under Recommendation No. II.

Dr. JITTA thanked Professor Debré for his very clear and interesting statement. While, as Professor Debré had said, it was true that the enquiry had been set on foot as a result of a proposal made by the Netherlands delegation, there had been a general feeling in the air that such an enquiry was necessary and there could be no doubt that in any case the Health Committee would have taken the initiative of instituting the enquiry on its own account. The valuable results obtained as a consequence of the Assembly's resolution were shown in the report of the work of the Commission.

Professor Debré had referred to the enquiry into infant mortality held at The Hague ten years previously. Dr. Jitta might be excused on the score of national pride if he said that he too considered that enquiry a masterpiece.

As to Professor Debré's statement that infant mortality in the Netherlands was a little lower than in Denmark, Dr. Jitta would point out that there were certain provinces in Southern Netherlands where the infant death rate was higher than elsewhere. As Professor Debré had said, it was paradoxical that in Emmen, which was a black spot in the health bill of the Netherlands, infant mortality, in spite of the bad conditions prevailing there, should be lower than in many other districts. The reason for this was probably the fact that, owing to poverty, the population were unable to purchase milk for the feeding of infants and had to rely on the natural method of breast-feeding. The great assistance rendered by the wives of doctors in the Netherlands in the work done there was due to the influence of Professor Gorter, of Leyden.

Dr. Jitta noted with satisfaction the proposal that the report should be circulated as widely as possible, with a view to the general study and appreciation of the results obtained and in order that it might serve as a guide to all concerned in infant hygiene.

In conclusion, he urged that the Commission of Experts should continue its studies on the prevention of whooping-cough, measles and rickets, particularly the latter disease, which had been shown to be of the greatest social importance.

Dr. CARRIÈRE associated himself with the President and Sir George Buchanan and wished to dwell more particularly on the very admirable personal work which had been done by the Rapporteur, Professor Debré, who had presented a synthetic analysis of the causes of infant mortality such as the Health Committee had never yet had before it. While it was true that the report did not contain a great deal that was new, it must be remembered that it had never been supposed that the experts would discover any causes which were unknown hitherto. The main value of the report was the presentation of a synthetic analysis of the causes of infant mortality.

There had been a very marked decline in infant mortality in Switzerland, amounting to as much as 50 per cent in the last twenty years. This improvement had occurred mostly in the death rate of children in their first year. The position, on the other hand, with regard to still-births and to deaths in the first four days of life was stationary. The causes of this fact were mysterious, but the conditions previous to confinement had no doubt something to do with it. Much remained to be done in this field. While women workers in factories were protected by legislation, nothing had yet been done for the women who worked in the fields and whose work was certainly no less hard. This was a point to which the attention of medical men and administrators alike should be drawn.

Dr. Carrière would press the proposal that the report should be distributed as widely as possible. He himself had made a private enquiry in Switzerland in interested circles and had encountered a mass of indifference which the wide distribution of the report would do much to overcome.

Dr. TSURUMI offered his sincere congratulations to Professor Debré. The results shown in the report were of particular interest and value to Japan, where infant mortality at present

was very high, although the population was increasing fairly rapidly. He had been particularly interested in the question of immunisation against scarlet fever and whooping-cough. If the experts were to continue their study of that question, he would be glad to place at Professor Debré's disposal certain scientific information on the subject which had been recently collected in Japan.

Professor Ricardo JORGE paid a tribute to the Commission of Experts for the results it had obtained and to Professor Debré for his admirable survey. He would point out, however, that there were exceptions to the general statement, made on page 4 of the report, that whooping-cough was a more important cause of death than measles. In Portugal, measles was far more dangerous than whooping-cough and amounted to a veritable scourge. Whooping-cough, on the other hand, occurred only in a benignant form. In the city of Oporto, where Professor Jorge had been medical officer of health, measles occurred in three-yearly cycles; the recurrence of the disease might be regarded almost as a Malthusian operation, correcting over-population. The expert's suggestion for isolation of measles cases would be practically impossible to carry out in the rural districts, since, as soon as a child caught measles, the usual practice was for the other children to be put in contact with it.

Professor CANTACUZÈNE had listened with very great interest to Professor Debré's statement. The most illuminating and the most instructive point in Professor Debré's report was that dealing with the classification of the causes of death and their regular super-imposition as the scale in the death rate rose. That was a fact which had been admirably brought out by the Rapporteur. He urged that the enquiry should not be left in its present stage, but that it should be widely extended. The greatest possible benefit would be derived for the development of theoretical and practical knowledge of questions of infant pathology. It would be desirable for the enquiry to be extended to the countries in South-Eastern Europe, where the death rate of young children was extremely high. This, for instance, was the case in Roumania. The causes of death among children of less than one year particularly in the country, were very little known in Roumania, and it was extremely difficult to obtain even approximately accurate statistical data on the subject. An enquiry into the causes of infant mortality in the countries of South-Eastern Europe would not fail to arouse the local administrations to the inadequacy of their present information. It would also act as a powerful stimulus to them and would make them appreciate the desirability of making good a regrettable omission as soon as possible.

Dr. CHODZKO associated himself with previous speakers in their appreciation of the valuable report. There were a few points on which he wished to comment.

He wished to ask the Rapporteur whether he did not think that syphilis played a certain part in deaths occurring before and in confinement. In this connection, Dr. Chodzko would suggest that, among the measures to be taken for the supervision of mothers, a more explicit recommendation should be inserted as to the desirability of taking the Wassermann test; that measure was now in force in certain countries. It had been discussed by the Health Committee some time previously and many Governments had endeavoured to introduce it. It would perhaps be desirable, therefore, that the Health Committee should take the opportunity presented by the present report to encourage its introduction.

Certain of the recommendations appeared to be drafted in somewhat too general terms. For instance, the report recommended a campaign against the employment of untrained midwives (*matrones*), but failed to lay down any precise measures for this purpose. That was a point of particular importance for many countries. Among the measures during confinement, again, it was recommended that access to maternity hospitals should be facilitated for parturient women. While Dr. Chodzko had nothing against maternity hospitals, he would remind the Committee that, in the course of the enquiry made by Dr. Kinloch at Aberdeen into the causes of the puerperal death rate, it had been ascertained that puerperal mortality amounted, speaking generally, to 2.8 per thousand in cases attended by midwives, to 6.9 per thousand, in cases attended by doctors in the patients' homes, and 14.9 per thousand in cases at maternity hospitals. That was a very significant figure, the responsibility for which was ascribed by the investigation to infection (*Lancet*, January 12th, 1929). Nevertheless, it remained true that there was a great difference in the death rate among mothers in maternity hospitals and mothers confined in their own homes, so that, if access to maternity hospitals were to be recommended, it would also be essential to recommend a very high degree of security from the hygienic point of view in those hospitals.

The maternity hospitals varied enormously. Some were veritable slaughter-houses. Would it be possible to guarantee the safety of mothers in small maternity hospitals the establishment of which in rural districts was recommended? Such hospitals would be very costly and the recommendation would be almost impracticable in existing circumstances. What, then, was the reason for that recommendation? Had sufficient experience yet been obtained in this field? The Health Committee would require more information concerning these hospitals, especially as to the way in which they worked, before it could send forward such a provision, which appeared to Dr. Chodzko to be particularly hazardous. He would therefore urge that the passage in the report dealing with this question should be drafted much less precisely. On the other hand, the recommendations dealing with the prevention of cross infection, with the supervision of infants gathered in hospitals, nursing homes, etc., should be drafted in more definite terms. The mortality in some crèches reached as high as 50 or 60 per cent.

Dr. Chodzko was convinced that the most effective measure was that mentioned on page 7 of the report concerning the provision of allowances for pregnant women, although, as Sir

George Buchanan had rightly stated, there were certain obstacles to the carrying out of this recommendation.

As to the questionnaires, it was regrettable that they contained no reference to nationality. That was a very important matter from the point of view of the death rate, as had been shown from the enquiries undertaken in the United States of America, where it had been seen that the infant death rate among the populations of different nationalities residing in the same towns varied enormously.

In conclusion, Dr. Chodzko joined in the proposal for the continuation of the enquiry and would be glad if it could be extended to Poland.

Dr. LUTRARIO said that he had read the report with the very greatest interest, and he congratulated Professor Debré upon his statement. The enquiry deserved the closest attention, as much on account of the methods followed as by reason of the subject with which it had dealt, the results obtained, and the observations and suggestions presented. The report rightly recommended a number of hygienic, prophylactic, social, economic and other measures for combating infant mortality. The enquiry presented perhaps special interest for Italy, which had recently passed a law on maternity and child welfare, the first object being to safeguard the life of young children.

Dr. Lutrario had, however, observed that among the suggestions submitted but little importance was attached to the evacuation of children either to hospitals in the strict sense of the term or to other institutions. He did not fail to appreciate the true value of such institutions. He knew from his own experience of the misdeeds that were liable to be perpetrated in them, sometimes amounting to massacres. In the case of healthy children, he preferred that they should be boarded out or placed in another family, but sometimes evacuation to hospital was essential in cases, for instance, where the child was seriously ill, where the mother was ill, or where the mother had died in circumstances of extreme poverty. Too much emphasis, therefore, could not be placed on the importance of institutions or hospitals organised on rational bases. This implied, on the one hand, infant's feeding wards, consultation rooms, nurseries, etc., organised on proper lines, and, on the other hand, nursing wards equipped in accordance with hygienic principles and including medical, surgical and orthopædic services, incubators, etc. Hospitals organised on these lines would certainly afford the best possible assistance in the campaign against infant mortality. On this subject, however, the report merely said: "The prevention of cross infection implies improvement of hygienic conditions and medical supervision of all infants gathered together, as in hospitals, nursing homes, etc."

Dr. Lutrario thought that greater stress should have been laid on this point, and that reference should have been made to the establishment or improvement of children's hospitals, institutions, crèches, etc. He would be glad if Professor Debré could give him a few explanations on the subject.

Professor OTTOLENGHI congratulated Professor Debré on his report. He laid particular stress on the importance of the recommendation for the continuation of researches into the prevention of scarlet fever, measles, whooping-cough and diphtheria. In this connection, he reminded the Committee that a wave of diphtheria in a particularly serious form had been observed in various parts of Europe in the current year. The determining causes of this occurrence had not yet been ascertained, but it would obviously be extremely valuable if some light could be thrown on them. Possibly, the Health Committee and even the Commission of Experts should take up the matter.

With a view to combating the diphtheria epidemic, vaccination had been recommended, but it was known that vaccination encountered numerous difficulties and that many practitioners, and sometimes even the health authorities, had doubts on the subject. Professor Ottolenghi called to mind the fact that the Health Section had undertaken an enquiry into the problem as a whole. The results of the enquiry were awaited with very great interest, and it would be desirable, especially at the present time, that they should be published as soon as possible.

In regard to Professor Jorge's statement that whooping-cough took a benignant form in Portugal, that remark could not apply to the other countries. In Italy, vaccination was currently practised for whooping-cough, since this was a disease which had spread very considerably in different places and in certain instances opened the door to other alarming infections.

In conclusion, Professor Ottolenghi supported the proposal of the experts in general and urged that their enquiries should be continued and extended.

The PRESIDENT observed that the discussion had brought out the great importance of the question and that it demonstrated the value of the results obtained by the Commission of Experts. Its work had been followed in Denmark with great interest since the beginning. As to the difference in the infant death rate in Denmark and the Netherlands, this had been brought out as the result of a statistical enquiry, and an endeavour was now being made to ascertain the nature of the statistics, since it was essential, in order to make a proper comparison, to know the basis on which they had been prepared. Enquiries into infant mortality were being made both at Copenhagen and in the rural districts in Denmark, in accordance with the rules laid down by the experts, and therefore it was to be hoped that in future years the statistics would bring out the differences between the various districts.

The observations made by the Commission of Experts in regard to tuberculosis (page 4 of the report) were of particular importance in view of the fact that the Health Committee was examining the question of the BCG vaccine. He would be glad, therefore, if Professor Debré could give further explanations on this matter.

Among the causes of infant mortality noted in the report, the President observed that the experts appeared to be of opinion that whooping-cough and measles were the most important. In Denmark, good results had been obtained from vaccination against whooping-cough.

In regard to the wave of diphtheria to which Professor Ottolenghi had referred, the Danish authorities had been struck by the fact that in Germany and Denmark, especially in the big cities, the epidemic had been characterised by an exceptionally high fatality rate. It had been noted that the results obtained with the anti-diphtheric serum differed very widely. At Copenhagen, enormous doses had been used and the number of deaths had been reduced to 1.4 per cent, while in Berlin the number of deaths was reported as being 20 to 30 per cent. The question, therefore, had been examined whether the difference between these death rates was not due to a difference either in the sera used or in the nature of the cases. The President would therefore suggest that it would be advisable to authorise the Health Section to arrange for the doctors concerned to examine this question on the spot, with a view to seeing whether they could detect any differences in the features of the disease.

In regard to Dr. Chodzko's suggestion for the taking of the Wassermann test, the President observed that this was applied on a big scale to all new-born children suspected of syphilis in Copenhagen. It would be possible, therefore, to obtain further information on the efficacy of the measure.

In conclusion, he supported the proposal for as wide a distribution as possible of the report, both among specialists and general practitioners as well as in the newspapers, and suggested that the Health Section should be requested to assist in carrying out this object.

Professor CANTACUZÈNE insisted on the change which had been observed for some time in Europe in the seriousness of the cases of diphtheria. As regarded endemic diphtheria in Roumania, it had been noticed that there was no increase in the total number of cases but that there was an abnormally and progressively increasing proportion of the serious forms of the disease, often accompanied by early laryngeal diphtheria. As in other countries, like France, Germany and Italy, it had in Roumania been found necessary at the present time to inject a very high quantity of antitoxic units in order to obtain the effects previously obtained with weak doses of the serum. The fact that this phenomenon was general merited an exhaustive comparative investigation. There could be no question of any change in the method of the preparation of the sera. These were prepared in Roumania according to the classic methods and purified sera (which were indisputably less efficacious than complete sera) were not prepared at the Bucharest Institute. It might be that there was a change in the pathogenic properties of the diphtheria bacilli isolated at the present time from the throat of the patients. A comparative international enquiry by the Health Section might lead to valuable scientific and practical results.

Professor OTTOLENGHI added that in Italy it had been observed that the serum for the treatment of diphtheria did not possess the same efficacy as formerly. Various explanations had been suggested. It would perhaps therefore be desirable to examine this question, and more especially the problem whether the loss of efficacy was real and whether it was contingent upon new methods of preparation employed. He had raised this question because he thought that Dr. Madsen, as Chairman of the Commission on the Standardisation of Sera, might be interested in it. If it were found that in the preparation of the sera there was any peculiarity which had remained unknown hitherto, but was essential for their efficiency, that would be a result the importance of which needed no demonstration in the treatment and prophylaxis of diphtheria.

The PRESIDENT said that good results had been obtained in Copenhagen with the use of large doses of the sera prepared according to the same methods as formerly. The sera used, however, contained a very large number of immunisation units, and the speed of reaction between the serum and the toxin was high. There might be danger in the employment of refined sera, since they sometimes reduced the speed of activity of the serum.

Dr. HAMEL agreed that the question was of great importance. The German medical authorities had been surprised at the occurrence of such isolated epidemics, which were characterised by a high rate of toxicity. They constituted a formidable test for the efficacy of preventive vaccination. An endeavour had been made to cope with the epidemic by the vaccination of patients with a new preparation.

FOURTH MEETING.

Held on Saturday, May 4th, 1929, at 3.30 p.m.

President : Dr. Th. MADSEN.

420. **Examination of the Report of the Medical Director (Continuation) : Report of the Commission of Health Experts on Infant Welfare (Continued).**

II. *Commission of Health Experts on Child Welfare (Continuation).*

The PRESIDENT referred to the observations of Dr. Chodzko regarding the necessity of establishing rural hospitals for sick children.

In view of the fact that, at the moment, the question concerned only respiratory diseases, whooping-cough and measles, the problem which arose was whether children suffering from these diseases should be isolated in rural hospitals. A question connected with this problem also arose : Should patients suffering from pneumonia be taken to such hospitals ? Experience seemed to show that the transport of such cases should be avoided.

Dr. CHODZKO agreed with the President, but pointed out that his observations at the previous meeting did not deal with rural hospitals for sick children.

Professor DEBRÉ, asked by the President to reply to the observations made at the previous meeting in connection with the report of the Commission of Health Experts on Infant Welfare, said that he had little further to add, since every remark made had been in the nature of a courteous appreciation of the Commission's work.

Whooping-cough and Measles.

He had been asked whether he considered whooping-cough to be a graver cause of infant mortality than measles. To this he would reply in the negative. It had been merely desired to state in the report that the enquiry had shown that, in the field which it covered, whooping-cough had played a much more important part as a cause of infant mortality than had been thought. Account must also be taken, not only of the places in which the enquiry had been conducted, but also of the year during which it had been carried out, before a general conclusion could be drawn.

In so far as whooping-cough was concerned, the enquiry had shown that in most countries the importance of that disease in regard to the death of very young children had not been properly recognised. The reason for this was that it was rarely diagnosed in the case of the deaths of children of less than one year of age. Their deaths had been registered as due to bronchial pneumonia. It was only as the result of an enquiry which had shown the existence of a brother or sister suffering from ordinary whooping-cough that attention had been drawn to the possibility of attributing the death of the child to whooping-cough and not to bronchial pneumonia. If reference were made to the available statistics, it would be seen that measles apparently played a much larger part in the mortality of very young children than whooping-cough. The report had desired to show that this proportion was not quite accurate.

Syphilis.

Professor Debré explained that the enquiry had not been invariably conclusive in regard to the influence of syphilis in the mortality of very young children. The investigators were somewhat divergent in their views on this point. It was thought in France that syphilis played an important part in prematuration, dead-births and in deaths occurring in the very first days of life. Professor Debré discovered, however, that that opinion had not been shared by any of his colleagues throughout the enquiry. Such a statement was, indeed, difficult to prove. A certain number of Wassermann tests had been carried out, both on the mothers and the infants, in cases where hereditary syphilis had been suspected ; these tests were generally negative. Consequently, it had been necessary to conclude that, in a certain number of cases examined, proof of the existence of syphilis had not been forthcoming.

The Question of Untrained Midwives (Matrones).

Professor Debré said that the enquiry had proved once more how great was the havoc caused by untrained midwives and how difficult it was to carry on a campaign against them. In certain regions, the women generally preferred to call in untrained midwives rather than doctors. The part they played was lamentable. They were incapable of diagnosing malpresentations and the doctor, called in too late, was compelled to sacrifice the child. Was there no means of overcoming this bad influence ? It seemed to have been found in a little district in the Department of Seine-Inférieure where a well-trained midwife had succeeded in carrying the day. It had been noted however, that a number of doctors refused to take part in the campaign against untrained midwives for fear of losing their patients, so great was the influence of these women with the population.

Access to Maternity Homes.

In the districts in which the enquiry had been conducted, the statistics had shown that births in maternity homes had been satisfactory and that the proportion of women saved after a difficult confinement was also satisfactory. In certain poor rural districts, such as those in Austria and even in certain districts where conditions of life were good, such as Touraine, the investigators had been struck by the bad conditions in which many confinements took place. Mothers were not examined before the time of delivery and in cases of malpresentation the doctor, called in too late, was obliged to sacrifice the child. Rural maternity homes were also in existence in a number of large villages and were working satisfactorily. If the dossiers of the enquiry were examined, the members would be astonished at the number of obstetrical disasters recorded in backward rural districts owing to the conditions under which the confinements, which were lamentable from the point of view of hygiene and asepsis, were carried on. The investigators had the impression that, if there were places in those districts where it would be possible speedily to transport a woman on the point of confinement, a considerable number of infant deaths would be avoided.

Boarding-out of Infants and Maternity Homes.

Professor Debré recognised that an insufficient amount of attention had been paid in the report to this question. Throughout the enquiry, the investigators had heard appreciation expressed of the boarding-out of infants and of maternity homes. The results achieved were excellent, but it had been noted that there was considerable difficulty in inducing pregnant women to remain in these homes. Very often it was found impossible to keep the women there because they preferred their freedom.

Supervision of crèches.

The enquiry had shown that there were a considerable number of crèches which were not under medical supervision. These crèches were generally properly conducted and the children received all the necessary care. Since these establishments were not under medical supervision, if a case of measles or whooping-cough occurred, the doctor was called in late in the day. If an epidemic broke out, the only measure taken was to close the establishment. Strict medical supervision of smaller crèches was rare, even in towns with a well-organised health service, such as existed in England and Germany. For that reason, the Commission had been of opinion that it would be useful to urge that crèches should be everywhere placed under medical supervision.

Hospitals.

In reply to Dr. Lutrario, Professor Debré said that the investigators had been struck by the differences that existed between children's hospitals. In Vienna, for instance, typical examples had been encountered. Side by side with admirable clinics, where every precaution was taken to safeguard the child from the moment of its birth, there were hospitals where these conditions had not been achieved and the results were very different. The Commission had reached the conclusion that children's hospitals were to be recommended, provided that elementary hygienic precautions were taken.

Tuberculosis.

The President had drawn attention to an elliptical phrase in the report, which had been adopted after a good deal of hesitation. From this phrase it would be inferred that the deaths in infancy from tuberculosis were limited in number. What the Commission had meant was that, in certain towns in which there were intensive centres of tuberculosis, a considerable number of deaths of young children which could be attributed to this disease had been expected, but that the enquiry had not borne out this expectation. It was found in these districts that tuberculosis killed very few children in the first year. This fact was of special interest for the experiments in the use of the BCG vaccine.

The desire had been expressed that other countries should undertake an enquiry of the same character. Such an enquiry would have a special interest, as there was a feeling that, with the exception of Norway, the group of countries in which the first enquiry had just been conducted were neighbours and formed, as it were, a homogeneous group in Europe. It would therefore be interesting to undertake an enquiry of this type in another region of Europe. The experience acquired during the first enquiry would be useful to the new investigators, and the Commission, which had carefully considered the lessons of the first experiment, would be happy to place itself at the disposal of any countries desiring to undertake an enquiry of the same character.

Professor Ottolenghi had emphasised the importance of scarlet fever, diphtheria and rickets. Preliminary studies had already been made and the results communicated to Dr. Rajchman, who, as he had the documents, would be in a better position to reply to the questions raised.

Professor Debré thanked the Committee for the kind words which had been addressed to him. He would be happy to transmit them to his colleagues on the Commission, to whom they were in reality addressed, as he was merely their spokesman. He would like to be authorised on behalf of the Health Committee to thank, not only the members of the Commission, but their assistants, particularly the visiting nurses and doctors for the considerable work which they had done and which had facilitated the work. In certain difficult districts of Normandy and Austria and in Paris, where it was sometimes extremely difficult, among a population which disliked such investigations, to conduct enquiries which were sometimes somewhat indiscreet, but which enabled the facts of the case under observation to be determined — salary of the father, antecedents of the family, way of life, housing conditions, etc. — the visiting nurses, in particular, had had to show exceptional tact. The doctors had also helped in the work unstintingly, often being compelled to put together in the evening for the Commission details of observations made during the day upon the children whom they had treated. The publication of the results of the enquiry would give satisfaction to all those who had collaborated.

Dr. RAJCHMAN, replying to the question raised as to the further steps to be taken upon the recommendations of the Commission, recalled the procedure during previous enquiries determined upon by the Health Committee. When a question was referred for study, it might be dealt with according to one of two procedures. Either a letter or questionnaire might be addressed to the health administrations in order to obtain the necessary information, or a general note might be prepared based on reports already published. The results obtained, however, from such a method of work were variable. The material was disparate and not altogether comparable, and the value of the basic facts was an unknown quantity. Professor Debré had explained how carefully the present enquiry had been undertaken, and what precautions had been adopted in order to obtain a sure basis for the conclusions to be drawn.

Dr. Rajchman would emphasise the value of this method, as he thought that it was one which should be applied in the future. It was the only method the results of which had a technical value. Professor Debré, during his statement, had drawn attention to certain obscure points which remained to be elucidated. Only the method already adopted would enable these obscure points to be cleared up. The present enquiry should therefore be regarded as a typical enquiry, and it strikingly emphasised the necessity for the Health Organisation to concentrate upon certain essential problems. The enquiry dealt with a problem of which the conclusion had appeared to be foregone, and yet the work of elucidation had been very considerable, as would be appreciated from Professor Debré's statement. Further enquiries were still necessary in order to carry the task to a successful conclusion.

Dr. Rajchman would infer from this that the Health Committee should concentrate upon the study of a few problems. Two subjects were at present under investigation — infant mortality and syphilis, and these enquiries were being extended constantly. In four countries of Latin America, an enquiry had been opened into the problem of infant mortality. Two other countries, Bolivia and Paraguay, had decided to undertake the same enquiry, and Peru had displayed the same intention. There might therefore be contemplated for next year a conference similar to that which had been held in Rome. The President had intimated that the same enquiry had been begun in Denmark, and Dr. Tsurumi had asked that it should be extended to his country. It was understood that the report would be forwarded to the Japanese authorities. The Secretariat would hold itself at the disposal of all countries undertaking this enquiry for any necessary information.

He was happy to see that Dr. Chodzko and Dr. Carrière were in favour of extending the enquiry to Central and Eastern Europe. Probably, the report would serve as a basis for the extension of the study of infant mortality in Greece, to be undertaken by this new Centre at Athens. There remained a certain number of obscure points to be cleared up, and these were the points that might be solved by the extension of the enquiry. In many countries, for instance, even in those where the medical organisation was most complete, it was still impossible to make post-mortem examinations in the normal course of things. In Latin America, however, the enquiry might be undertaken with abundant material, owing to the facilities which existed there for making post-mortem examinations. In the case of syphilis, Denmark would furnish a considerable number of cases of Wassermann reactions. It would be inferred that in certain countries material would be found enabling certain doubtful points to be elucidated.

Four different types of report would be published.

First, there would be the report of the Secretariat, in which the methods used and the difficulties encountered would be explained. This report would serve as a guide to countries undertaking the enquiry. It would be a fairly detailed report and would probably be ready before the end of the year.

Secondly, there would be national reports, which would differ according to the countries. He was able to assure the Committee at once that the report of Dame Janet Campbell would shortly be published. The very important report of Professor Rott would also, he understood shortly be published in Germany. The reports for the Netherlands, Austria and Norway were, he gathered, under way. The report for France had already been the subject of conversations with Professor Debré. These reports would be published according to various methods. They were intended specially for experts.

Thirdly, there would be reports intended for the non-medical public. Professor Debré had conceived the happy idea of asking a well-known French writer to prepare an introduction to the report which he himself intended to compile. That was an excellent idea, and might be followed in the different countries.

Fourthly, the publication of detailed summaries for the medical Press should be contemplated. The summary made by Professor Debré might serve as a model and he would ask Professor Debré in this connection again to come to the assistance of the Health Committee.

Dr. Pirquet, whom everyone regretted, had put forward a suggestion for a meeting of child welfare experts in the Netherlands and had proposed to place on the agenda of this Conference a study of these reports. It would be interesting to follow up that idea, as it would enable the results of the enquiry which had been begun to be discussed in the presence of experts.

What further enquiry should be undertaken? It was at present difficult to decide. An enquiry into mortality in the first ten days of life had been suggested in co-operation with obstetricians. It would be interesting if the Commission on Child Welfare were to establish an agenda for a meeting on this subject.

An enquiry had also been proposed into the respiratory diseases. That was a proposal which merited detailed consideration. Finally, an enquiry into rickets had been proposed; this would be a complex study, which had already been discussed by the Health Committee and undertaken by Professor Debré and Professor Gorter. Possibly, interesting suggestions would be forthcoming at an early date. Finally, it had been asked that the enquiry into immunisation against scarlet fever and diphtheria should be continued. That question was somewhat outside the scope of the present enquiry, which had been undertaken because the Commission on Infant Welfare had referred to it. It had been discussed by the Commission on several occasions and two Rapporteurs had been appointed, Professor Debré for scarlet fever and Professor Gorter for diphtheria. The Rapporteurs had got into touch with those who in Europe had special experience in the work of premunisation, and had drawn up reports which had been distributed. A programme of concrete work might be established on the basis of these reports.

In respect of diphtheria, proposals had been submitted by the President at the morning meeting. The question might well be dealt with by means of an interchange of clinical staff in the countries in which the enquiry had been undertaken. An early occasion would be taken in order to give these proposals a concrete form.

The PRESIDENT thought that the report which had been discussed summarised one of the most successful enterprises of the Health Committee. It gave the impression that the enquiry had made excellent progress and would achieve tangible results. He again thanked Professor Debré for his valuable assistance.

Sir George BUCHANAN thought that more precision was required before some of the new enquiries were undertaken. He would, in this connection, like the Committee to have a further opportunity of expressing its views and of submitting preliminary observations on the programme of enquiries sketched by Dr. Rajchman. Several members of the Committee were specially well qualified to assist in this matter, and it would be regrettable if they had to regard this programme as final and wait to discuss it until the report had been submitted. He was referring particularly to diphtheria, scarlet fever and rickets.

Dr. RAJCHMAN was sure that the Committee was unanimous in the expression of its confidence, and he was convinced that Sir George Buchanan himself would not be disappointed. The programme of the enquiry was fourfold. It included, first, diphtheria and scarlet fever and, secondly, rickets. The enquiry into rickets was still in a preliminary stage, consisting in the preparation of notes, and no investigation would be undertaken before the Committee had had an opportunity of expressing its views in the course of a discussion. Two Rapporteurs had been appointed for the study of immunisation against scarlet fever and diphtheria. That enquiry would continue, but would not be the subject of further discussion. Final proposals would be placed before the Committee.

Sir George BUCHANAN had no objection to the course proposed by Dr. Rajchman, but the enormous amount of research work already undertaken in different countries on the question of rickets should be remembered. No useful plan of enquiry could be adopted without taking that work into account.

While he regarded the programme for the enquiry into scarlet fever and diphtheria as useful, he thought it could hardly be expected that the Rapporteurs themselves would undertake the immense task of reviewing all existing knowledge on these subjects. The members of the Committee should be ready to contribute to the common stock of knowledge the results of their own study of the question, and in a matter of this kind they might also find advantage in discussions at the sessions of the Permanent Committee of the Office international d'hygiène publique.

The report of the Commission of Health Experts on Infant Welfare was adopted.

IV. PROGRESS OF ENQUIRIES AND INVESTIGATIONS: ACTION TAKEN ON THE RESOLUTIONS OF THE HEALTH COMMITTEE.

Welfare of the Blind.

No observations.

Vaccination by BCG.

The Committee held over its consideration of this item.

Rabies: Action taken on resolutions of the International Rabies Conference.

No observations.

Dengue.

No observations.

Dangers resulting from the Use of X-Rays.

Dr. JITTA was pleased to note the statement in the report that the authorities and institutes of the Union of South Africa using X-rays considered "that the interest now being shown by the Health Committee of the League of Nations in this matter was opportune and worthy of support". The importance of the standardisation of the use of X-rays was becoming more and more widely recognised, one illustration of this progress being the fact that a new draft law on the subject was shortly to be submitted to the Netherlands Chamber of Representatives. Dr. Jitta asked Dr. Rajchman whether it would be possible to make a general report on this question.

Sir George BUCHANAN thought that a general report of the kind Dr. Jitta suggested, which should contain all existing laws, regulations and action taken independently of regulations, would be very valuable. He suggested that Dr. Jitta, who was specially interested in this question, should be asked to act as Rapporteur. He drew attention, in this connection, to the recommendations of the British X-rays and Radium Protection Committee, which had been examined at a recent international conference of radiologists and had secured general approval.

Dr. RAJCHMAN said that the Secretariat would be glad to place all information in its possession on the subject at Dr. Jitta's disposal. He would also venture to suggest that Dr. Jitta should be authorised to apply for technical assistance should he wish to do so.

Dr. JITTA said that it would be a great honour for him to act as Rapporteur on this question. The subject being very technical, he welcomed the suggestion of Dr. Rajchman. Dr. Jitta pointed out that he might also have occasion to apply for assistance to the Health Section.

Survey of Health Conditions in the Pacific Islands.

Dr. RAJCHMAN drew attention to a note received from Dr. Hermant and Dr. Cilento on the progress of the enquiry in the Pacific Islands. He pointed out that this report was only a preliminary one.

Sir George BUCHANAN suggested that, as the document under consideration had been presented to members at a late date owing to the fact that the Health Section had had an unusually full programme during the preceding year, the Committee should hold over its final approval of the report in order that it might more fully consider its contents.

421. Report of the Far-Eastern Commission (Annex 4).

Dr. JITTA said that it would be seen from the report of the Far-Eastern Commission that the Singapore Bureau was developing on the lines which the Committee desired. Dr. Jitta then read the report and the accompanying resolution. He added that the Commission had discussed the question of broadcasting in clear, with a view to facilitating communication with ships at sea, and suggested that Dr. Rajchman should study this question and present a report on the subject.

Dr. TSURUMI was pleased to note that the Singapore Bureau was developing and extending its activities, thanks to the collaboration and goodwill of the authorities in the Far-Eastern countries. He wished to present a few observations on the recent work of the Bureau.

In the first place, the dissemination of epidemiological information, which was always carried out with the requisite speed and accuracy, enabled the health authorities of the Far-Eastern countries to take preventive measures for the safeguarding of public health. He had been particularly glad to learn that the Singapore Bureau had begun to work as a regional centre on April 15th, in accordance with the arrangements between the Health Organisation and the Office international d'hygiène publique and in execution of the Paris International Sanitary Convention.

In view of the capital importance of international co-operation to the success of a campaign, against epidemics, Dr. Tsurumi had been pleased to learn that, since the preceding year, the Australian Government had regularly furnished information to the Singapore Bureau on health conditions in the Archipelago of the Western Pacific. The field over which the Singapore Bureau circulated epidemiological information now stretched, therefore, from Panama to Suez and from Melbourne to Chosen.

Further, it was satisfactory to learn that the Chinese Republic had established in the preceding year a Ministry of Public Health, and that the Eastern Bureau had come to an agreement with the Ministry with regard to the dissemination of epidemiological information.

Dr. Tsurumi pointed out that it was particularly desirable that the Bureau should be informed of the arrival of infected vessels in ports included in the scope of its services. Telegraphic information of this kind would be most useful for many administrations.

The question of research into cholera and plague, to which Dr. Tsurumi had called the Health Committee's attention at its fifth session, had been discussed once more by the Advisory Committee. The question of the prophylactic value of oral vaccination, which Dr. Rajchman had raised at the Conference in January 1926, had already been answered in the affirmative by Lieut.-Colonel Russell, and it had been decided to continue the examination of the subject. The Committee had also been informed of the work which certain delegates were to undertake in accordance with the programme for plague research adopted at the Delhi Conference. Dr. Tsurumi expected that the results of this work would be communicated by those delegates to the Eastern Bureau at the next Conference.

With regard to the two epidemics of pneumonic and bubonic plague which had broken out in succession in Central Mongolia in the two preceding years, a communication had been made on each occasion to the Health Section by the Health Bureau of the South Manchurian Railway Company. Fortunately, these epidemics had passed away without entailing any great loss of life, whereas the two preceding epidemics in Manchuria had occasioned several thousand deaths. It was considered probable, however, judging by the statements of the special mission which had been despatched by the South Manchurian Railway Company, that there were seats of endemic plague even in Central Mongolia. This special mission had succeeded in discovering that the transmission of the plague virus might be due to rodents, among which should be included the squirrel. Many scientific and administrative questions would, however, have to be settled before adequate preventive measures could be taken.

In these circumstances, Dr. Tsurumi hoped that international research work into the question of plague would be undertaken, and particularly that a thorough examination in centres where plague was endemic would be made under the auspices of the Health Organisation, not only on account of the scientific interest of such research, but in order to safeguard the health of the world.

Sir George BUCHANAN was pleased to learn that information would be available at a later session, and, before action was taken on the subject of broadcasting epidemiological intelligence about cholera, plague, etc., in clear, it would be necessary to consider the question whether such broadcasting might not tend to weaken the official system for the supply of information on outbreaks of diseases which had been set up under the International Sanitary Convention of 1926.

Dr. JIRTA said that he would draw the special attention of the Commission to this matter.

Surgeon-General CUMMING asked for further information on the "enquiry into the efficacy and working of quarantine stations in the Far East" which was referred to in the report.

Sir George BUCHANAN said that he believed the enquiry related particularly to the equipment of quarantine stations.

The PRESIDENT thought that the main point under consideration was the question of the desirability of providing for special quarantine accommodation for first-class passengers. The Commission also wished to gauge the results that had been obtained in the Far East in the course of the last twenty years by the use of quarantine stations.

Dr. RAJCHMAN drew attention to the text of the resolution on this subject (page 44 of the annual report for 1927) which the Advisory Council of the Singapore Bureau had adopted at its third session, to the Minutes of the discussion on this subject at the fourth session (page 50 of the annual report for 1928) and to the further resolution adopted at the fourth session (page 54 of the annual report for 1928). The second of these resolutions had now been submitted to the Health Committee for its approval.

The report of the Far-Eastern Commission was adopted.

422. Budget Estimates for 1930.

Dr. CHODZKO commented upon the budget estimates for 1930 and drew attention to the following reductions: Part 1: Item 3, Travelling and removal expenses of the Secretariat, 10,000 francs; Item 4, General printing and documentation, 3,000 francs; Item 5, Cables, telegrams and telephones, 1,000 francs.

Dr. Chodzko also drew attention to the estimates for the Technical Committees and Sub-Committees, conferences, missions, work of experts and collective and individual studies, etc., 370,397 francs. The League contribution to this sum was only 240,000 francs, that was to say, a reduction of 10,000 francs as compared with 1929. Reference to the diagram contained in document C.H. 795 (A. 4, Extract (a)) would show, however, that the result of the normal increase in salaries, in accordance with the internal regulations of the Secretariat, was an annual decrease in the total credits available for technical work. Dr. Chodzko suggested that the Health Committee should request the Council to draw the attention of the Assembly to the fact that these credits should not be diminished in this systematic manner. With this purpose in view, Dr. Chodzko submitted the following draft resolution:

"The Health Committee,
"Having taken note of the budget proposals of the International Health Organisation for the year 1930,
"Submits to the Council the desirability of drawing the attention of the Assembly to the fact that normal increases in the salaries of the staff should be taken into consideration in determining the total of the budget, as was the case in the 1929 budget;
"Emphasises the fact that the stabilisation of the budget of the International Health Organisation would otherwise involve a progressive diminution in the credits available for technical studies; in the budget proposals for 1930 these credits do not amount to more than 62.8 per cent of the total budgetary provision, while for the year 1927 they amounted to 67.5 per cent, though there has been no increase in the personnel employed."

Dr. Chodzko's resolution was adopted.

FIFTH MEETING.

Held on Monday, May 6th, 1929, at 10 a.m.

President : Dr. Th. MADSEN.

423. Greetings to Professor Léon Bernard and Dr. Miyajima.

The PRESIDENT, on behalf of the Committee, welcomed Professor Léon Bernard.

He had received from Professor Pittaluga a telegram regretting that it was impossible for him to attend the session.

He welcomed Dr. Miyajima, replacing Dr. Nagayo, and requested him to take his seat at the table of the Committee.

Lastly, he had received from M. Velghe a letter thanking the Committee for its telegram, and regretting once more his inability, owing to illness, to attend the session.

424. Survey Method of Stimulating Public Health Administration in the United States of America : Studies on the Cost of Medical Care in the United States.

Surgeon-General CUMMING read a statement on the survey method of stimulating public health administration in the United States of America (Annex 5).

The PRESIDENT thanked Surgeon-General Cumming for his very complete and interesting statement concerning the methods used in the United States.

Professor WINSLOW observed that Surgeon-General Cumming had covered very fully the survey side of the problem and added that the Committee would that afternoon have the opportunity of noting the results of the survey method as applied on a large scale to the problems of Greece.

He wished merely, in addition, to call attention to the crystallisation of the results of the American health surveys in the shape of the appraisal form prepared by the Committee on Administrative Practice of the American Public Health Association, in close co-operation with the Federal Public Health Service.

The essence of the appraisal form lay in the attempt to evaluate quantitatively and objectively the actual health activities carried out by health departments and voluntary agencies in a given community. It involved, first of all, the selection of a certain quantitative measure, such as the number of laboratory tests for a particular disease, the number of visits of tuberculosis patients to clinics and the like, and the establishment of certain normal values for each service based on the actual practice of the more advanced of a group of cities studied. This procedure had met with an enthusiastic welcome from health officers throughout the United States as aiding them in the development of a properly balanced public health programme and as giving them concrete objective evidence of the adequacy of the results obtained.

Every effort had been made to avoid any tendency to over-standardisation by seeing that the appraisal forms were used only with the consent and under the direction of the local health officials and that invidious comparisons between different communities were avoided. The object was fundamentally to enable each health officer to measure his own work against a general objective standard and it would be noted that the appraisal form was not imposed by any higher administrative agency but represented the effort of the health officers own organisation to improve the general standards of practice. Dangerous stagnation was avoided by the revision of the appraisal form every three years to keep pace with rising standards of current practice.

The actual quantitative standards of one country would by no means fit another, but it might be of interest to consider the possibility of applying this general principle in certain European countries with the object of developing locally applicable standards and of obtaining a comparative idea of the importance of various public health procedures in different countries.

The PRESIDENT thanked Professor Winslow for the ideas he had developed. They were new for many members of the Committee and could hardly be adopted in their present form in all countries. It was none the less true that the suggestions he had submitted might be of the very greatest use. He proposed that the Health Committee should instruct the Health Section to consider what could be done in this field.

Dr. LUTRARIO congratulated Surgeon-General Cumming on his admirable statement of the progress made by the United States in the matter of public health. With the sole object of showing that that progress was realised and greatly appreciated in Italy, he instanced the case of Professor Piccinini, who had been nominated *professeur agrégé* at Naples University for a memorandum he had written on the subject on his return from a visit to America. Surgeon-General Cumming had referred to the importance of the initiative taken by Great

Britain, which had been the first country in the world to lay down in 1848 that the supervision of the public health was one of the functions of the State. That remark was perfectly correct if account were taken only of the period following the Middle Ages with their obscurantist tendencies. But it must not be forgotten that Rome had already declared that the safeguard of public health was the basic law of the State.

Sir George BUCHANAN wished to thank Surgeon-General Cumming and Professor Winslow for the very useful information they had given on the methods used to appraise and value the health conditions of American cities and counties. Every country found it necessary to carry out the same sort of operation, though each did so by its own methods. It was most useful for any country to know what plan was followed in the others. The chief doubt he had about any system of "marks" was that it tended to stereotype methods of administration.

The earliest systematic work of public health reform in England, about 1843, began with the appointment by the Government of a Royal Commission which worked by means of special sanitary surveys of the principal British towns. When the appointment of medical officers of health by local authorities became general, about 1872, the central health authority, in prescribing their duties, insisted on an annual report in which the various conditions affecting the health of the district had to be reviewed. That system had continued since, the lines of reporting being indicated annually by the central department. A few years ago, when it appeared that there was a tendency for these reports to become stereotyped or merely to repeat themselves, the central health authority substituted a system by which the medical officer of health had only to make a full survey of the health conditions of his district every five years, with shorter summary reports in the four intervening years, the years for full survey being chosen so as to take advantage of the census.

Up to a few years ago also, the medical staff of the central department made systematic inspections and reports on districts with the object of reviewing all their sanitary conditions and pointing out those which were defective. In consequence of the recent concentration of effort on particular aspects of public health, notably on tuberculosis, venereal disease, maternity and child welfare, mental deficiency etc. — activities promoted by special Government subsidies to local authorities — local health authorities in England and their medical officers of health had lately shown some tendency towards what was perhaps an excessive concentration on these grant-aided subjects. This fault, if it were a fault, should now be corrected by the operation of the Local Government Act, 1929, which, among many other important provisions, had substituted a block grant from the Government to local authorities calculated according to their needs, for the various special purpose grants. The new system tended towards greater devolution of public health work to local authorities, which would have a wider latitude in the choice of the measures they adopted for the promotion of public health. In these circumstances, there was certain to be a new demand for periodical expert surveys to appraise the progress made in different local areas and to compare the advantages of one line of action with another, without, however, aiming at any excessive standardisation or undue interference with local responsibility.

Dr. CHODZKO joined in the congratulations to Surgeon-General Cumming and Professor Winslow. The members of the Health Committee were already fairly familiar with the organisation of health in the United States, but it was a very good thing that they should be given an opportunity of receiving fresh information on the subject. The methods applied in the United States and transferred to Europe had already given excellent results. In Poland, by combining the idea of the "demonstration centre" with that of dispensaries, the creation of "health centres" had been evolved; there were already 140 of these and others were on the point of being set up.

He would next point out that there was no clear definition of the term "health centre". It was incorrect, as was sometimes done, to describe dispensaries as "health centres". A significant discussion on this point had been held a short time ago at the Berlin Medical Association. The question had been raised of the expediency of treating patients in dispensaries.

Dr. Chodzko believed that the same problem was at present being discussed in France. That, therefore, was a point which required elucidation, the object being to define health centres in relation to social hygiene.

Professor Winslow's suggestion that the Health Section should be instructed to consider the question was an excellent one. The competent circles would be glad to help the Section in its enquiry.

Dr. CARRIÈRE thanked Surgeon-General Cumming, Professor Winslow and Sir George Buchanan for the extremely interesting information they had given the Committee concerning the organisation of the public health services in the United States of America and in Great Britain. Surgeon-General Cumming had said that the United States was a young nation. Obviously a young nation was not bound by tradition or, if it were preferred, by routine, and could do more than another nation; when, in addition, it was in possession of considerable financial resources, it could achieve great things. The United States had indeed achieved great things, and deserved congratulation on the progress it had made in the field of public hygiene. Following on what Sir George Buchanan had said, Dr. Carrière wished, however, to draw attention to certain difficulties involved in the standardisation of data. In a country like Switzerland, such standardisation or, rather, centralisation presented, side by side with

certain advantages, certain very real disadvantages. It was unquestionably essential to allow the local health officials the greatest possible measure of freedom in the discharge of their duties.

The introduction of arithmetic into public health documents was very attractive at first sight, and it would be possible to deduce from mathematical considerations certain very valuable conclusions. Dr. Carrière did not think, however, that that method could be applied everywhere with much success. He did not, for instance, think that it would be possible to use in Switzerland the appraisals marked 1 to 20 as indicated in the pamphlet supplied to the Committee, but the idea in itself deserved consideration, and should form the subject of an enquiry which the Health Committee might take up when the members had had time to read the pamphlet carefully.

Professor Léon BERNARD said that there was no need for him to add his tribute to those which had already been paid to Surgeon-General Cumming and Professor Winslow. He had had an opportunity of seeing with his own eyes what was being done in America and of convincing himself that that country attached importance, not only to the quantity, but also, and more especially, to the quality of the work.

He too believed that it would not be possible, without some modification, to apply the same methods in Europe, but it was none the less true that the data collected on the basis of the American forms had a very real significance.

He thought that, in assimilating standardisation to centralisation, Dr. Carrière was confusing two different matters. Centralisation consisted of the concentration of power in the hands of central bodies, but standardisation was nothing more than making the methods of application uniform. Standardisation, therefore, could exist without centralisation and, vice versa, centralisation did not necessarily imply standardisation.

Dr. Chodzko had referred to a question which was of paramount importance from the practical point of view — the question, not whether a dispensary was rightly or wrongly called a health centre, but whether treatment in dispensaries should be allowed. Prophylactic measures formed an essential part of the duties of dispensaries; but they were not always absolutely distinct from therapeutic measures. For instance, it was difficult to imagine an anti-malaria dispensary which did not distribute quinine or an anti-venereal dispensary which did not apply a specific treatment. Furthermore, a certain measure of therapeutics might be held to be indispensable for the simple preservation of health. If that were so, what view was to be taken of, for instance, the artificial pneumothoraces, of which there were so many in France that the hospital services had difficulty in making the necessary insufflations? It had been suggested that the dispensaries should be charged with carrying out the insufflations, but in certain districts the medical corps had been opposed to that course. An international enquiry on these subjects would therefore be of the very highest interest.

An enquiry of the same sort into the question of social insurance would be no less important. It would be remembered that France was on the point of applying a law of this nature; and whereas, formerly, leaders of French medicine were perpetually commending the influence of the system of social insurance in force in Germany upon the development of institutions for preventive medicine, the most recent writings of German authorities were now quoted as an argument against the adoption of a similar system in France. The parties on either side upheld their respective arguments so passionately that it was impossible to form an objective idea of the question, and only an impartial international enquiry could enlighten the French doctors.

Professor Ricardo JORGE did not propose to discuss or comment on the organisation of health in the United States of America. He would be content to admire in silence.

He wished, however, to refer to a remark made by Dr. Lutrario, who, with the object of demonstrating the benefits of modern hygiene, had spoken of the obscurantism of the Middle Ages. Professor Ricardo Jorge wished to protest against an allegation of that kind. The Middle Ages had left no domain of social or intellectual activity unexplored. The modern world had benefited by its researches and on some matters had nothing to add. It would be difficult, in particular, to affirm that modern prophylaxis surpassed mediæval prophylaxis in regard to leprosy. The Middle Ages were acquainted with early diagnosis and isolation, and in the thirteenth and fourteenth centuries there had been some twenty thousand leper colonies. Could the twentieth century maintain that it had as many sanatoria for tuberculosis? Everyone knew of the measures taken by Venice to stamp out the spread of plague, measures which included quarantine, isolation and disinfection. Nothing much better was being done in 1926.

The twentieth century vaunted its hygiene, but did it deserve the whole credit for it? It was not the twentieth century which had set up the social system, the consequence of which was the existing good sanitary conditions. The truth was that men had grown richer and that wealth was a condition of hygiene. It would be to the credit of the United States that they had used their wealth for the improvement of their social and sanitary conditions.

Dr. JITA joined in the congratulations to Surgeon-General Cumming and Professor Winslow. The survey they had presented was too vast to be discussed in detail. There was, however, one point to which he desired to draw his colleagues, attention — the danger lest standardisation might kill private initiative, which was essential from the financial point of view and in order to stimulate activity.

In regard to the question raised by Dr. Chodzko, the conclusion had been reached in the Netherlands that the dispensaries could only work if they were assisted by doctors.

Dispensaries had existed in the Netherlands for twenty-six years, and if, at the beginning, the results obtained had not always fulfilled the hopes placed in them, it was because the doctors had been opposed to the setting up of the dispensaries. Since then, the controversy had died down, the opposition had fallen away and the dispensaries could work to good effect.

Dr. LUTRARIO wished to dissipate a small misunderstanding. Professor Ricardo Jofge had taken too literally what he had said with regard to the obscurantism of the Middle Ages. The words to which Professor Jorge had referred were intended to refer to the fact that there was no micro-biological doctrine at that period, a doctrine which had afforded precious light to those who were fighting for public health. Without the aid of that doctrine, prophylactic measures had remained in the empirical stage. Dr. Lutrario, however, did not fail to recognise the great efforts which had been made by the Republic of Venice and by other maritime cities, but, notwithstanding the good intentions by which they had been actuated, their efforts had been helpless against the epidemics which had succeeded one another without intermission. Nor did he overlook the great efforts made in the field of public relief, proof of which was afforded by the twenty thousand leper colonies. The modern world was even in debt to the Church for the preservation during the Middle Ages of precious Greek and Latin treatises. During the same period, some particularly gifted individuals had anticipated certain discoveries of later date, and, among them, Frascator had foreshadowed the existence of microbes. It might then be said, in a sense, that the darkness of the Middle Ages had been illuminated by certain lights and on that point Dr. Lutrario agreed with Professor Jorge.

Dr. CARRIÈRE, in reply to Professor Léon Bernard's observations, said that the standardisation of which he had spoken necessarily supposed a measure of centralisation, since a single type of form could only be imposed by a central body. From that point of view, therefore, standardisation might be merged in centralisation.

Professor LÉON BERNARD replied that, in the case of the United States of America, standardisation existed without centralisation. This instance demonstrated that the distinction which he had made between standardisation and centralisation should be allowed to stand.

Dr. HAMEL thanked Surgeon-General Cumming and Professor Winslow for the valuable suggestions contained in their communications and in the printed memoranda laid before the Committee. These suggestions would be studied in Germany with great interest with the object of ascertaining what practical use could be made of them.

In regard to the practice of social hygiene, the conviction was strongly held in Germany that wholehearted co-operation on the part of the entire medical corps was an absolutely essential condition. In Germany, the view was held, in principle, that treatment of patients in dispensaries was to be avoided and that the patients should be passed on to medical practitioners.

Dr. Chodzko had referred to a discussion held in Berlin by the Medical Association on the question of the treatment of patients in the municipal dispensaries. So far as Dr. Hamel knew, the question concerned only the treatment of venereal disease in the municipal consulting bureaux, and these bureaux only treated patients suffering from venereal disease who otherwise abstained from visiting a doctor and so obtained no treatment at all.

As to the question raised by Professor Léon Bernard concerning the criticisms levelled by German doctors at the working of the sickness insurance system, it could not be expected that any legislation on the subject would satisfy everybody, and certain disadvantages as well as advantages were bound to emerge. It was therefore quite comprehensible that the doctors, as well as the insurance associations, should desire amendments of one provision or another.

With a view to arriving at a compromise in the matter, a "committee of common action" had been set up, consisting of representatives of the medical corps and of the sickness insurance organisations. This committee held meetings from time to time in order to remove any difficulties which might arise in the interpretation and application of the law. The development of legislation on sickness insurance in other countries was being followed attentively in Germany with the object of profiting therefrom.

Social legislation was not immutable in its external forms and must be adapted to local and temporal conditions. As regards sickness insurance in Germany, however, it could be stated in any case that the best qualified members of the medical corps were unanimously of opinion that the advantages of the system far outweighed the few remaining disadvantages.

Dr. RAJCHMAN, on behalf of the Health Section and in his own name, thanked Surgeon-General Cumming and Professor Winslow for the documents and the report they had prepared. Their papers were of great importance and some of them had been used for the investigations carried out in Greece. Professor Winslow had proposed that an enquiry should be held on the activities of "health centres" in various European countries. Such an enquiry, which might be undertaken in collaboration with the Schools of Hygiene and health administrations, would be very useful, especially in view of the fact that, as Dr. Chodzko had pointed out, no exact definition yet existed of the term "health centre", which sometimes appeared to cover institutions of varying character.

In certain of the study tours which the Health Section had organised, the health administrations concerned had asked for information as to the documents to be prepared. Hitherto, the Health Section had possessed no definite data on the subject. Sometimes the

documentation prepared by the countries in which the interchange had been held had not borne on the questions in which the doctors sent to make studies were interested. It would therefore be necessary, first and foremost, to study the position as it now stood and then to see what application could be made of fresh methods in any concrete cases which arose.

While acknowledging the importance of Professor Léon Bernard's observations, Dr. Rajchman was inclined to think, with Sir George Buchanan and Dr. Carrière, that in certain cases it would be difficult to apply in detail the method of marked appraisals indicated in the memorandum. Furthermore, the deductions to be drawn from an enquiry undertaken in accordance with the principles laid down in the memorandum would emerge more easily from a reading of the whole of the data collected than from a consideration of the columns of figures contained in the table on page 107 of this document. He thought that one of the great advantages of the use of the American methods was that it would make it possible to ascertain the way in which the appropriations made for health purposes were employed. Stress had been laid on the importance of funds in this connection; it should, however, be stated that in the majority of countries better results could be obtained if the sums placed at the disposal of the public health organisations were expended more rationally.

If such were the Committee's intention, the Health Section would be glad to make an exhaustive study of the document presented by Surgeon-General Cumming and to publish it in French and English as an extract of the Committee's Minutes. The Section would further prepare a report on that document, on the results to which the use of the methods recommended would be calculated to lead, and on the methods employed by other countries. Then, in co-operation with the Schools of Hygiene and health administrations, it would collect all information that could be obtained regarding the so-called "health centres" and dispensaries in the various countries concerned.

The PRESIDENT felt that it was the general desire of the Committee that the Secretariat should be instructed to take up the study of this question and to present a report.

Surgeon-General CUMMING said that he greatly appreciated the reception given by the Committee to his survey. As mention had been made of certain historical questions, he would point out that the Mosaic law contained admirable precepts on food hygiene, while Cyrus had been advised by his father to watch over the health of the troops.

The form of the statistical tables presented need not be regarded as immutable. Local conditions and national habits must be taken into account in every case. The public health administration in the United States of America was opposed to the principle of centralisation, and considered that co-operation between the Federal organisations and the local authorities was preferable. Each time that an enquiry had been made on the spot, it had been held at the request of the city concerned, and in that way disputes had been avoided.

The system adopted in Great Britain, one which left the local authorities a fairly wide measure of freedom, was of especial interest. In order to appreciate the results obtained in each case by the local authorities, it would probably be well to enter them in a form of the kind used by the American officials. Surgeon-General Cumming repeated that it was a matter of indifference to him whether the forms were adopted for this purpose in the shape in which they were presented or with certain modifications.

Dr. Chodzko had referred to the rift dividing private doctors from Government doctors. That question was a burning one in the United States also. A meeting had been held recently comprising representatives of the medical associations, of the public health bodies, of economic interests, of foundations, private patients, etc. These representatives had asked Surgeon-General Cumming to appoint a committee of five to study the question, but he had not yet appointed the members.

The PRESIDENT thanked Surgeon-General Cumming for the valuable information he had supplied. He recalled that the Health Section had asked Professor Winslow to be good enough to make a statement on the cost of medical care in the United States.

Professor WINSLOW observed that Professor Léon Bernard had mentioned the difficulty of distinguishing between the prevention and the treatment of disease, and it was now recognised that public health services were vitally interested in seeing that adequate medical care was provided for the populations under their charge.

The problem of the cost of medical care had been largely solved in Europe through sickness insurance programmes. In the United States there were no such systems on any general scale, but free hospital service for the poor had been developed to a high degree. Professor Winslow believed that sickness insurance had been introduced into Europe particularly to meet the needs of the poorer classes. In the United States, it was rather the condition of the middle class which was now unsatisfactory, including those persons who were not willing to accept free treatment, but who were unable to pay the full cost of medical care. The lack of physicians in the rural districts also presented a serious and increasing problem.

The Committee had received a pamphlet entitled *The Five-Year Program of the Committee on the Cost of Medical Care*. This Committee had been organised under the chairmanship of Dr. R. L. Wilbur, Secretary of the Interior under President Hoover, in order to undertake a joint study by physicians, public health workers, economists and representatives of the general public of the extent of illness in the United States, the type and cost of the care which was at present received, the remuneration of the medical profession and the success of various experiments in organised medicine which had been set on foot to meet the needs of special population groups. The Committee had embarked on a five-year study of these problems

and hoped to be able to reach a solution mutually satisfactory to the medical profession, the public health workers and the public. Those concerned in this study would be glad to know of any similar work in Europe, and the Committee would be happy to communicate to their European colleagues the results of the researches carried out in the United States.

Professor LÉON BERNARD said that the researches now being undertaken in the United States presented the highest interest for Europe, and Professor Winslow's proposal for the communication to the Health Committee of the results of the enquiry undertaken by the American Committee should be given full consideration.

Dr. RAJCHMAN thanked Professor Winslow on behalf of the Health Section and himself. He would be glad if Professor Winslow could send, not only to the members of the Committee, but also to the Health Section, the documents published by the American Committee, as and when they appeared. The Joint Commission on Social Insurance and Public Health was conducting similar researches on its own account. It was therefore possible to anticipate that the Health Committee might have an opportunity, at a later date, of making certain suggestions based on the work of these two bodies.

The PRESIDENT, expressed once again the Health Committee's thanks to Surgeon-General Cumming and Professor Winslow for the valuable contribution they had made to its work, and underlined the importance of the progress made in the United States in the field of public health.

SIXTH MEETING.

Held on Tuesday, May 7th, 1929, at 10 a.m.

President : Dr. Th. MADSEN.

425. **Collaboration with the Greek Government in the Sanitary Reorganisation of Greece** (document C.162.M.63.1929.III.).

M. Raphael, Greek Chargé d'Affaires, came to the table of the Committee.

The PRESIDENT, speaking on behalf of his colleagues, said that he wished to express their thanks to the Greek Government for its assistance and hospitality. The delegation had particularly appreciated the assistance of the Greek Public Health Authorities, who had drawn attention to all the defects of the existing system in order that those defects might be remedied. The report which was now before the Committee was based upon the results of the wide enquiry which had been undertaken under the direction of Dr. Rajchman. The President also wished to thank the Medical Director and his colleagues for their remarkable work.

The President's note was read to the Committee (C.162(a).M.63(a).1929.III).

Professor CANTACUZÈNE wished to express his sincere congratulations to the delegation for the work which they had done. The report might be regarded as a model, and many public health services might benefit from it by adopting certain parts. The sanitary organisation scheme rested upon a wise basis, it being intended that gradual progress should be made by successive stages, and that the complete application of the reforms should be preceded by an experimental phase which would only affect certain limited areas. The authors of the scheme were to be congratulated on having recognised the necessity of making health organisations independent of political fluctuations. This was a point of capital importance. In this connection, Professor Cantacuzène recalled that the creation in Roumania of a Health Ministry, which was, as such, subject to a certain extent to political influence, had not perhaps realised the hopes of those who had expected that this change would secure for the health organisation the essential continuity and objectivity. The Greek Government had certainly acted wisely in adopting the ideas set forth in the scheme — a scheme which was instinct with the spirit in which the League had its being.

Professor Cantacuzène then submitted the following resolution :

“ The Health Committee,

“ Having received the report of the Commission on the collaboration with the Greek Government in the sanitary reorganisation of Greece, as well as the statement made by the Chairman of the Commission at the present session when presenting that report :

“ Approves the action taken by the Commission and accepts the conclusion of its report ;

“ Expresses its high appreciation of the work of the experts who have undertaken the preparatory work of the Commission ;

“ And offers its sincere thanks to the Greek authorities, including their technical officers, for the invaluable assistance which the Commission received at their hands. ”

Surgeon-General CUMMING supported Professor Cantacuzène's resolution and associated himself with the congratulations to the experts upon their excellent report. The Greek Government, in his opinion, should be congratulated for the method it had adopted to secure

the most expert advice available in the reorganisation of its public health services. He was convinced that adoption of the programme outlined in the report would produce results of far-reaching importance to Greece, a country which had so long a tradition of friendship with the United States, while the latter numbered among its residents so many who were of Greek origin. This enquiry and the collaboration of the Greek Government with the Health Organisation of the League in this matter were considered so important that the President of the United States of America had authorised him immediately to delegate one of his senior officers to take part in it, and to give all assistance within his powers for the success of the scheme contemplated. He sincerely hoped that the result of this collaboration would be as beneficial as possible to the Greek people.

Professor Cantacuzène's resolution was adopted unanimously.

M. RAPHAEL said that he had been keenly interested in the report of the Commission. In his letter of April 19th, 1929, the Prime Minister of Greece had made a very clear statement of the point of view of the Greek Government with regard to the forthcoming reorganisation. It would be unnecessary to enlarge upon this statement. M. Raphael wished, however, to take this opportunity of expressing the warm thanks of the Greek Government to the Chairman of the Committee and the other eminent persons who had visited Greece and conducted their investigations with such thoroughness and efficiency, as well as to the Medical Director and those who had collaborated with him in this valuable work. He was convinced that continued and close collaboration between the Greek Health Services and the Health Organisation would produce the most satisfactory results.

Finally M. Raphael wished specially to thank Surgeon-General Cumming for the statements which he had just made, and which he had greatly appreciated. He would not fail to communicate these statements to his Government.

The PRESIDENT thanked M. Raphael for his kind words. The exchange of letters which had taken place showed that the collaboration to which he had referred already existed, and there could be no doubt, in view of the letter which had been received from the President of the Council, that the plan which had been elaborated would be adopted.

(M. Raphael withdrew.)

The PRESIDENT wished to express particular thanks to M. Aghnides, of the Political Section, for his invaluable assistance in this work.

426. Report on the Second Session of the Commission of Expert Statisticians (Annex 6).

Dr. RAJCHMAN drew attention to two of the recommendations of the Commission of Statisticians in connection with the decennial revision of the International List of Causes of Death. According to one of these recommendations, the replies received from the various Governments should be referred direct to the Joint Commission. In the other, a desire was expressed that the International Conference should consider the possibility of standing arrangements being made for the study of questions relating to the International List in the intervals between the decennial revisions, and within the limits of the agreement reached on this subject between the International Institute of Statistics and the Health Organisation of the League. The second of these recommendations was addressed to the Health Committee direct.

With regard to morbidity statistics, the experts had recommended, *inter alia*, that the nomenclature adopted should be that of the International List which was to be determined at the forthcoming Conference for the following ten years, or of a list in which the nomenclature was similar. Dr. Rajchman pointed out that the first three recommendations of the experts on this subject might be referred to the Joint Commission. He suggested that it would be preferable to discuss the recommendations of the Commission with regard to BCG vaccination separately and in greater detail.

427. Report of the Joint Commission of the International Institute of Statistics and of the Health Organisation set up for the Preparation of the Fourth Revision of the International List of Causes of Death (Annex 7).

Dr. CHODZKO explained that this report had been drafted by M. Huber, Director of the French General Statistical Service. The principal revision which had been suggested was a marked reduction in the number of headings in the detailed List, it being proposed that the original number, 200, should be reduced to 155.

Dr. Chodzko believed that this change would tend to further the introduction of the International List in those countries which were still recalcitrant. A notable change that had become manifest in the provisional revision of the List was the adoption of an aetiological, in preference to a purely anatomical, classification as the basis of revision. This change of attitude was in keeping with the advance of medical science in recent years.

The Joint Commission had adopted an important recommendation with regard to a point of procedure. Recognising that the members of the Conference fell into two groups, those representing the countries which had adopted the detailed List and those representing countries which employed the abridged List, it had proposed that the detailed List should be discussed by the former group only. The Commission had also recommended that its dissolution should not take place until the opening of the Conference.

Dr. Chodzko added that he would forward to Dr. Rajchman a short memorandum by Dr. Kacprzak, head of the Statistical Service of the State College of Hygiene at Warsaw, on the origin and development of the nomenclature of causes of death.

In conclusion, Dr. Chodzko wished to lay particular emphasis on the cordial attitude towards the Health Committee which had been manifest throughout the session of the Joint Commission, and on the spirit of collaboration which had inspired the proceedings.

Dr. JITTA assured the Committee, on behalf of the International Institute of Statistics, that the Institute would be pleased to collaborate with the Health Organisation in this branch of its work for as long a period as should be necessary.

He pointed out that, judging by his own experience, more importance would appear to be attached in the Netherlands to causes of still-birth than was the case in other countries. The Commission had considered a nomenclature of causes of intra-uterine death drawn up by the Commission of Experts on Infant Welfare. It had agreed that this nomenclature was too detailed to serve as a basis for general statistics, but the division into three groups adopted by the experts had been preserved.

Dr. Jitta added that the Committee would realise the necessity for drawing a distinction between "abortion with septic conditions" and "abortion without septic conditions being mentioned".

Sir George BUCHANAN was sure that all his colleagues would be grateful to Dr. Chodzko and Dr. Jitta for their clear explanations of the work accomplished by the Joint Commission. It was particularly satisfactory that, in fixing the nomenclature, no acute cleavage of opinion was arising, either as between the Health Organisation and the International Institute of Statistics, or as between the ætiologists and the anatomists.

The suggestion that the representatives of those countries which had not adopted the full List should be requested to abstain from intervening in the discussion on the revision of that List was wise. In this connection, he mentioned that, in the opinion of the British Government, it was undesirable that the document issued at the close of the Conference should be given the misleading title of "Convention". This term could not rightly be applied to a document which merely contained recommendations, and should be reserved for agreements which were actually binding on the parties concerned.

As regards the suggestion that the Joint Commission should be authorised to continue its co-ordination of the nomenclature during the next ten years, he noted that the Commission itself was expecting the matter to be considered at the forthcoming Conference, and he did not think that the Health Committee should prejudge the decision of that Conference. His British colleagues on the Joint Commission had not wished, he believed, to commit themselves to a definite approval of such a prolongation of that Commission's task.

Sir George Buchanan thought that the preparation of the alphabetical list which was referred to in the first recommendation of the experts with regard to morbidity statistics was obviously desirable. He was pleased to note that, in their second recommendation, the experts had not declared themselves warmly in favour of proceeding immediately to the compilation of a comprehensive index of international nomenclature of causes of sickness. A compilation of this kind had been advocated in various quarters during recent years. It seemed to be believed that, if only the nomenclature of the insurance and hospital returns in every district could be brought into conformity with the nomenclature of such an index, it would be possible to determine the distribution of and variation in each particular illness throughout the world, or to compare the health of districts one with another.

The Committee should consider, however, whether any attempt to establish such an index would not merely be a waste of time and energy. At the present time, even for diseases regarding which a definite nomenclature and a system of compulsory notification had long been established, all sorts of difficulties existed in comparing the figures of different countries or different areas of the same country. It was at least arguable that the best proceeding was to avoid mass statistics and to proceed by a thorough sampling examination of individual diseases, as had been done in Great Britain in the case of rheumatism and cancer. In such intensive enquiries a nomenclature might be necessary, but it would practically be an *ad hoc* nomenclature created for the needs of the particular enquiry. A considerable step forward would shortly be taken in the revision of the international nomenclature of causes of death, and in any case this should be cleared up before the nomenclature of causes of sickness was dealt with internationally.

Sir George Buchanan alluded also to the reference to the Expert Statisticians for advice as to the statistical tables in *The Health Year-Book*. Any increase in these tables should be very carefully considered. The impression might arise that the statistical information contained in them was comparable as between different countries, whereas that information was usually only of value as providing an illustration of conditions in individual countries.

Dr. CARRIÈRE thought that the reduction in the number of headings in the List of Causes of Death was a satisfactory change which would tend to facilitate the adoption of the Lists. In connection with the revision of the Lists of Causes of Death, he drew attention to the confusion which resulted from the adoption of fresh lists, an adoption which sometimes took place even before the former list had come into current use. He would ask whether these revisions were really required. The need had been alleged of taking into account the progress of science. He wondered whether the practical drawback to the revisions did not outweigh this theoretical advantage.

He was glad to note that Sir George Buchanan had taken up the question of lists of causes of sickness. He agreed with Sir George Buchanan that it would be necessary to exercise even more prudence in this sphere than in the establishment of Lists of Causes of Death. He wished, however, to point out how valuable these lists would be for the various administrations. Care should be taken not to confuse the List of Causes of Death with the list of causes of sickness, which was used for a different purpose. The Swiss insurance agencies had requested Dr. Carrière to draw up a nomenclature of causes of sickness. He had found it difficult to meet this request and would have been glad to have a model list in his possession. He believed that lists of causes of sickness would be of great importance and value for insurance agencies.

Dr. Carrière recalled Dr. Rajchman's statement that the following recommendation had been drafted in intentionally vague terms :

“ That the Health Organisation should consider the possibility of undertaking scientific studies of the prevalence of diseases, particularly of diseases of great importance to public health. ”

He wished to know which diseases were meant by “ diseases of great importance to public health ”. Were studies to be made of tuberculosis, malaria, etc., or of new diseases ?

Dr. TSURUMI shared Sir George Buchanan's view with regard to morbidity statistics. He thought that the recommendations of the Commission of Experts would be difficult to apply.

Dr. Tsurumi asked Dr. Rajchman what was meant by the words “ pathological conditions ” in Recommendation (a). He also asked Dr. Chodzko what form the information on endemic diseases should take. Should all these diseases be placed under different headings or should they, on the contrary, be grouped under one heading ?

Dr. LUTRARIO said that he would not expatiate upon the observations which had been made, but that he would like to have some explanations with regard to the interpretation of the word “ still-birth ”, which should, he thought, be defined. Certain countries applied this term to cases of the death of children before they had drawn breath. On the other hand, other countries applied the term to cases of death prior to the declaration of birth at the registry. This question had already been considered by the Joint Commission. Dr. Lutrario wished to take this opportunity of entering a strong recommendation that the Geneva definition should be adopted in all countries, since countries in which the term “ still-birth ” was applied to cases of death prior to the declaration of birth at the registry could not but furnish misleading statistics.

Dr. Lutrario asked that a list should be drawn up of the synonyms employed in declarations of causes of death, such a list being indispensable to comparison between the statistics of different countries. He instanced the confusion which constantly arose between typhus and typhoid fever. In Italy, for example, the word “ tifo ” was used to indicate typhoid fever, and it had been noted that a great number of cases entered as typhoid fever had been entered in the statistics as cases of exanthematic typhus.

Professor Ricardo JORGE said that, since the Committee was at present concerned only with points of procedure and was not discussing the question of substance, he would not speak for the moment of the text and headings of the Lists of Causes of Death. He recognised that frequent revisions of Lists of Causes of Death created some disturbance in the establishment of national statistics, but he thought that decennial revisions were nevertheless necessary, for the nomenclature of causes of death, like all other nomenclatures, contained defects which should be removed. Considerable progress, moreover, had already been made. The defects were due to the fact that medical practitioners did not yet possess a pathological nomenclature. Moreover, even if such a nomenclature existed, it would still be necessary to take account of the individualism of medical practitioners in their diagnoses.

The morbidity lists to which Dr. Carrière had drawn attention would fill a gap which had existed hitherto. Formerly, in the time of Bertillon, morbidity lists had been associated with Lists of Causes of Death. It was now proposed that the two lists should be separated, and it would be for the Conference to undertake this task.

With regard to the synonymous terms employed in the Lists of Causes of Death, he wished to point out that a list of such synonyms was contained in every decennial nomenclature.

Dr. CHODZKO said that the Joint Commission was very grateful for the praise which the Health Committee had bestowed on its work.

In reply to Dr. Tsurumi, he explained that all local endemic diseases came under Heading No. 37. Among these were included yellow fever, which was considered as an endemic in Africa and Brazil, and certain endemic diseases in other countries, such as Poland, Eastern Prussia, etc., which could not be included in an international list.

Dr. JITTA referred to the case of cholera which did not appear on the list of epidemic diseases. All that had been done in this connection was to request in a note that when cholera existed as an endemic in any country, an indication should be given, together with the indication of the deaths occasioned by each particular disease, of the number of deaths which were attributed to this cholera.

The question of the revision of the lists had already been considered at the Paris meeting. Attention had been drawn to the difficulties of such revision, and it had been decided that the lists should be altered as little as possible. M. Huber, the Chairman of the Commission, had promised to present an explanatory note on each of the changes effected.

Dr. Jitta entirely agreed with Dr. Lutrario with regard to the methods of registration of still-birth. A few years ago, in his own country, children who had died before the declaration of their birth had been considered as still-born. That declaration might, however, be made after a lapse of as much as three days after the day of birth. The administrative regulations governing the declaration of still-birth had since been changed.

Dr. Jitta also agreed with Dr. Lutrario with regard to the question of the list of synonyms. In the new list, each heading should be accompanied by a list of such synonyms.

Dr. RAJCHMAN said that he would reply one by one to the various questions which had been put to him. In the first place, to the question whether the Secretariat would take account of the findings of the statisticians with regard to the tables to be inserted in the *Year-Book*, he would reply that he was glad, for his part, to state that Dr. Boudreau, who had been present at Berlin during the discussion of these tables, had warned the Commission against the dangers of such tables.

In reply to Dr. Tsurumi's question with regard to the words "pathological conditions", he explained that the insertion of these words had been due to an error. The correct text was "descriptive terms of diseases and of pathological conditions".

In reply to Dr. Carrière's question, Dr. Rajchman explained that the reference in the paragraph which Dr. Carrière had quoted was to diseases the notification of which was compulsory. The Health Section, moreover, preserved complete freedom of action on this point. It would be possible to make a distinction between the various paragraphs of this document, since the first of these paragraphs related to the nomenclature and the others to the study which was to be undertaken. For his part, he thought that questions in which nomenclature alone was concerned should be left to the Joint Commission, these questions falling particularly within its jurisdiction. In any case, the Health Committee retained complete freedom with regard to the studies to be undertaken.

A desire had been expressed that the International Conference should decide upon a formula which would be acceptable to all. It was not yet known what the International Conference would do. Whatever decision it took, however, the autonomy of the Health Committee would remain intact. The Conference would not, moreover, be a Governmental one, and could not, therefore, do much more than make recommendations. The work of the Health Organisation of the League should be continuous and, since the Joint Commission had already carried out some valuable work, it was only right that it should pursue its task.

Professor Léon BERNARD recalled that, together with Dr. Jitta, he had been one of the first to advocate the creation of the Joint Commission. He regretted, however, that he could not entirely agree with Dr. Rajchman. He recognised that the Joint Commission should continue to ensure liaison between the International Institute of Statistics and the Health Committee, but he wished to make a reservation with regard to the Medical Director's view of the part to be played by Governments in the body set up by the Paris Conference.

As Chairman of the Commission of Clinicians set up to enquire into vaccination by BCG, he wished to recall the circumstances in which that Commission had requested the statisticians for a statement of their views. Too little time had elapsed as yet for an assessment of the results of BCG vaccination to be possible. Dr. Calmette had therefore been obliged to frame his judgment on the basis of the statistics which he himself or other experimenters had collected. It was precisely his statistical contentions that had occasioned the criticism of the professional statisticians, criticism which had been very lively, and occasionally out of place, especially in the case of Dr. Greenwood.

The Commission of Clinicians at Paris had then examined the question, and, having been impressed by the observations that had been made, had thought it necessary to lay down the method in which the statistics should be drawn up in the future, in order that they might be satisfactory from the points of view both of pure statistics and of clinical experiment. In order to forestall criticism, it had decided to submit to the Commission of Expert Statisticians a preliminary draft which it had prepared.

Professor Léon Bernard had read the reports which had been drawn up after this consultation of the expert statisticians. Although he was himself a member of the International Statistical Institute, he regretted that the documents of the Commission of Clinicians had been submitted to professional statisticians. They had shown that they had no idea of the actual facts, of the practical aspects of prevaccination, or of clinical experiments in different methods. They had confined themselves to the field of abstract figures, and the result had been that a large part of their advice was useless. As Chairman of the Commission of Clinicians, he protested, therefore, against the conclusions of the Commission of Expert Statisticians, and asked his colleagues on the Health Committee to decline to accept those conclusions. While the Health Committee should take note of that part of the experts' advice which was sound, it would be regrettable, from the point of view of future studies of BCG vaccination, if it were to adopt the conclusions of the Committee of Experts which had met at Berlin, the statisticians having shown that they had no idea of the practical working of an enquiry of this kind.

Sir George BUCHANAN said that he had followed Professor Léon Bernard's remarks with great interest, and thought that the results of this consultation with the statistical experts showed how desirable it would have been that some member or members of the Health Committee should have been present at their meetings, in order to guide their discussions and act as Rapporteurs to the Health Committee on the question. The Commission of Experts had, he believed, shown no great enthusiasm in undertaking the study of the question of BCG vaccination, and the fact that its conclusions were alleged to neglect practical requirements

was to be largely attributed to the situation in which the members of that Commission had been placed. If application were made to medical statisticians only after a failure to sift the numerical data, and after having excluded them from all the preliminary research, it could hardly be expected that they would reach practical conclusions. The great mistake of the Conference on BCG had been to ask the views of all who might be interested in the question: clinicians, veterinary surgeons, pathologists, bacteriologists, etc., but to pass by the medical statisticians, and thus to make it impossible for them to acquire that practical point of view for the lack of which they were now reproached. The statisticians, he noted, had proposed that the results of all experiments in BCG carried out in different countries should be centralised by the Health Organisation, and then referred to the statisticians for examination. If it were intended that each country should be left free to conduct the enquiry in its own way and to draw up its own report of the results of that enquiry, the proposal might be regarded as reasonable.

Dr. RAJCHMAN said that he would reply in the first place to Sir George Buchanan's observation, which was to the effect that the Health Committee had before it a report which was neither objective nor impartial, and that it was difficult to induce the experts to regard matters from a practical point of view. He hoped that Sir George Buchanan would not maintain this opinion.

He confessed that, on reading the report of the Commission of Expert Statisticians which had met in Berlin, he had been a little disappointed, having noted that its recommendations could not be given practical application, and that the Commission of Experts had, moreover, rejected the views of its own Sub-Commission appointed to examine the documents on BCG vaccination. The Chairman of this Sub-Commission had been a leading statistician on medical matters — Professor Westergaard, and the Sub-Commission had included an opponent of BCG, Dr. Rosenfeld, and another expert, Dr. Schlossmann, who had been specially indicated by the views which he had expressed on this subject. Finally, the Secretary of the Sub-Commission had been Dr. Biraud, representing the Health Organisation. The Sub-Commission had made definite recommendations with regard to BCG vaccination, which had been rejected by the Commission of Expert Statisticians.

Dr. Rajchman read these recommendations, and concluded from them that the Sub-Commission had thoroughly probed the subject, had recognised all its difficulties, and had formulated resolutions which took account of the facts, whereas the Commission of Statisticians itself, rejecting the conclusions of the Sub-Commission, had adopted recommendations of a markedly different character.

With regard to the question of the transmission of observation cards to the Health Organisation, Dr. Rajchman entirely shared Sir George Buchanan's view. This proposal should not be accepted. There was no reason for making the Health Section responsible for the vast task of sifting these cards.

If the recommendation of the Commission of Experts were analysed, it would be seen that it amounted to a recommendation of the form of enquiry which Professor Debré had already recommended for the studies in infant mortality. It was based on the same principle. It was essential that the enquiry should be entrusted to a competent director, who would have resort to the advice of statisticians, that it should relate to a fairly large number of children, and that it should combine observations made over fairly long periods in order that every modern statistical method might be applied. It should be noted that this recommendation was framed in vague terms in order that it might occasion no objection on the part of the directors of the institutes and clinics which had commenced experiments with BCG vaccine, and which would consequently find no difficulty in supporting these recommendations.

A joint meeting might, moreover, be contemplated, at a more or less early date, of the statisticians associated with the clinical studies of BCG vaccination, in order that they might be asked to give a precise interpretation of the material which would be submitted later to a special Conference of Statisticians. The general principles on which any precise study should be based would thus have been applied.

Professor OTTOLENGHI said that Dr. Rajchman had anticipated several observations which he had himself intended to make. He would therefore confine himself to certain supplementary remarks.

When the proposals of the Paris Conference on BCG, in connection with the experiments in the vaccination of newly-born children which were to be undertaken in the different countries, had first been discussed, he had maintained the principle that, no better method of solution for such a question than statistical research having hitherto presented itself, it was essential that such research should be pursued with all necessary accuracy. In conclusion, he had proposed that the Health Committee should consult the statisticians before the vaccination experiments were begun. Instead of consultation being limited to the statisticians alone, he would have preferred that a joint meeting of the statisticians, the clinicians and the hygiene experts should have been held, in order that conclusions of which all would approve might have been reached. Although this procedure had not been followed, he agreed with Dr. Rajchman that the recommendations of the Commission of Statisticians were not, on the whole either immoderate or impracticable. The lines of action indicated by that Commission would be of value to further studies.

Reverting to Dr. Rajchman's proposal that the doctors who undertook an enquiry of this kind in their own country should bear in mind the advice of the Commission of Statisticians, he thought it well once more to stress how necessary it was that judgment should not be left to the statisticians alone. He would recommend that a joint meeting of the

statisticians and the organisers of the enquiry in the different countries should be convened as soon as possible, in order that they might agree upon uniform methods for the collation and analysis of the data obtained; methods which would be sufficiently accurate and at the same time practical.

Various forms and cards had been suggested, on which particulars were to be entered in the various countries in which the enquiry would be made. In this connection, Professor Ottolenghi asked whether it would not be well first to submit the models of these cards and forms to those concerned in each country, asking them for suggestions and observations, and not to hold the meeting to which he had referred until these had been received. This was the procedure which had been followed in drawing up the statistics in connection with infant welfare. Relations should be opened with all concerned, undue haste being avoided, if exact statistical data were to be obtained.

Professor Ottolenghi urged, therefore, that an endeavour should be made to create closer liaison between medical practitioners and statisticians in the preparation of the work for the enquiry, and that, on the other hand, liaison should be established with the institutes in which the enquiry would be made, in order that the directors of those institutes might be enabled to state their views.

Professor CANTACUZÈNE gave a brief account of his personal experience of BCG vaccination. The number of cases of this vaccination in Roumania had greatly increased, since there were now more than 25,000 vaccinated children in that country. The statistics of these cases had recently been studied, account having been taken as far as possible of the observations of the statisticians. The cases had been closely scrutinised and sifted; incomplete observations or observations of doubtful accuracy had been discarded, and approximately 17,000 cases had finally been selected for the study. The general results of this analysis, which had been entrusted to a professional statistician, had differed very little on the whole from those obtained by the usual methods. Such differences as were noted had been mainly due to the fact that account had been taken on this occasion of the "life table". This was the most valuable change which the recommendations in the experts' report had brought about.

Experience showed, indeed, that the difficulties encountered in such a study were not so much statistical as medical. They were mainly due to the vague indications which were often given by doctors in their diagnosis of the cause of death of the child. In the Roumanian statistics, for instance, whenever a diagnosis of meningitis was, from the ætiological point of view, ill-defined, it was at once assumed that the case in question was one of tuberculous meningitis — the result being that doubt might be cast on the efficacy of the vaccine. In spite of the extreme severity of this method, the indisputable efficacy of the vaccination had become abundantly clear. Of its innocuous nature there could no longer be any possible doubt.

After examining the recommendations of the Commission of Expert Statisticians, Professor Cantacuzène shared Professor Léon Bernard's view. Those recommendations were far too systematic, and bore too little relation to actual conditions and to the possibilities of medical practice. Nevertheless, they provided valuable general indications with regard to the methods to be followed, particularly in respect of the "life tables". It should, however, be borne in mind that the application of these methods should be elastic, and that the details should vary according to the different countries and centres.

In conclusion, Professor Cantacuzène said that, in all future research, every endeavour should be made to bring about close and unbroken collaboration between the statisticians and doctors. He thought that it would be very desirable to convene a conference in connection with the introduction of these methods, at which the directors of the institutes which had been requested to pursue the study of BCG vaccination would be present, together with the statisticians who normally collaborated with them in this work. It would thus be possible to agree upon the adoption of a statistical method which would be at once reasonable, elastic, objective and free from all abstract dogma.

Professor Léon BERNARD, referring to Professor Cantacuzène's observations, pointed out that the principal difficulty was a medical one. There was a period in human life when medical practitioners could not be held responsible for errors of diagnosis which they might commit. That period covered the first two years of childhood. It was impossible in such cases, unless a post-mortem examination were made, to give a diagnosis which could be used for scientific ends.

He did not think that there was any ground for the criticism that, at the Paris Conference and at the meeting held at Berlin, there had not been sufficient liaison between statisticians and clinicians. The clinicians had been represented by Dr. Schlossmann, and he wished in this connection to pay a tribute to the leading rôle which he had played. Dr. Schlossmann had been present in a threefold capacity — as statistician, child doctor and member of the BCG Commission — in order to make provision for liaison between statisticians and clinicians.

He thought that it might be concluded from the report that the Sub-Commission had adopted the model cards for BCG, which had been presented by the Commission of Clinicians. The latter Commission had always held that these cards should be first submitted to the directors of the establishments which would be called upon to employ them. The procedure which had been adopted required, however, that the cards should be shown in the first place to the statisticians, prior to submission to the directors of these institutes.

In conclusion, Professor Léon Bernard noted that the Committee was in unanimous agreement with regard to the need for close liaison between clinicians, statisticians and directors of institutes which were to apply BCG vaccination.

Dr. Rajchman asked whether it would not be well, before proceeding to a classification of the results, to call a meeting of all those collaborating in the work in order to settle the preliminary question of the groups of witnesses, the importance of which had already been pointed out by Professor Debré.

Professor Léon BERNARD agreed with this suggestion.

Sir George BUCHANAN asked whether the first conference would consist only of statisticians and clinicians, or whether the directors of the institutes at which the vaccination would be organised would also be present.

Dr. RAJCHMAN replied that it would be preferable that each of the two categories concerned should be represented.

SEVENTH MEETING.

Held on Tuesday, May 7th, 1929, at 3.45 p.m.

President : Dr. Th. MADSEN.

428. Application of Article 10 of the International Opium Convention of February 19th, 1925, to Morphine Esters.

Dr. CARRIÈRE, Chairman of the Opium Commission, commented upon the note which he had prepared on this subject (Annex 8), and submitted the following resolution :

“ The Health Committee places on record that the recommendation made at its thirteenth session concerning the application of Article 10 of the International Opium Convention to ‘ benzoylmorphine and the morphine esters generally ’ should apply to all morphine esters without exception. The possibility of exempting, in conformity with Article 8 of the Convention, those esters the innocuous character of which may hereafter be clearly demonstrated, is however, reserved. ”

Sir George BUCHANAN thought that all his colleagues would agree that the question of the British Government had been opportune, since uncertainties might have arisen with regard to the phrase in question. The supplementary explanation now given cleared up the doubt.

He took the opportunity to present to the Committee a list, which was set forth in a document which had been circulated to members (document C.H.797), of preparations containing heroin, and as such falling under the 1925 Opium Convention, which the British Government proposed to exempt by application of Article 8 of that Convention. The justification for this proposal was that the considerable difficulty with which the heroin could be recovered from these preparations effectively prevented their being used for any other purpose than the legitimate medicinal use for which they were required.

Attention had lately been directed in England to the extent to which the substance “ papaverin ” was in demand for export trade. It appeared possible that this substance might be liable to abuse as a substitute for morphine, and perhaps the Committee could throw some light on the subject. He inquired also whether any results had been obtained by the Committee created by the Brussels Conference to examine the question of standardisation of the analytical methods employed in various countries in the determination of the morphine content of particular preparations. The British authorities had been impressed by the differences between the estimated amounts of morphine in these preparations according as the official methods of one or another national Pharmacopœia were followed.

Dr. CARRIÈRE said that, with regard to the proposal of the British Government for the exemption of the preparations indicated in its list, he believed that the provisions of Articles 4 (d) and 8 of the 1925 Convention were so precise as to admit of no doubt. The matter might, however, be referred to a committee of experts.

With regard to the substance papaverin, he referred to the fact that the opium alkaloids were derivatives of phenantren or isoquinolin. Papaverin belonged to the second group, which had been demonstrated to be incapable of narcotic action.

The question of the possible standardisation of the methods of analysis referred to by Sir George Buchanan had been left in suspense, the Belgian Government not having taken a decision as to whether this standardisation should be made the object of an international convention. This question might receive the consideration of the Health Committee.

Dr. Carrière recalled that the British Government had communicated a previous list of three substances which it proposed to exempt from the provisions of the Convention, and that the Siamese Government had also communicated a lengthy list of such preparations. The consideration of the Siamese list had been delayed owing to the absence of a translation. Dr. Carrière proposed that these lists should be approved by the Committee and referred direct to the Office international d’hygiène publique.

Sir George BUCHANAN thanked Dr. Carrière for his explanations.

The PRESIDENT, speaking on behalf of his colleagues, thanked Dr. Carrière for the enquiries he had made.

The resolution submitted by Dr. Carrière was adopted.

429. **Work of the Cancer Commission : Exposé by Sir George Buchanan.**

Sir George BUCHANAN, Chairman of the Cancer Commission, asked the Committee to accept a verbal report on the work of the Commission since its last session, seeing that the results of the principal branch of the work which had been undertaken during this interval was before it in printed form, namely, the draft report of the Sub-Commission on the Radiotherapy of Cancer.

Before dealing with that report, he would briefly refer : (a) to the general work of the Commission ; and (b) to the progress of the enquiry on occupational cancer.

In regard to the general work, the Commission had not made any new requests for data, but the Secretariat continued to receive various communications and publications for which the Commission was grateful and which, it was hoped, would be utilised in due course. Certain of these contributions had particular interest because they were communicated specially for the information of the Commission.

Professor Deelman, through Dr. Jitta, had submitted a note on the present position of research undertaken in the Netherlands on heredity in cancer. The Committee would remember that the intensive enquiry into cancer of the uterus and the breast had confirmed the belief that there was little scientific or statistical evidence in support of the heredity factor. In the enquiry referred to by Professor Deelman, however, parallel investigation of the families of cancerous and of corresponding non-cancerous persons had been made and it was inferred from the data so far obtained — the figures at present are quite small — that the heredity factor was conspicuous in the cancer group. It would be premature to draw any definite conclusions from these data, but they at least suggested that enquiries on similar lines might usefully be undertaken by others. Interesting information had also been received from the Polish Congress on Cancer, which had been held at Warsaw, with regard to the influence of race on the disease, and a valuable memorandum on the same subject in relation to Japan had been supplied by Dr. Kusama. It was understood that difficulty in regard to funds had retarded the work on the relation between cancer and constitution in Italy, of which Dr. Lutrario had spoken at previous sessions. It had been hoped that the radiological and occupational cancer enquiries could include some incidental investigation into the factor of constitution, but this had not proved possible.

The study of occupational cancer was being undertaken by the special Sub-Commission under the chairmanship of Dr. Major Greenwood and had already made progress. Its secretariat was furnished jointly by the Health Section and the International Labour Office. While there were certain well-recognised types of occupational cancer — for instance, cancer of chimney-sweeps, mule-spinners, workers in pitch and tar and operators of X-rays — it had been noted that the rare cases in which these forms of cancer occurred appeared to be distributed to a varying degree among the same class of workers in different countries. If the reasons for these discrepancies could be found, some further light might be thrown on the ætiology of the disease. The Sub-Commission had also considered the possibility of the existence of forms of occupational cancer which had not hitherto been suspected and would only be brought to light by new studies. It would, in this connection, be remembered that mule-spinners' cancer, now so well known, had occurred for many years before its occupational cause was realised. The Sub-Commission was interesting itself also in an enquiry into skin cancer which had lately been initiated in Great Britain, in which country several centres had been taken at which all cases of skin cancer were thoroughly examined, and special enquiries made into the previous occupations of the patient with a view to discovering whether any particular occupation might have been responsible for exposure of the skin to irritation. It might be possible after the lapse of about a year, to make a sufficient analysis of the results obtained to show whether this line of work deserved further extension.

In most countries, the results of the enquiry that had been undertaken to ascertain whether certain classes of miners were liable to cancer of the lung, similar to the Schneeberg cancer, had been negative. Cases of the disease among Czechoslovak cobalt-miners had, however, been established (see document Cancer S.C. Prof. 3). The Sub-Commission on Occupational Cancer, as progress was made, would probably either present monographs on particular subjects or submit a more comprehensive report with regard to occupational cancer in various countries.

Sir George Buchanan came now to the enquiry into radiotherapy and the report of the special Sub-Commission of radiologists and gynæcologists on that subject. The greater recognition in recent years of the curative properties of radium and of its specific action, in certain circumstances, on cancer tissue had given rise to a demand that the supply of radium for purposes of therapeutic treatment should be adequate. Radium being so costly, it was essential that methods calculated to produce the maximum benefit should be employed and only a few institutions, which were scattered over all parts of the world, possessed the necessary experience on this matter. This consideration was specially important from the point of

view of the League's Health Organisation, which desired to help Governments that were called upon to spend money on radium and which had to see that their money was effectively used.

The form of cancer for which all countries most desired this information was cancer of the uterus. Relatively, the results of the various methods of treating cancer of the skin and of the tongue were easy to ascertain, but in the case of uterine cancer, where a deep-seated organ was involved, and the technique was very varied and complicated, the need for appraising the potentialities of radium treatment was very great. Appraisal was the more necessary when one considered the only alternative, namely, formidable surgical operations. The Sub-Commission had realised that it would be necessary to have resort only to a small number of institutes possessing lengthy experience of the subject, and considered that, in assessing the results of the treatment, it was essential to take as cured cases only those in which at least five years of survival after treatment had been proved.

In the first instance, the Sub-Commission had applied only to three clinics — at Stockholm, Paris and Munich respectively—and had arranged for co-operation between these clinics in a thorough study of the results achieved in the treatment at different stages of uterine cancer. Meetings had been held at each clinic in succession and at each clinic the director had made a full statement on the methods employed and results obtained. Originally, it had been anticipated that this work of study and comparison would enable statistical data to be drawn up on the basis of which certain forms of radiotherapeutic treatment (radium alone, or combined with röntgentherapy) could be specified as giving the optimum proportion of cures. The methods employed in the three clinics in question had, however, differed in so many essential particulars that it had not been possible to realise this anticipation. Each clinic, moreover, had a different conception of the definition of the various stages of uterine cancer, while the data available with regard to after-histories and survival had also been inconsistent. After getting at the facts, and after a careful analysis and through enquiry by Dr. Lane-Clayton, it was concluded that this line of enquiry would only create misunderstanding and had best be abandoned.

Consequently, in substitution for this line of action, the experts at each clinic, in accord with one another, had decided that each should set out in his own way the details of the methods which were followed and the results which had been obtained at the institution which he represented. The bulk of the report of the Sub-Commission on the Radiotherapy of Cancer (document C.H.788) was made up of these special monographs. If the results therein referred to — from any one of the three — were compared with those which had been obtained only some years previously, even by the most skilled surgical treatment, which so few women could obtain or would submit to, it would be realised that the position already reached by radiotherapy was highly encouraging.

In the presentation of this experience, moreover, the experts had taken the trouble to set out the details of various methods which at different times had seemed hopeful, had been fully tried out, but had ultimately been abandoned. At a time when radium was being used more than ever before, this kind of information should be particularly useful. Otherwise, men coming to radium treatment fresh and with enthusiasm would only be wasting time, and possibly causing loss of valuable life, by following lines of procedure which foreign expert experience had already conclusively shown to be unprofitable.

While the experts had given their individual and valuable reports, they realised that it would have been desirable that a statement of combined results should have been possible, and they had decided to make such statements possible in the future. Setting aside prejudices, they had reached important agreements with regard to future records. Sir George Buchanan referred specially to the agreement reached regarding the standard classification of stages of cancer of the uterus referred to on page 12 of the report, and to the standard form of case-record referred to on page 15. This form now stands recommended to all clinics and hospitals for their acceptance on the high authority of the whole Sub-Commission. If it is generally adopted, as no doubt will be the case when the report is published, those engaged in a similar enquiry in the future will have an enormous advantage.

In considering the demand for radium in recent years — illustrations of which have lately been given by the considerable purchases in Australia and the successful efforts which were being made at the present time in Great Britain to raise national funds for its purchase — the Sub-Commission was convinced that the new and widespread advertisement of radiotherapy might give rise to fallacious views with regard to the cures which it might effect, or as to the capacity of all hospitals and all clinics or individual doctors to use it. While the treatment of uterine cancer by radium at an early stage in the disease might, relatively, be considered a simple matter, its use at later stages demanded a far more advanced technique and experience, in the absence of which radiotherapy, so called, might be injurious rather than beneficial. In the last chapter of its report, therefore, the Sub-Commission had laid stress upon this consideration, and had formulated a series of propositions regarding the way in which radium should be distributed and used that would doubtless be valuable to the State or other organisations which have the responsibility of dealing with radium supplies. Professor Régaud, who prepared this chapter for the Sub-Commission, has also laid great and

necessary stress on the importance of public action to assist in the early diagnosis of this form of cancer at its first stages.

Finally, the Health Committee would agree that this Sub-Commission and its experts deserved its warmest thanks for the sacrifice of time which they had accepted in the performance of the task entrusted to them.

The view had been advanced that the virtual monopoly of the supply of radium was possibly being arbitrarily employed in order unduly to raise its price, and it had been suggested in some quarters that the League should intervene, in international interests, to deal with this suspected abuse. The matter had not come before the Cancer Commission in any way, but he did not believe that there was any evidence of such an abuse of the monopoly. He based this view on the report of a Special Committee of the British Government set up to advise the Cabinet on the question of radium supply, which had just been published.

The Sub-Commission of Radiologists had drawn attention in its report (document C.H.780) to the necessity of ensuring further international co-operation with regard to the radiological treatment of cancer. Questions would certainly arise on which the advice of the experts would be valuable, and it would also be necessary to follow up the work of international classification. No definite decision need perhaps be taken with regard to the continuance of the Sub-Commission's activities until the next session. The Committee would then be in a position to appreciate the reception accorded to the report and to the recommendations therein contained, and to consider whether a series of expert visits to other institutions was desirable, and how far the adoption of the new international classification need be further pressed.

In conclusion, Sir George Buchanan said that he was convinced that there were great possibilities in the treatment of cancer by radium. It was possible that some time in the future this treatment would be suspended, but at present it provided an efficient weapon for use against the common foe.

The PRESIDENT was sure that all the members of the Committee had followed Sir George Buchanan's statement with very great interest. He wished warmly to thank Sir George Buchanan for the successful manner in which he had co-ordinated the work on the cancer question. He begged him to transmit the Committee's thanks to the members of the Commission and to the experts.

Surgeon-General CUMMING said that he would be glad to have exact information on the accidents occasioned by the use of paint with a radium basis for the dials of watches, clocks, etc. Sensational rumours had been spread in the United States to the effect that the use of such paint had caused the death of a large number of work-women in the States. Professor Workling, who had been despatched to Europe to enquire into the matter, had not discovered any cases of radium poisoning either in Germany or in Switzerland. Surgeon-General Cumming would therefore be glad to hear the views of his colleagues on this question.

He regretted that, summoned by other duties, he would be unable to participate in the remainder of the Committee's work.

Reverting to his observations in connection with the enquiry into syphilis, he wished to point out, in order to obviate any misunderstanding, that his sole aim in making these observations had been to explain the action that had been taken in the United States, and that his remarks by no means implied a criticism of the part played by the Health Section—quite the contrary.

Dr. TSURUMI said that Dr. Nagayo was preparing a report which he intended to submit to the Health Section. Hitherto no case of occupational cancer had been noted in Japan. Dr. Nagayo had given various explanations of this fact, which would be found in his report.

Since he was keenly interested in the question of the bearing of heredity on cancer, Dr. Tsurumi was awaiting with impatience the report which Dr. Jitta was to present at the next session.

Dr. JITTA had nothing to add to the report of Sir George Buchanan, whom he wished to congratulate warmly. Professor Delman's researches into cancer were only preliminary but were of some importance. Too few cases had, however, been observed to make it possible to draw any certain conclusion. The most interesting point was the method of work which had been followed. Enquiries had been made; not from the patients, but from the doctors, and in small towns, where doctors knew all about the family and antecedents of their patients. Errors were bound to occur, but the information which had been obtained was extremely valuable. Professor Delman and himself would be very glad if a similar enquiry could be opened in other countries, for it would then be possible to observe enough cases to draw practical conclusions.

Dr. LUTRARIO said that he also had nothing to add to Sir George Buchanan's statement. He wished to inform the Committee of the results obtained in the course of an enquiry into occupational cancer which had been undertaken under the auspices of the International Labour Office and under the direction of Professor Loriga, General Inspector of Labour in Italy.

At present, this enquiry was being conducted in three regions — Piedmont, Liguria and Lombardy. The clinics, hospitals, dispensaries and diagnosis centres had been consulted. An extension of the enquiry to other regions would be contemplated later.

Hitherto only nine cases had been discovered in twelve years (1910-1922) in the town of Novi Ligure alone. These cases had occurred in the briquettes factory directed by the railway authorities (tar being used to a great extent in the manufacture of these briquettes). The cancer in these cases had been localised on the skin, and for the most part on the scrotum. No new case had been noted since 1922, although the manufacture had continued.

There had been no cases in the filatures, either in those which used the Ring method — which presented no dangers — or in those which used the Selfagtings method, which was dangerous on account of the projection of small drops of vaseline oil.

No results had been obtained in the gas-factories, nor in any of the other industries which worked with tar.

Mention had also been made of a case in the hospital of Sangallicano, and one at the Dermatological Clinic in Rome. It seemed, then, that Italy was less immune than had hitherto been supposed.

Dr. Lutrario wished to take this opportunity of also drawing attention to another subject which the group of Italian experts were studying—the relationship between cancer and the constitution of those suffering from it. The Health Committee had entirely approved of the study, which was at the present time a very important one. The establishment of two or three research centres was contemplated, in which each case would be thoroughly examined from the point of view of the constitution, and in relation with a subject free from cancer and placed under the same conditions. Steps had also been taken in official quarters in order to obtain the collaboration of medical officers of the Air services who have special experience of subjects connected with the constitution of the body.

It had not been possible, however, to make much progress in the enquiry, since funds were lacking. The General Direction of Public Health in Italy had been ready to make a contribution, but the Health Section had not been in a position to do likewise.

Dr. Lutrario said that he was not, however, disheartened, and he urged that means should be given him for pursuing this enquiry, which would crown the work which had now been continuing for five years. He pointed out that, for the moment, the experts were engaged in editing the reports which had hitherto been presented, certain of which required revision.

The PRESIDENT welcomed Dr. Carozzi.

Dr. CAROZZI said that he could give Surgeon-General Cumming the explanation for which he had asked in connection with accidents caused by radium paint. Surgeon-General Cumming had said that the enquiry in Europe had been fruitless. The explanation would appear to be that the radium solution used in America was a certain solution which had been invented by a Pole, who had himself died a few months previously as a result of its use. In Europe, a different solution had been adopted. The conditions of work were, moreover, different. In America, the solution was contained in small jars and the women who worked with it were obliged to form the brush into a point with their lips. In Europe, they had been spared this operation, and accidents had thus been avoided.

Dr. RAJCHMAN, speaking on behalf of the Health Section, thanked the Chairman of the Cancer Commission for his statement and for the ability with which he had directed the proceedings of the Sub-Commission on the Radiotherapy of Cancer. The Committee had cause to be grateful to him for having shown that, even by following a revolutionary method, much valuable work might be done. Sir George Buchanan's proposal had been extremely prudent, being to the effect that no decision should be taken until the next session, by which time the Committee would have read the criticisms in the medical Press with regard to the report which had been published, and that only then should the work of the Commission of Experts be resumed.

Sir George BUCHANAN, on behalf of the Cancer Commission, thanked the Committee for its expressions of appreciation, which he would transmit to the members of the Sub-Commission of Experts.

430. Second International Conference on Sleeping-Sickness.

Dr. RAJCHMAN read a note (Annex 9) on the report of the Second International Conference on Sleeping-Sickness and on the resolution adopted by the Council on December 11th, 1928. The Committee was called upon to take a decision on the note and on the report. The Conference had expressed a hope that the Health Organisation would recommend the convocation of a Third International Conference on Trypanosomiasis. This recommendation was worthy of consideration, although the matter was not particularly urgent. The Conference had, moreover, recommended that the Health Organisation should collect and analyse data concerning the prevalence and importance of sleeping-sickness in relation to other causes of morbidity. The Committee might consider this suggestion, which had been transmitted by the Council. Two recommendations of the Conference followed. The first related to the most efficacious manner in which the Health Organisation might assist scientists working in the various national laboratories, and contemplated the annual award of travelling scholarships to members of institutes and research centres. The second recommendation related to the organisation of interchanges to enable research workers in African laboratories to become acquainted with trypanosomiasis investigations carried out in laboratories in other territories.

Dr. Rajchman would venture to make an exception to the usual procedure and to submit the following draft resolution to the Committee :

“ The Health Committee,

“ Having considered the report of the Second International Conference on Sleeping-Sickness, the report by M. Quiñones de León to the Council on the work of that Conference, and the resolution adopted by the Council relating thereto,

“ Attaches special importance to the recommendation of the Conference that the Health Organisation of the League should collect and analyse facts obtainable in regard to the importance of human trypanosomiasis in relation to other causes of morbidity, and expresses the hope that the administrations concerned will co-operate fully in this study ;

“ Recommends that the services of the Health Organisation be placed at the disposal of the administrations of those territories and that it employ its usual methods of enquiry and work in complying to the fullest possible extent with the recommendation of the Conference ;

“ Endorses the recommendation of the Conference concerning the appointment of an expert Committee to assist in co-ordinating trypanosomiasis investigations, and recommends that the following experts be invited to serve on that Committee :

Dr. A. BAGSHAWE ;

Professor E. VAN CAMPENHOUT ;

Professor Aldo CASTELLANI ;

Professor MESNIL ;

Professor G. PITTALUGA ;

Professor R. STRONG.

“ Requests the Medical Director to take all practical action to give effect to the recommendations of the Conference concerning individual interchanges between laboratory staffs.”

Professor NOCHT approved the draft resolution proposed by Dr. Rajchman. He was pleased to note the good work which had been done by the Commission and the Conference. That work had mainly related to the scientific aspect of the question. From the practical point of view, the Commission and the Conference had already considered the question of prophylaxis, but only in general terms. He thought that the practical study of the campaign against trypanosomiasis might now be begun.

Professor Nocht had recently read the reports of two Belgian research workers who had made experiments with prophylactic treatment by Bayer 205, and had obtained good results. More than 3,000 people had been treated, and the doctors had endeavoured to follow up the cases for a period of ten months. They had got into touch with more than 1,600 of the patients, and had noted that, among those treated by two injections of Bayer 205, there was no case of contamination in the six months following the injection. During the ten months, only two cases had been found. The question arose, therefore, whether the time had not come to apply this prophylactic treatment in small centres, where it would be an easy matter to supervise the workmen in any particular industry, for example, and above all, the European employees in the threatened areas.

Each year, in the institute which Professor Nocht directed, as many as six people who had returned from Africa afflicted by sleeping-sickness had been treated. The other clinics and hospitals had probably treated as many or more patients. It would appear that two injections of Bayer 205 might be counted upon to produce prophylactic action. The immunisation appeared to hold good for six months, but not for longer.

Dr. RAJCHMAN pointed out that the report of the Second International Conference on Sleeping-Sickness contained a programme of research work. He read this programme and recalled that it had been adopted after a long discussion by a sub-committee.

Dr. LUTRARIO said that Sir George Buchanan and himself had been the only members of the Committee present at the Paris Conference. He wished to point out how successful that Conference had been, as much from the administrative as from the technical point of view. The Conference had not established a draft convention, but it had studied a complete scheme of assistance for persons suffering from trypanosomiasis. It had also considered a scheme for the improvement of local sanitary conditions and the organisation of the campaign against the disease.

An excellent draft convention had been presented by the Belgian delegation. The Conference, while recognising the value of the draft, had been of opinion that the time had not yet come for its adoption, in view of the different conditions obtaining in the various African colonies.

Dr. Lutrario wished to lay particular stress on Resolution No. 7 (page 2 of the report), which read as follows :

“ In view of the economic and public health importance of animal trypanosomiasis in Africa, the Conference recommends that close and continuous contact between medical and veterinary research should be established and that future international conferences should consider both the human and animal trypanosomiasis as a whole and not confine their attention to sleeping-sickness.”

He pointed out, in this connection, that the Italian colony of Erythrea was at present free from human trypanosomiasis, but not from animal trypanosomiasis.

The studies which had been undertaken had shown that there was probably a relationship between the two diseases, and he thought it would be well to throw light on this question.

Recently, in a village of Zululand, it had been thought necessary to settle the question of identity. A form of *F. rhodesiense* which had affected the inhabitants and the animals simultaneously had been noted. The village had been evacuated and, after sanitary conditions had been improved, the population had been brought back. After a certain time, however, the disease had broken out afresh among the animals and not among the men, which proved that the supposed identity was false. The research work into the relationship between animal and human trypanosomiasis would therefore have to be pursued.

With regard to the treatment of the disease and its prophylaxis, the Italian delegation had strongly recommended that the colonial administrations should be requested to experiment with preparations by way of the mouth, and Dr. Lutrario wished to press this recommendation. The only results hitherto obtained were those of the experiments undertaken in the English colonies in the use of a very expensive product. He would like a definite allusion to be made in Dr. Rajchman's draft resolution to the need of undertaking research work in this direction, and he was confident that such work would meet with success and would be of very great assistance from the point of view of prophylaxis.

Dr. Lutrario had learnt with regret that the laboratory of Entebbe was no longer working. In view of the very interesting results which that laboratory had obtained, he regretted that no endeavour had been made to keep it in being. He thought it essential to have a study centre for research work in connection with trypanosomiasis alone.

Sir George BUCHANAN thought that it would be difficult to introduce into the resolutions the particular matters raised by Dr. Lutrario. It was important that these points should be noted, but it would be better to adopt the report in general terms. As regarded the second paragraph, he assumed that the only object of the emphasis was to keep Governments on the alert, and to obtain from them a prompt supply of information for the Health Section. He thought it would be premature to send a representative or a mission to Africa at the present time to seek for information.

Dr. RAJCHMAN said that he had understood that the Conference had unanimously decided that it was not necessary to send a further commission of enquiry to Africa. Several difficulties remained to be solved, but the Conference had thought that it would be well, in the first place, to draw up a programme of research work for the laboratories and to circulate the reports among laboratories, drawing attention to the points which required elucidation; and, in the second place, to lay down bases for study and interchanges (report of M. Quiñones de León, document C.567.1928.III). The resolutions of the Conference had been approved by the Council.

The Council had further adopted the report, which had been transmitted to the various administrations in Africa, and the data required were beginning to reach the Health Section. It was thought that the Health Committee might strengthen that decision still further by laying stress on its importance. It had been proposed to divide the enquiry into three stages: first, the study of the documents available in Europe, which had been transmitted to the colonial administrations with a view to the collection of documentation appertaining to the territories they governed; secondly, the enquiry would then be taken up, should it appear desirable, in conjunction with the directors of the Health Services of the Colonial Offices, and, if necessary, a representative would be sent to the African territories concerned, who would place himself at the disposal of their administrations, would study on the spot, together with the chief colonial medical officers of those territories, the documentation that had been collected, and would place at the disposal of the local authorities the information which had been obtained elsewhere. The third stage would be the preparation of a general study based upon the documentation received, and including an outline of a sanitary programme.

Dr. LUTRARIO desired a few explanations on the programme proposed for the next Conference. He hoped that the Conference would not be limited to sleeping-sickness, but would deal with trypanosomiasis in animals. It would also be well for exact research work to be carried out regarding oral prophylaxis. The injections on which information had been given required the attendance of a doctor and of a medical assistant, whereas oral prophylaxis was a great deal simpler. The Italian Government was greatly interested in the researches into this subject.

Dr. RAJCHMAN replied that the Conference had confined itself to recommending that the Health Committee should organise interchanges and should collect documentation to be distributed among the laboratories. It would be useful if a fresh Conference were convened, but the necessity was not felt to be immediate.

Dr. LUTRARIO was particularly insistent that the Governments should be informed of the researches to be undertaken.

The PRESIDENT requested the Committee to adopt the draft resolution.

The draft resolution was adopted.

The PRESIDENT observed that the agenda was concluded, and requested the Committee to take a decision on the report of the Medical Director.

The report of the Medical Director was adopted.

431. Invitations to Congresses and Conferences.

Dr. RAJCHMAN read the memorandum on congresses and conferences to which invitations had been received.

He proposed that the Committee should postpone taking a decision as to representation at the Second International Congress on Malaria (Algiers, May 21st, 1930).

The Committee would be represented at the Fourth Congress on Social Hygiene of the British Empire by Sir George Buchanan.

The PRESIDENT hoped that Surgeon-General Cumming would consent to represent the Committee at the First International Hospital Congress at Atlantic City, U.S.A., from June 13th to 21st, 1929.

432. International Hygiene Exhibition, Dresden, 1930.

Dr. RAJCHMAN said that the Organising Committee of the Exhibition had enquired whether it would not be possible to provide for a special section for the Health Committee of the League at the Exhibition. He proposed that the Commission on Education in Hygiene should be instructed to hold a session at Dresden on the occasion of the Exhibition.

Dr. HAMEL observed that the members of the Committee had learned from the document communicated to them by the Secretariat that in 1930 an International Hygiene Exhibition was to be held at Dresden for the first time since the memorable Exhibition held in 1911.

The opening of the Exhibition would coincide with the inauguration of the new building which had been constructed to shelter the German Hygiene Museum and to enable it to develop its full powers of action. Dr. Hamel did not think it necessary to expatiate on the importance of the German Hygiene Museum, the creation of which, as members were aware, had been the result of the International Hygiene Exhibition held in Dresden in 1911. He merely wished to recall that the work of that institution was highly appreciated in Germany, and that the Museum had endeavoured, by its exhibitions and training equipment, to carry on effective propaganda in the realm of hygiene, even in a number of foreign countries. The Committee itself had, moreover, approved the Museum's work and had testified to its high esteem for it by complying, at its twelfth session, with the request made by the Museum for the participation of the Health Organisation in the International Hygiene Exhibition to be held at Dresden in 1930. The German Hygiene Museum and the Managing Committee of the Exhibition had instructed Dr. Hamel to thank the Committee once again for that decision. He would at the same time, on behalf of his Government, thank the Secretary-General for his friendly reply to the invitation of the German Government.

The preparations for the Exhibition were being pushed on actively. The German Government had, at the beginning of the current year, sent out official invitations to foreign States, and it might even now be anticipated that in all probability a large number of them would take part in the Exhibition. It was practically certain that eight European States would accept the invitation. The present position of the negotiations with the other countries, and notably with the United States of America and the South American countries, gave good grounds for hoping that they would shortly be brought to a successful conclusion.

In order to show the importance of the International Hygiene Exhibition, Dr. Hamel would merely point out that the site set aside for the Exhibition would have a total area of 360,000 square meters, of which 35,000 would be occupied by covered-in pavilions. For the portion of the Exhibition assigned to the foreign States, there would be constructed in the middle of the site an international pavilion covering a surface of 10,000 to 12,000 square meters, the central part of this hall being occupied by the exhibit of the Health Organisation of the League.

He wished to state, in this connection, that it was proposed to make study tours during the period of the Exhibition. These tours would be held in part in connection with the courses organised by, among other bodies, the Academy of Hygiene, with the help of eminent authorities belonging in particular to the foreign States. With the object of enabling persons of limited means to take part in the tours, it had been decided to grant special facilities for those participating. Not only doctors and hygiene experts desirous of undertaking medical studies, but also persons in other professions, such as economists, professors, members of social relief bodies, nurses, members of industrial undertakings of all kinds, etc., would be allowed to take part in the study tours. In parenthesis, Dr. Hamel drew special attention to the interest which the last category of visitors might find in a visit to the industrial hygiene exhibit.

He wished to assure the Committee that the Hygiene Museum, in co-operation with the health authorities of the Reich, the States and the communes, and with the chief authorities in medical science and social hygiene, as well as with the social insurance organisations and the charitable associations, would endeavour to confer on the Exhibition as marked a scientific and artistic character as possible.

In conclusion, he expressed the hope that the Health Organisation and the Health Committee would lend the Exhibition the benefit of their assistance and their patronage in any way which they thought most useful.

Dr. Hamel also stated that the Director of the Dresden Hygiene Museum had placed at the disposal of the Health Organisation a travelling hygiene museum, which would take up an area of 350 square meters.

This exhibition would be placed gratuitously at the disposal of the Health Organisation, but it was understood that the expenses of packing, transport, etc., would be defrayed by the countries to which it was sent on loan.

In view of the activities of the Health Organisation in Greece, Dr. Hamel proposed that, in order to enable Germany to make a contribution — although a very modest one — to the work which was contemplated, this collection should first be placed on view for a period of one year at the Health Centre which was to be created at Athens.

The PRESIDENT thanked Dr. Hamel for this interesting communication. He noted that all the members of the Committee were agreed that they should lend the Dresden Museum their full collaboration, and he thanked Dr. Hamel for the offer to place a travelling hygiene exhibition at the disposal of the Greek Government.

He considered that the proposal that the Commission on Education in Hygiene should meet at Dresden on the occasion of the Exhibition was admirable, and he invited the Committee to accept it.

The proposal was adopted.

Sir George BUCHANAN noted that the agenda had been concluded, but wished to know whether it was intended to resume the discussion on the annual report in order to give effect to the reservation he had made.

Dr. RAJCHMAN pointed out that, at the time when Sir George Buchanan had made his reservation, he had observed that it would be preferable not to discuss the annual report on the last day of the session. Now that Sir George Buchanan had said that he wished to maintain the principle that the report should be discussed, Dr. Rajchman proposed that the discussion should be begun at the next session.

Sir George BUCHANAN said that, in order not to hold up the work of the Committee, he would not press his reservation. He hoped, however, that the following year the discussion on the annual report could be held in a more satisfactory manner than had been the case in the current year. If there had been time, and if there had been an opportunity for studying the report, he would have desired to submit certain general observations and, in particular, to underline the special importance of the report. He seized the opportunity to thank the Secretariat for the work it had done and to stress once again the fact that so important a document should not be adopted without discussion.

Dr. RAJCHMAN said that he would welcome a discussion on the annual report, but he thought it would be inexpedient to wait until the eleventh hour to do so.

EIGHTH MEETING.

Held on Wednesday, May 8th, 1929, at 10 a.m.

President : Dr. Th. MADSEN.

433. Preliminary Draft of a Plan for Collaboration, in respect of Health Matters, with the International Institute of Agriculture (document C.H.794)

Dr. LUTRARIO gave a brief account of the steps taken in connection with this question. He recalled the happy initiative of the International Institute of Agriculture in arranging for collaboration with other international organisations concerned with rural hygiene. The Institute had entered into negotiations with seventeen organisations, all of which had given their support and sent a delegate. A Commission had been set up and had held its first session in May 1928; it had appointed its bureau and prepared its regulations. The International Institute of Agriculture now had, therefore, an international commission of co-ordination, forming part of the International Scientific Agricultural Council (C.I.S.A.), under which various sections were grouped. At the time when the international health organisations of Geneva and Paris had invited Dr. Lutrario to collaborate, Dr. Chodzko had already presented, in October 1927, a remarkable memorandum on rural hygiene, which he had also submitted to the Paris Permanent Committee in May 1928.

At the last session of the Paris Permanent Committee, Dr. Lutrario had presented a statement in which he had referred to the various aspects of the question, and had devoted particular attention to the question of rural hygiene as far as it fell within the competence of the Geneva Committee.

He presented the results of his study (document C.H.794) and made brief comments on this report. He pointed out in particular that the present-day country labourer was aware of his functions in the economic system of his country and was evincing new and legitimate demands. It was essential to improve his standard of living and to wage a campaign against those evils which particularly affected the country districts, especially malaria and tuberculosis. Dr. Lutrario gave a brief account of the advance of urbanisation and of the depopulation of the rural districts in different countries.

He drew attention to the remarkable work which had been done by several charitable associations, and particularly by the Rockefeller Foundation, which had undertaken the task of improving country dwellings, and of educating that large class of society, agricultural labourers, by means of demonstration motor-cars. The keystone of the problem was the improvement of housing conditions. Dr. Lutrario drew attention in this connection to the passage of his report on the system of land drainage in Italy.

After having consulted with Dr. Rajchman and Professor Carozzi, Head of the Health Service of the International Labour Office, he had been pleased to note that they were both in favour of a study of rural housing such as he suggested. The detailed plan of enquiry and the draft questionnaire contained in Annex 2 would be found in the report.

As Dr. Rajchman had pointed out, advantage might be taken, in opening the enquiry, of the rural hygiene interchange which was to take place shortly in Denmark. The collaboration of a delegate of the International Institute of Agriculture on that occasion would be most desirable. Dr. Lutrario also wished to make a particularly warm appeal to Dr. Chodzko, whose collaboration would be of great assistance in casting light on the problem.

Dr. CHODZKO expressed his approval of Dr. Lutrario's important and interesting report. He was ready to lend all the collaboration within his powers.

Professor NOCHT wished to lay stress upon point 3 of the report—the milk problem. He had been impressed, in the course of his studies in Germany, by the importance of considering, not only the quality, but the quantity of milk used in the nourishment of children. There were certain districts in Germany where almost all the milk produced was centralised by co-operative societies. The country people sold all their milk, and had therefore to buy milk for their children, but, in order to economise, they did not do so and fed their children upon a mixture of large quantities of adulterated coffee and a little milk. The town artisan was consequently able to feed his children much better than the country labourer. It was important that this aspect of the problem should be included in the scope of the enquiry.

Dr. TSURUMI warmly supported the plan of enquiry. In no country could its value be over-estimated, and least of all in Japan, where the total population was increasing rapidly, whereas the rural population was steadily diminishing. The Japanese Government attached very great importance to this problem, the solution of which should be one of the main factors in the improvement of sanitary conditions in the country districts.

The PRESIDENT said that he would be very pleased to assist the participants in the enquiry in Denmark on the occasion of the forthcoming interchange.

Dr. RAJCHMAN thought that the Committee would unanimously accept Dr. Lutrario's proposals. The interchange in Denmark would provide an excellent opportunity for opening the enquiry. Arrangements had already been made for the participation of a member of the International Institute of Agriculture in this interchange. He hoped that a report might be presented at the next session on the results obtained, and that it would then be possible more closely to define the practical details which should be adopted.

Dr. LUTRARIO thanked Dr. Chodzko for the promise of his collaboration, and the members of the Committee who had signified their approval.

In reply to Professor Nocht, he explained that he had contemplated the milk problem rather as a possible subject of future study and had focused attention on the question of rural housing and the comparison of rural and urban death rates. The second of these subjects had been placed on the agenda of the forthcoming session of the Office international d'hygiène publique. He thanked Dr. Tsurumi for his support, and also the President, who had offered to collaborate. He approved Dr. Rajchman's proposals. Under the circumstances, he did not think that there was any occasion to present a definite draft resolution forthwith.

Dr. Lutrario's report was approved.

434. Establishment of Standard Methods for the Examination of Preparations placed on the Market as Products with a Vitamin Content.

Dr. RAJCHMAN read a draft resolution, which was adopted after a short exchange of views in the following form:

“ The Health Committee,

“ In view of the need for controlling preparations alleged to contain vitamins which are placed on sale in constantly increasing numbers in many countries ;

“ Invites the Permanent Commission on Standardisation of Sera, Serological Reactions and Biological Products to consider the elaboration of standardised methods for the examination of such preparations ;

“ And requests the Medical Director to obtain information regarding the methods employed by public health administrations to suppress the abuses to which the sale of such products may give rise. ”

435. Adoption of the Report on the work of the Fourteenth Session.

The draft report was adopted, subject to certain formal amendments proposed by various members of the Committee (Annex 11).

In connection with Resolution 4 (enquiry into the causes of infant mortality), Dr. LUTRARIO pointed out that Italy had made preparations for an enquiry and had done much work in this field.

Dr. RAJCHMAN replied that a special report would be made on the work done in Italy. This report would probably be submitted at the next session, as soon as the results of the enquiry had been published.

Dr. LUTRARIO asked that reference should be made to this fact in a footnote.

In connection with Resolution 9 (report of the Commission of Expert Statisticians on its second session and report of the Chairman of the Joint Commission of the International Institute of Statistics and of the Health Organisation on its first session), Professor OTTOLENGHI proposed that, in paragraph 3, part of lines 4 and 5 should be deleted, so as to read merely: "considers that . . . should be communicated to the directors of the studies contemplated by the Paris Conference". He emphasised that the Committee had already received a series of well-defined proposals from the Commission of Expert Statisticians and — as had already been remarked at an earlier meeting — these proposals were not excessive for the preparation and compilation of statistics on BCG vaccination. It was now a question of communicating these proposals to the directors of national investigations, and, later, of bringing about meetings between them and the expert statisticians, in order to overcome certain difficulties of a practical nature which seemed likely to arise out of the application of the rules enunciated by the Commission.

Dr. RAJCHMAN said that this was an entirely fresh contention. At the preceding meeting, all the members of the Committee had agreed on a point of principle: they had considered that the recommendations of the Expert Statisticians Commission made at the Berlin meeting were somewhat complicated, and that it would be necessary to have them interpreted, before they could be put into practice, by the statisticians themselves, who would act in an advisory capacity to the directors of clinical research.

It was in this connection that Professor Ottolenghi, as well as Professor Léon Bernard, had stated that the directors of clinical research work should also be present at this meeting of their statisticians. Arrangements should be made for this meeting, at which the directors, accompanied by their expert statisticians, would meet certain members of the Health Section for a discussion of the best method of giving practical application to the proposals in their respective countries.

The PRESIDENT said that his view of yesterday's discussion coincided with Dr. Rajchman's.

Professor CANTACUZÈNE said that his view had also been the same. A divergence had arisen between the often rather vaguely outlined methods proposed by the expert statisticians, and the practical possibilities of carrying them out. With a view to lessening this divergence, the value of a meeting between the directors of the institutes and their own statisticians had been recognised; in this manner, an agreement should be easy to obtain.

Dr. RAJCHMAN added that, if the Berlin meeting had made certain proposals which had been somewhat warmly discussed, there were others which, in the opinion of the members of the Committee, should be retained. In order to ascertain how these principles might be given practical application in local conditions, the offices of Dr. Biraud, who had already been concerned in this question, would be at the disposal of the statisticians and directors of research clinics at the proposed meeting.

Professor OTTOLENGHI stated that, as he had already said, his point of view was as follows. No doubt now existed that the manner in which the data for statistical appraisal was to be prepared was of the highest, perhaps essential, importance, in order to estimate the prophylactic activity of BCG. It was therefore indispensable that every precaution, even those which were the most difficult to put into effect, should be taken. An Expert Statisticians Commission, nominated by the Committee, had formulated rules on this point. Possibly these rules required slight modification before they were suited to the necessities of actual practice and local conditions. It was only logical that these modifications should be discussed at a meeting which brought together the statisticians themselves, or their representatives, and those persons in each country who would be responsible for the execution of the studies. It would appear undesirable that such a meeting should be held without the experts who had formulated the rules in question; this would only result in reservations and criticisms.

Dr. RAJCHMAN said that he did not wish to discuss the point of principle. The Health Committee should express its lack of confidence by a clear and definite vote if it felt that the Secretariat was unequal to the task of explaining to the Committee the reasons leading certain Commissions to make certain proposals. The Secretariat had done all in its power to bring together some technical authorities, and it was in a position to explain the views of the experts, which were sometimes contradictory. Having said this, he would draw the attention of the Health Committee to the fact that, if a meeting were organised at which the directors of research work in Belgium, France, Germany, Italy and Roumania, with their statistical advisers, were present, this would include at least two or three members of the Commission of Expert Statisticians which had met at Berlin. It would thus be a simple matter, for instance, for Professor Gini to set forth the principles which he had supported or opposed at Berlin, and to pronounce upon their applicability to any particular research work which was being undertaken in Italy.

Sir George BUCHANAN said that, for his part, he had always thought that so large a meeting was hardly necessary. The main point was merely to obtain uniformity of method in the compilation of the statistics. He proposed that the task of carrying out the Committee's wishes should be left to the President and to Dr. Rajchman, for he believed that too much importance should not be attached to it, and that it would be quite sufficient to hold a meeting for a final revision of the form of the statistics.

The PRESIDENT said that this view was in accordance with the trend of yesterday's discussion. He thought, moreover, that this was clearly expressed in the text of the resolution.

Professor OTTOLENGHI, referring to Dr. Rajchman's latest observations, stated that during the present discussion, as during the previous one, he had only had the question of principle in mind, quite apart from any personal considerations.

Resolution 9 was adopted.

436. **Close of the Session.**

The PRESIDENT thanked his colleagues for their indulgence, and also thanked Dr. Rajchman, whom it would be superfluous to praise, and the Secretariat.

Dr. CHODZKO, speaking on behalf of the Committee, warmly thanked the President for his conduct of the proceedings.

Dr. MIYAJIMĀ said that it had been a great pleasure to him to have been able to attend the present session and to meet once more his former colleagues. As a former member of the Provisional Health Committee, he would venture to congratulate the Health Organisation on the splendid work it had done ; that work was of great importance, especially in the Far East. The magnificent work of the Singapore Bureau and the interchanges in Japan and India had deeply impressed the Far-Eastern peoples and had drawn their attention to the work of the League, awakening in them at the same time a sense of the international character of public health work. He might state with certainty that the gradual but swift development of this organisation would continue unchecked, thanks to the able presidency of Dr. Madsen, the collaboration of his colleagues and the assistance of the energetic Medical Director, Dr. Rajchman, aided by his staff.

The PRESIDENT said that he had been greatly touched by these kind words. All the members of the Committee were grateful to their friend and former colleague, Dr. Miyajima, for his expression of confidence and for his appreciation of the work that had been done in the Far East.

ANNEX 1.

C.H.777.

AGENDA OF THE FOURTEENTH SESSION OF THE HEALTH COMMITTEE.

1. Collaboration with the Greek Authorities as a result of Official Correspondence with the Greek Government and the Council Resolution of December 13th, 1928.
2. Report of the Chairman of the Cancer Commission.
3. Report of the Chairman of the Commission on Education in Hygiene and Preventive Medicine.
4. Report of the Chairman of the Opium Commission.
5. Medical Director's Report and Budget Estimates for 1930.
6. Report of the Fourth Session of the Advisory Council of the Health Organisation's Eastern Bureau at Singapore.
7. The Survey Method of stimulating Public Health Administration in American Cities. Studies on the Cost of Medical Care in the United States.
8. Report of the Second International Conference on Sleeping-Sickness and Council Resolution of December 11th, 1928.
9. Report of the Commission of Health Experts on Child Welfare (Session held in Rome from March 25th to 28th, 1929).
10. Report of the Commission of Expert Statisticians (Session held from April 2nd to 6th at Berlin) and Report on the Work of the Mixed Commission of the Health Organisation and of the International Institute of Statistics in connection with the Forthcoming Revision of the International List of Causes of Death (Paris, April 9th, 1929).
11. Miscellaneous : Invitations to Congresses and Conferences.

ANNEX 2.

C.H.776.

REPORT OF THE MEDICAL DIRECTOR ON THE WORK OF THE HEALTH ORGANISATION SINCE THE LAST SESSION OF THE COMMITTEE.

(November 1928-March 1929).

I.

COUNCIL DECISIONS.

The members of the Health Committee have been informed of the resolutions adopted by the Council during its fifty-third session (December 1928) with regard to the reports on the work of the Health Organisation.

1. The Council adopted the report of the representative of Spain on the work of the thirteenth session of the Health Committee and approved the resolutions of the Committee (document C/53rd Session/P.-V.2, page 1).¹

2. The Council also adopted the report of the Second International Conference on Sleeping-Sickness (document C/53rd Session/P.-V.2, page 3).¹

This question is on the agenda (No 8) and the members of the Health Committee will receive a special memorandum on the subject.

3. The Council also approved the proposals made by the Health Committee with regard to the request of the Greek Government for the assistance of the Health Organisation in the re-organisation of the Public Health Services of Greece. The Council further invited the Health Committee "in the light of the discussions before the Council, to put at the disposal of the Greek Government the various technical possibilities of collaboration of the Committee, including those of its Technical Commissions, in order to ensure complete co-operation in the preparation, as well as in the subsequent development, of the plan thus evolved". This question is also on the agenda (No. 1) and the members of the Committee will receive a special report thereon. (Document C/53rd Session/P.-V.4).¹

4. The Council acceded to the request of the President of the Health Committee that the Minutes of the Committee should continue to be printed as before (document C/53rd Session/P.V.2, page 8).¹ The minutes of the thirteenth session were accordingly sent to the printers in January and distributed on March 18th, 1929.

¹ This document was distributed to the Members of the Health Committee on January 3rd, 1929.

II.

CURRENT WORK OF THE HEALTH SECTION.

I. — *Service of Epidemiological Intelligence and Public Health Statistics.*

1. Since the last session of the Health Committee the *Weekly Epidemiological Record* has assumed a new and enlarged form. It is published regularly each Thursday evening. Since the beginning of the year a comprehensive official communiqué has been received each week from the Director of the Office internationale d'hygiène publique, setting forth all information received regarding the appearance and prevalence of the diseases covered by the International Sanitary Convention. This is published on the first page of the *Weekly Record*. As a large proportion of the information received by the Office is either sent through the Health Section or forwarded to it at the same time as it is sent to the Office, the publication of epidemiological intelligence as received by our Epidemiological Intelligence Service would entail a large amount of repetition of the Office communiqué. Such considerations prompted the changes that have taken place in the manner of presenting the information contained in the body of the report. Each week short descriptions are given of the epidemic situation of the diseases which are of primary importance at the time in each country from which such information is available.

2. The epidemic of influenza which has been so widespread during the last two months has been chiefly responsible for the considerable increase in size of the *Weekly Record*. I take this opportunity of placing on record our appreciation of the assistance given by most public health administrations in supplying telegraphic information on the progress of this epidemic in their respective countries.

It has enabled us to publish each week a fairly comprehensive and up-to-date summary of the situation.

3. At the end of the *Weekly Record* the telegraphic information received from the Singapore Bureau and from the Sanitary Maritime and Quarantine Council of Egypt is reproduced in the form in which it is received.

4. The interest and importance of a large amount of the epidemiological information constantly being received has justified the continuation of the issue of mimeographed *Daily Reports* which enable information to reach Health Administrations specially interested with as little delay as possible. Such information contained in these daily sheets as is of general interest is also reproduced and amplified in the subsequent *Weekly Record*.

5. The increase of work caused by handling the large amount of information received on influenza, and also sickness among the members of the staff, was responsible for regrettable delay in the issue of the *Monthly Epidemiological Report* for January and February. In each future number of this Report special attention will be devoted to one or more of the important communicable diseases. Soon after the period of maximum prevalence of each of the chief diseases it is hoped that it will be possible to describe its characteristic epidemiological features. Such annual surveys published in the Monthly Reports render unnecessary the publication of the *Annual Epidemiological Report* which have in past years been published with the annual statistical tables. The annual statistical tables for the year 1927 were for the first time unaccompanied by the usual epidemiological survey.

6. *Eastern Bureau at Singapore.* — Full information on the work of the Eastern Bureau during the past year is given in the Report of the Director of the Bureau which will be found in the minutes of the Advisory Council's fourth session which opened at Singapore on February 14th, 1929.

To that Report is annexed the estimates for the year 1930, which were approved by the Advisory Council, subject to the addition of 1,700 Straits dollars. The Singapore budget estimates are submitted for the consideration and approval of the Health Committee.

The Advisory Council elected Col. GRAHAM as Chairman and Dr. NOBECHI as Vice-Chairman for 1929.

The resolutions of the Council will be circulated as soon as they reach Geneva.

7. *Co-operation with the Office internationale d'hygiène publique.* — The publication of the office communiqué on the first page of the *Weekly Record* has already been referred to. The agreement concluded with the Office internationale during its last session regarding the transmission of telegraphic information from Regional Bureaux was put into force immediately and has worked satisfactorily. All cabled information received from Singapore is telegraphed to the Office internationale immediately upon receipt. The Office communiqué is received in Geneva each Wednesday morning; additional information received from the Office on Thursday morning is incorporated in the proofs, thus enabling the communiqué to be as up-to-date as possible.

8. *The Alexandria Bureau of the Sanitary Maritime and Quarantine Board of Egypt.* — Each week the Alexandria Bureau telegraphs its bulletin, using the AA Code. This information is repeated from Geneva by cable to the Eastern Bureau. Similarly the Singapore weekly bulletin is telegraphed as soon as received to Alexandria. The text of the Alexandria weekly message is reproduced as received at the end of the *Weekly Record*.

9. *The Pan-American Sanitary Bureau at Washington.* — Since December last a report in roneographed form has been received each week by post from the Pan-American Sanitary Bureau. These reports contain information obtained from the Office communiqués and from other regional bureaux and occasional information regarding the "Convention" diseases in the American continent. The *Monthly Bulletin* of the Pan-American Sanitary Bureau is likewise regularly received.

10. *The Commission of Expert Statisticians.* — The second meeting of this Commission will take place on April 3rd, in Berlin. The Agenda is as follows :

1. Preparation of the Fourth Revision of the *International List of Causes of Death* (Collaboration between the Health Organisation of the League of Nations and the International Institute of Statistics).
2. Questions connected with the Uniform Definition of Still-birth.
3. Morbidity Statistics and the Establishment of a Nomenclature of Diseases :
 - (a) Results of the preliminary enquiry regarding morbidity statistics in various countries.
 - (b) Memorandum by Dr. Roesle on the comparative study of morbidity.
 - (c) List of diseases proposed by Dr. Roesle.
 - (d) Report by Dr. Teleky on the morbidity statistics of the Rhineland Sickness Insurance Funds.
 - (e) Principles underlying the collection and tabulation of morbidity statistical data suitable for adoption by Sickness Insurance Funds and other Public Health Welfare Organisations.
4. The Collection and Analysis of Data concerning the Results of BCG Vaccination (Resolution of the Clinical Committee of the BCG Conference held in Paris, October 1928).
5. Miscellaneous : Statistical Chapters of *International Health Year-Book*.

The report of the Commission is a special item of the Agenda (No. 10) and will be forwarded to the members of the Committee after the meeting in Berlin.

11. *The Joint Commission for the Preparation of the Forthcoming Revision of the International List of Causes of Death.* — The Joint Commission composed of four members nominated by the International Institute of Statistics, namely, Dr. Jitta, M. Huber, Dr. Dunlop and Dr. Jahn, and of four nominated by the Health Organisation, namely, Professor Gini, Dr. Stevenson, Dr. Haven Emerson and Dr. Roesle, together with the President and Secretary-General of the International Institute and representatives of the Health Committee, will meet in Paris on April 9th to consider and co-ordinate the work done by the Health Organisation and the Institute with regard to the preparation of the fourth revision of the *International List of Causes of Death*.

II. — System of Liaison with the Health Administrations of the Various Governments.

1. A programme of interchanges for 1929 was presented to the Health Committee last October, which provided — subject to the necessary credits being available — for a study tour on industrial hygiene, the continuation of the study of rural hygiene, and the organisation of groups for the collective international examination of the protection of the milk supply, the problems of housing, certain aspects of rural sanitary engineering, and the relationships between the medical services of health insurance organisations and the public health services.

Owing to many demands upon the budget this year it has been necessary to limit this programme as strictly as possible.

2. The interchange on industrial hygiene, organised in co-operation with the competent services of the International Labour Office, will begin at Lyons on April 3rd, where the participants will attend the sessions of the International Congress on Occupational Diseases, after which the group will study the organisation and administration of medical factory inspection in Northern Italy, Bavaria and Switzerland. There will be ten or twelve participants and the length of the interchange will not exceed five weeks.

3. The interchange on rural hygiene will begin on June 4th in Copenhagen and the members will remain about three weeks on the islands and mainland of Denmark, studying the developments of rural hygiene in relation to the agricultural, economic and educational progress of the rural population. A most interesting programme has been arranged by Dr. Madsen and his Danish colleagues. Particular attention will be paid to the "Folk High Schools", the co-operative movement and the voluntary system of health insurance, all of which have contributed to the present high development of rural hygiene in Denmark.

The group will then proceed to the Netherlands, where the programme arranged last year by Dr. Jitta and his associates was commented upon favourably by all the participants. The ease of communication and the experience acquired in previous interchanges, enable the Health Authorities of the Netherlands to prepare a programme showing the general development of rural hygiene in a relatively short period of time.

The number of participants in this interchange will not exceed twelve and the duration will be limited to five weeks. The provision of a sufficient number of periods for rest, note-taking and informal discussion, coupled with the limitation of the whole study period to five weeks, will prevent undue fatigue and enable the participants to make very thorough studies.

4. The collective tour for the study of the relations between the medical services of health insurance organisations and the public health services will begin in Berlin on April 8th, and continue in Hamburg, Cologne, Nuremberg and Vienna, in all of which much material is available. The participants in this interchange will be the members of the Sub-Committee on Preventive Medicine which met last December for the first time. An excellent programme has been prepared by Dr. Hamel and his colleagues, and associates connected with the health insurance system.

5. Should resources permit a small group will be asked to make a collective study of the milk supply and its protection in the latter months of the year.

6. Although it would be extremely useful to organise a group of sanitary engineers to study rural aspects of sanitary engineering, this will have to be postponed but, in accordance with precedent, one or more sanitary engineers may be invited to participate in the interchange on rural hygiene mentioned above.

7. In order to prepare for the interchange on housing which in any event cannot be held this year, it would be useful to provide for one or more individual missions which would collect information and prepare reports needed for any future interchange.

8. *A General Interchange in France in 1930.* — Interchanges of interest to the general public health officer and limited to the study of the health organisation and administration of one country have been held recently in England, Germany and Italy. It is proposed to organise and hold a similar interchange in France in 1930. The competent officials have been consulted and have agreed that May and June would be the most suitable months. In view of past experience, the duration of the interchange will be limited to six weeks, and visits will be paid to only a few cities and departments, selected in such a way as to enable the participants to see the most characteristic districts and at the same time to study all types of health practice under varying conditions.

In view of the influence of these varying conditions on the public health, attempts will be made to show the participants the relation between public health work and the geographical, economic and social structure and conditions of the various districts.

Professor Léon Bernard has kindly agreed to act as chairman of a central committee which will assume responsibility for organising the interchange, and which has already begun to make the necessary preparations and to get into touch with the local authorities concerned. He will doubtless be pleased to give the Committee further details on the proposed interchange.

9. *Individual Missions.* — As in preceding years, we have invited medical officers from the Far-East and far-distant countries to carry out individual missions. In addition we shall have to reserve a certain amount of this credit for Greek health officers in connection with the plan of collaboration between the Greek Health Administration and the Health Organisation of the League. This system of missions is being utilised very fully in connection with definite plans for international co-operation in health matters and the missions are being given a more definite object.

III.

TECHNICAL SECRETARIAT OF COMMISSIONS AND CONFERENCES.

I. — *Malaria Commission.*

1. *Courses in Malariology.*

The fourth series of practical laboratory courses on malariology will be held at the Universities of Hamburg, Paris and Rome, and will begin on June 10th, June 3rd and July 1st respectively. These laboratory courses will as usual be followed by field work in Spain, Italy and the Kingdom of the Serbs, Croats and Slovenes. The Health Organisation has once more offered a certain number of scholarships to medical officers engaged in antimalaria work, whose names have been submitted by Public Health Administrations.

2. *Research.*

In conformity with resolutions adopted by the Malaria Commission at its Conference last June, and approved by the Health Committee in October, a number of small expert committees have been set up to consider the following problems :

(a) *Malaria and Housing.* — On the basis of suggestions made by Mr. Evans, of Nigeria, and M. Bonamico, of Rome, a questionnaire concerning "Housing and Malaria" has been prepared and sent to the Public Health administrations of numerous countries in which malaria is prevalent, inviting their assistance in the collection of the information required. Proposals and research schemes have been received from Professor Brumpt, Dr. Hackett, Professor Missiroli, Dr. de Buen and Dr. Kligler.

(b) *The Study of the Intensive Treatment of Malaria by Quinine and its Action on Gametocytes.* — Professor Nocht has sent us his proposed plan of research on this subject and Dr. Kingsbury (Malaya) has promised his help. Doctor Sergent, of the Pasteur Institute of Algiers, has informed us that his Institute has been carrying out researches on this question, the results of which will be available during 1929. Professor Ascoli and Professor Ottolenghi have submitted plans for research.

(c) *The Value of Plasmochine and Quiniostovarsol in the Treatment of Malaria.* — Professor Vittorio Ascoli has promised to send us the final results of the experiments he is at present carrying out.

Professor Ciuca has sent an outline of work, as well as copies of the case cards used by him, and has emphasised the desirability of the different research workers using absolutely identical materials of the same origin.

Professor de Langen (Dutch East Indies) has had a year's experience of plasmochine and has promised to send a report on his work.

The Director of the Anti-malaria Service in Madagascar has expressed his willingness to co-operate in the study of the treatment of malaria with these drugs.

Dr. Barber has already begun work with plasmochine.

Dr. W. Deeks has stated that the United Fruit Company has already some experience of plasmochine, the results of which are favourable; its use is being continued on a larger scale. He expressed his willingness to give a trial to quiniostovarsol.

Dr. Kingsbury (Malaya) has also expressed his willingness to participate in this work.

The results of the experiments that the Pasteur Institute of Algiers are undertaking will be received this year from Dr. Sergent.

(d) *Alkaloids.* — Professor Ciuca and Dr. S. de Buen are continuing these researches into the therapeutic properties of the subsidiary alkaloids of quinine, with quinetum from several sources. Their results will be included in the report on the properties of the subsidiary alkaloids which Professor Ciuca has undertaken to prepare.

3. *Study Tour in India.*

Since the last session of the Health Committee advantage was taken of the presence in Europe of Colonel Graham and Colonel Christophers, to settle with them, and Colonel James, the general arrangements of the tour of the Malaria Commission to India.

The Committee will remember that the object of the visit is twofold, viz., to give the members of the Malaria Commission an opportunity of seeing anti-malaria work in India and examining it in the light of their own experience; and secondly, to give medical officers engaged in such work in India an opportunity of discussing their problems with members of the Commission.

The participants will leave Europe early in August; on their arrival in India it is proposed that they should spend the first few weeks in the Punjab considering questions of interest to the group as a whole. Subsequently the members will separate, facilities being given to each to study those aspects of the malaria problem in which he is specially interested under the most favourable conditions possible. During the latter part of the tour the members will once more work together as a group. The provisional programme is as follows:

Leave Marseilles not later than the first week of August;

Arrive Bombay last week of August;

Arrive Lahore not later than the 1st September;

Arrive Calcutta about the second week of October;

During September and October conditions in the Punjab, the United Provinces and Bengal will be studied from Lahore, Karnal and Calcutta, and facilities will be afforded for the special studies of individual members;

Arrive Madras November 1st,

Work Madras Presidency during the month;

Arrive Bombay December 1st,

Work Bombay Presidency and Sind that month;

Arrive back in Europe about January 20th.

A detailed programme of the tour drawn up by Colonel Christophers is expected very shortly.

II. — *Commission of Health Experts on Child Welfare.*

1. *Enquiry on Infant Mortality.*

A. *European Enquiry.* — Very complete and detailed reports, containing the final results of the enquiry, have been drawn up by the experts from Austria, France, Germany, Great Britain, the Netherlands and Norway, on the basis of the plan established during the last meeting in London and approved by the Health Committee at its session of October 1928.

The report on Italy, where the enquiry began after the enquiries in the other countries, will be ready later.

The experts will meet at Rome on March 25th to discuss and compare the final results of the enquiry and to draw conclusions and make recommendations for the prevention of mortality among children under one year of age ; and also for any research or enquiry which they consider should be undertaken on problems which still require further study.

The report of the Conference on this subject, as well as the suggestions of the Experts as to the most effective use to be made of the large amount of valuable information already collected, will be submitted to the Health Committee before May 2nd ; this appears as a special item of the Agenda (No. 9).

B. *Enquiry in Latin America.* — This enquiry, undertaken in the Argentine, Brazil, Chile and Uruguay, is being carried out according to plan and will terminate during the first half of this year.

2. *Studies relating to Immunisation against Diphtheria and Scarlet Fever.*

Professor Robert Debré and Professor E. Gorter have been asked to prepare a preliminary report on immunisation against scarlet fever and diphtheria.

With regard to scarlet fever, Professor Debré has been in personal contact with the sanitary administrations of Germany, Netherlands, Poland and Roumania, and with technicians of these countries who, in recent years, have acquired particular experience on this subject. Professor Debré will present a report to the Conference at Rome and the recommendations of this Conference will be submitted to the Committee before its session in May.

Professor Gorter has made a similar study of immunisation against diphtheria. He has discussed a programme of studies with several Austrian, Belgian, Danish, English, French and German technicians. His proposals will also be presented, together with the recommendations of the Rome Conference, to the Committee in May.

III. — *Leprosy Commission.*

Dr. Burnet's Mission in Latin America.

The Committee will be glad to learn that Dr. Burnet has begun his mission, the programme of which was laid before the Committee at its autumn session. Before leaving Europe he visited various centres in order to discuss aspects of the Leprosy Commission's work ; in London he saw the Secretaries of the British Empire Leprosy Relief Association and the Mission to Lepers, and had an interview with Sir Leonard Rogers ; in Stockholm he visited Dr. Reenstierna, a leprosy expert, and in Bergen, Dr. Lie, Chief of the Leprosaria. Dr. Burnet also paid a visit to Tartu in order to obtain full details of the new method of leprosy treatment being carried out by Dr. Paldrock, which is giving such promising results.

Dr. Burnet left Europe on February 28th for Venezuela, the Government of which has signified its satisfaction at his forthcoming visit, as have also the Governments of Bolivia, Chile, Colombia, Ecuador and Peru. Other countries which he hopes to visit are the Argentine, Brazil, Paraguay and Uruguay. In each instance Dr. Burnet will discuss with the Health administration concerned the various problems specified at the last session of the Committee. It is hoped that he may return to Europe before the autumn session, but in any case a progress report on his mission will be prepared for that occasion.

IV. — *Permanent Commission on Standardisation of Sera, Serological Reactions and Biological Products.*

A. *Sera and Bacteriological Products.*

The President of the Health Committee has furnished the following information on the work of the State Serum Institute of Denmark which acts as the central institute of the Health Organisation :

1. *Anti-diphtheric Serum.* — The American, English, French, German and Danish standard sera were compared in 1928.

The annual comparison will be undertaken in the spring of 1929.

2. *Anti-tetanic Serum.* — The German, English and Danish standards were compared in 1928. Samples of the Danish standard serum have been sent to the Medical Research Council (London), the State Institute of Hygiene (Warsaw) and the South African Institute for Medical Research (Johannesburg).

3. *Anti-dysenteric Serum.* — During 1928 standard sera were sent to the following Institutes :¹

During 1929 samples of standard serum will be sent (in January, April, July and October) to the same Institutes.

¹ Institute for Experimental Therapy, Frankfurt.
State Institute of Hygiene, Warsaw.
Bacteriological Institute of the Faculty of Medicine, Keijo, Chosen.
Institute for Experimental Medicine, Bucharest.
Pasteur Institute, Paris.
National Institute for Medical Research, Hampstead, London.
National Bureau for the Prevention of Epidemics, Peking.

4. *Anatoxin*. — Comparative titrations have been carried out between the State Serum Institute in Copenhagen and the Pasteur Institute, and it is hoped that definite proposals for their standardisation may be drawn up next spring.

5. *Tuberculin*. — Comparative tests have been made with the German, French, English, Japanese and Danish standard tuberculin and in all probability definite proposals regarding the standard can be made during the coming months.

6. *Blood-types*. — An attempt has been made, by correspondence, to obtain an agreement about the standardisation of standard serum for different blood-types. In the near future samples will be sent out to :

The State Institute of Hygiene (Warsaw),
The Cancer Research Institute (Heidelberg),
The State Serum Institute (Vienna),
The Medical Research Council (London),

for a comparative test. It is hoped that an agreement will be obtained during the year.

7. *Gas-gangrene*. — We are experimenting with three horses and are comparing sera from France and England, but a solution is not anticipated at present.

8. *Scarlet Fever Serum*. — Probably no solution in the near future.

B. *Standardisation of Biological Products.*

The following report has been received from Dr. Dale on the present position of the question :

1. *Salvarsan*. — Effect is at present being given to the decisions of the Frankfort Conference, with regard to the standard for Neosalvarsan. Professor Kolle is experimenting with the possibility of selecting a batch, tested for stability by exposure for a short period at a high temperature, and then kept at a low temperature for issue.

A number of enquiries from different countries for Salvarsan standards have been referred to Professor Kolle.

2. *Digitalis*. — Supplies of the international standard material have been furnished, on request to the following, in addition to the Institutes to which it had previously been distributed :

1928.

Laboratoire de Pharmacologie, Faculté de Médecine, Paris ;
Reichsgesundheitsamt, Berlin ;
Service fédéral de l'Hygiène publique, Berne ;
Pharmaceutical Society of Great Britain, London ;
Servicios Farmacéuticos, Ministerio de la Gobernación, Madrid ;
Pharmacological Department, University of Michigan, U.S.A. ;

1929.

Pharmacologisches Institut, Budapest, VIII ;
Zaklad farmakologii Uniwersytet, Warsaw.

The standard has been made official in Germany, in connection with the issue of the new German Pharmacopœia ; a national German standard has been created, indistinguishable in activity from the international material.

A British standard, carefully tested by comparison with the international material, is now ready and will be issued as soon as the drafting of the new British Pharmacopœia, and the issue of contingent regulations under the Therapeutic Substances Act, make such a standard official.

3. *Strophanthin*. — The preparation of the international standard sample of Ouabain, by Professor Tiffeneau, is nearing completion. For this purpose Professor Tiffeneau is using a sample of Ouabain, identical in all its properties with the original Ouabain of Thoms. When the testing of this material has been completed, it will be sent to the National Institute for

Brazilian Institute of Microbiology, Rio de Janeiro.
State Bacteriological Institute, Moscow.
Bacteriological Institute, Sofia.
Department of Health, Albany (United States of America).
State Bacteriological Institute, Minsk (U.S.S.R.).
Instituto Vital Brazil, Nictheroy (Brazil).
Institute for Experimental Therapy and for Control of Sera and Vaccines of the Public Health Commissariat, Moscow.
State Institute for Serotherapy, Vienna.
Institute of Hygiene, Zagreb, Kingdom of the Serbs, Croats and Slovenes.
Bacteriological Institute of the National Department of Public Health, Buenos Ayres.
Government Institute for Infectious Diseases, Tokio.
Biological Department of the Bengal Chemical and Pharmaceutical Works, Calcutta.
Pasteur Institute, Bandoeng.
Sächsisches Serumwerk, Dresden.
South African Institute for Medical Research, Johannesburg.
Bacterio-Clinical Laboratory, Ltd., Calcutta.
Institute for Experimental Therapy, Marburg.

Medical Research, London, whence it will be distributed in sealed ampoules, and preserved as a permanent international standard.

4. *Insulin.* — The international Insulin standard has now been accepted in all countries where Insulin is made. Of the original quantity of 37 grammes (approx.), 19.9 grammes have hitherto been furnished to Government and other laboratories in the following countries :

Argentina	India
Australia	Japan
Austria	Netherlands
Canada	Norway
Czechoslovakia	Poland
Denmark	Spain
France	Sweden
Germany	Switzerland
Great Britain	Union of Soviet Socialist Republics
Hungary	United States of America

5. *Pituitary (Posterior Lobe) Standard.* — It was originally arranged that Professor Voegtlin, of Washington, should make a small sample of standard Pituitary (Posterior Lobe) Powder, and hold it at the disposal of other countries desiring to verify their national standards. The need for such an international standard was considered somewhat doubtful, since experience had shown that different workers, each starting with perfectly fresh posterior lobe material, and treating it in accordance with the prescribed recommendation, obtained materials not distinguishable from one another in activity. Accordingly, Professor Voegtlin prepared only a small quantity of the material, and this was soon exhausted. Meanwhile a much larger quantity was prepared by the National Institute, and this has recently been furnished to applicants, as an act of international courtesy.

The need for a standard may be illustrated by the experience of Professor Johan, of Budapest, who prepared a quantity of the posterior lobe powder in accordance with the prescribed recommendation. On comparing this with the British standard, furnished to him for the purpose, he found that the Hungarian standard was less active — six parts being needed to match five parts of the British. The comparison was repeated in the National Institute at Hampstead, an identical ratio being obtained. Professor Johan has accordingly been able to adopt, and issue, his national standard, by indicating 0.6 milligramme as the quantity containing one unit of activity in place of 0.5 milligramme of the international standard.

6. *Thyroid Preparations.* — No further progress has been made in this matter, but a recent paper published by Dr. Madsen's Institute, describing an improved method of measuring the physiological effect of thyroid preparations, and indicating a lack of correspondence between iodine content and physiological activity, suggests that it may be desirable, at some future date, to reopen the question of a standard preparation of thyroid activity. The suitability of pure thyroxin for use as such a standard would, in that case, have to be taken into consideration.

7. *Ergot, etc.* — No further progress has been made with regard to ergot, Filix mas, or oil of chenopodium.

8. At the request of the Accessory Food Factors Committee, appointed by the Medical Research Council and the Lister Institute, the National Institute for Medical Research recently undertook to prepare a standard solution of irradiated ergosterol in oil, to keep this at a low temperature, and hold the material ready for distribution to those who are engaged in making comparative biological tests of this vitamin. It is hoped that the Accessory Food Factors Committee will define a unit of vitamin D activity in terms of this standard ; and the question of the desirability of adopting this standard and unit for international use may later be raised.

V. — *Joint Commission on Public Health and Health Insurance.*

Sub-Committee on Preventive Medicine.

The Health Committee at its last session approved the proposal to set up, with the assent of the Chairman of the Joint Commission, a sub-committee on preventive medicine.

With the co-operation of the International Labour Office the following constitution and duties have been allotted to the sub-committee :

1. A sub-committee on preventive medicine of the Joint Commission on Public Health and Health Insurance is hereby created.

2. The sub-committee will consist of medical experts on public health nominated by the Medical Director of the League of Nations, and of medical experts on health insurance nominated by the Director of the International Labour Office.

3. The programme of work of the sub-committee will be as follows : Co-operation between public health services and organisations and insurance institutions with a view to the development of preventive medicine, and the orientation of medical practice towards hygiene and prevention in welfare institutions.

A. The meeting of the sub-committee on preventive medicine took place at Geneva on December 17th to 19th, 1928. (document CH / SH-AM / 8) : ¹

The sub-committee first emphasised the necessity of directing medical practice towards prevention and the importance of co-operation between public health services and welfare and insurance institutions. It then decided to investigate the following problems of fundamental importance :

1. Data regarding preventive medicine and morbidity and mortality statistics.
2. Training of medical practitioners in preventive medicine.
3. Equipment necessary for the practice of preventive medicine.

1. *Data regarding Preventive Medicine and Morbidity and Mortality Statistics.*

(a) The sub-committee was of opinion that the statistical methods, which are at present inadequate, should be improved and adapted to the needs of the different institutions of preventive medicine. A change in the present practice of professional secrecy would be necessary in the higher interests of the community.

(b) The Health Committee was requested to secure the assistance of the Commission of Expert Statisticians to study the practical problems connected with the classification of diseases suitable for use in institutions of preventive medicine.

The sub-committee asked two of its members to prepare a report for the Commission of Expert Statisticians stating the qualifications necessary for practitioners of preventive medicine and the special difficulties involved in its practice.

2. *Training of Medical Practitioners in Preventive Medicine.*

(a) The sub-committee recognised the necessity of giving special training to medical personnel and assistants employed by institutions of preventive medicine. It recommended that clinical instruction in general should have a bias in the direction of preventive medicine, and that a compulsory training, with examination, should be given to students in preventive medicine as well as post-graduate courses for practising doctors.

The sub-committee also requested the Health Committee of the League of Nations to ask the Commission for the teaching of hygiene and preventive medicine to draft a programme of instruction in preventive medicine for Medical Faculties and schools of hygiene, in co-operation with institutions of preventive medicine.

3. *Public Health Equipment.*

The sub-committee also felt the need of creating special establishments, placing at the service of the community every means of prevention, diagnosis and treatment afforded by the progress of science and medical technique.

B. The Health Committee gave its approval at the last session to an interchange on preventive medicine in 1929, the participants of which would be the members of the sub-committee. The first four will begin on April 8th, 1929, and last a fortnight. Visits will be paid to welfare, health and social insurance organisations in Berlin, Hamburg, Cologne, Nuremberg and Vienna.

The discussions, which will be held at the end of the tour, will serve as a basis for a report setting forth the results of the interchange.

VI. — *Opium : Application of Articles 8 and 10 of the International Convention of February 19th, 1925.*

The Council, during its meeting of December 1928, took note of the decision of the Health Committee taken at its session of October 1928, relating to preparations which various Governments have proposed to exempt from the Convention, in accordance with Article 8.

The Permanent Committee of the Office international d'Hygiène publique has been asked to submit certain preparations to further examination.

¹ The following members were present at the meeting :

(a) *Experts appointed by the International Labour Office :*

- Dr. E. BRESKY, Chief Medical Officer to the Central Institute of Social Insurance, Prague ;
Dr. R. BUREAU, Medical Adviser to the National Union of Federation of Socialist Insurance Societies of Belgium, Écaussines ;
Dr. W. DUNCAN, Divisional Medical Inspector, Queen Anne's Chambers, London ;
Comm. Cesare GIANNINI, Chief Medical Officer to the National Social Insurance Funds, Rome ;
Dr. H. KLUSZYNSKI, Medical Adviser to the Central Union of Polish Health Insurance Funds, Warsaw ;
Dr. Walter PRYLL, Chief Medical Officer to the Berlin Central Local Fund, Berlin-Charlottenburg.

(b) *Experts appointed by the Health Organisation of the League of Nations :*

- Dr. L. HEIJERMANS, Director of the Medical and Sanitary Service, Amsterdam ;
Dr. G. SEIFFERT, Medical Adviser to the Ministry of the Interior, Secretary of the Bavarian Federation for the Development of Public Health, Munich ;
Dr. A. STAMPAR, Director of the Public Health Department of the Kingdom of the Serbs, Croats and Slovenes, Belgrade.

The Council also took note of the decision of the Health Committee that *Dilaudide*, on the one hand, *Benzylmorphine* and the *Morphine Esters* generally on the other hand, are narcotics capable of producing harmful effects similar to those produced by products covered by the Convention, and that they should, in consequence, be brought within its scope, in accordance with Article 10. The resolution of the Council has been communicated to the contracting parties.

In accordance with the decisions of the Health Committee taken during its session of October 1928, the Permanent Committee of the Office international d'Hygiène publique has been asked whether, in its opinion, preparations containing *Eucodal*, *Dicodide*, *Dilaudide*, *Benzylmorphine* and *Morphine Esters* should come within the scope of the Convention and, if so, whether preparations containing less than a certain percentage of these substances should be exempted from the Convention.

The President of the Opium Commission will submit a report on these questions to the Committee at its next session.

VII. — *Commission on the Fumigation of Ships.*

On his return to the United States of America last year Surgeon-General Cumming at once forwarded copies of the report of this Commission to all his officers who are in charge of the larger ports. These officers were requested to collect and submit material on the points raised in the Commission's report, and so far as their routine work permits, to carry on fumigation under experimental conditions in order to answer some of the questions of interest to the Commission.

In November a conference of the health officers of the chief ports was held in Washington to discuss the detailed programme of the Commission and to consider the future steps to be taken with reference particularly to a meeting of the Commission of experts, which it was decided might be held in 1929.

The health officers of the ports of New York and Baltimore have made arrangements to breed ship rats in order to "salt" certain ships and thus test the value of fumigation.

Surgeon-General Cumming and his associates, in accordance with the recommendation of the Commission, have prepared and distributed to the members a programme of work which it is hoped will elicit observations and further suggestions. In addition an exhaustive review of the literature has been prepared by Surgeon Grubbs at the request of General Cumming, and this work, which will be very helpful to the Commission, has been distributed to all the members.

VIII. — *Commission of Experts on Syphilis and Cognate Subjects.*

The organisation of the retrospective inquiry into the treatment of syphilis, approved by the Health Committee at its October 1928 session, has been undertaken in the countries originally selected: Germany, Denmark, United States of America, France and Great Britain. In accordance with the original plan the co-operation of dermatological and venereal-disease clinics has been invited.

The co-ordination of the enquiries was undertaken in each country as follows:

1. For Germany, under the direction of Professor Jadassohn (Director of the Dermatological Clinic of the University of Breslau), by his assistant, Professor Martenstein.
2. For Denmark, under the direction of Professor Rasch (Director of the Rigshospitalet of Copenhagen), by his assistant, Dr. Lomholt.

3. For the United States of America by Dr. J. H. Stokes (Professor of Dermatology and Syphilology in the Medical School of the University of Pennsylvania, Philadelphia). Surgeon-General Cumming has appointed Dr. N. Parran, Jr. (Assistant Surgeon-General of the Public Health Department, Washington), to help in this work. The Scientific Committee of the Committee on Syphilis Research, Inc., New York, has also agreed to co-operate.

4. For France, under the direction of Professor L. Queyrat (President of the French National Anti-Venereal League, Paris), by Dr. J. Peroni.

5. For Great Britain by Col. L. W. Harrison, of the Ministry of Health, London, and Director of the Venereal Clinic of St. Thomas's Hospital.

The enquiry which will be undertaken by means of individual case cards and a detailed questionnaire, drawn up by the experts, will cover a total of about 50,000 cases.

IV.

PROGRESS OF ENQUIRIES AND INVESTIGATIONS: ACTION TAKEN ON THE RESOLUTIONS OF THE HEALTH COMMITTEE.

I. — *Welfare of the Blind.*

The Health Committee will be glad to learn that a first report, based on the information received by the Health Section, will be prepared by two very distinguished technicians appointed for this work by the British Ministry of Health and the Department of Health for Scotland.

The Social Insurance Service of the International Labour Office is assisting in editing the chapters relating to questions which come more particularly within the competence of that Office. It is possible that this first report may be ready before the autumn session of the Health Committee.

II. — *Vaccination by BCG: Action taken on the Resolutions of the Health Committee.*

1. The Commission of Clinicians of the Conference on BCG requested that expert statisticians should be consulted on the statistical methods for the study of the prophylactic value of BCG for children. This request was approved by the Health Committee at its last session and the matter was put on the agenda of the next session of the Expert Statisticians Commission which meets in Berlin, from April 3rd to 6th, 1929

A note has been prepared by the Secretariat (document C.H./BCG/33) setting forth practical proposals concerning the collection and analysis of comparative data on vaccinated and unvaccinated children under the supervision of institutes selected for the clinical studies of BCG (document C.H.767).

Suggestions concerning the statistical study of the clinical results of BCG were forwarded by Dr. Rosenfeld, of Vienna (document C.H./BCG/32), and by Professor Prausnitz, of Breslau.

A discussion on these questions will take place on April 2nd, between the Chairman of the Expert Statisticians Commission, Professor Westergaard, Dr. S. Rosenfeld (Vienna) and Professor A. Schlossmann (Düsseldorf), Member of the Clinical Commission of the BCG Conference. As soon as the Expert Statisticians Commission has approved the proposed methods concerning the clinical enquiry and the schedules designed for this enquiry, the institutes and dispensaries selected for the enquiry will be officially invited to take part in it. The following institutes have already promised to take part: The Institute of Hygiene of the University, of Breslau; the Child Clinic of the Academy of Medicine, Düsseldorf; the Forschung-Institut für Tuberkulose, Hamburg; Pasteur Institute, Paris; Serological Institute, Bucharest.

2. The experimental protocols adopted by the Veterinary Commission at the Conference on BCG were forwarded to the institutes selected during the Conference, and the following have accepted the proposed plan of work: Laboratory of Bacteriology and Veterinary Medicine of the Reichsgesundheitsamt, Berlin; the National Research Council, Ottawa; Veterinary Section of the State Laboratory of Hygiene, Utrecht; Institute for Vaccines against Tuberculosis, Milan; Institute for the Experimental Study of Human and Veterinary Diseases, Cracow; Federal Institute for Cattle Diseases, Mödling, near Vienna.

3. The subjects for research which were considered by the Commission of Bacteriologists as of particular interest were likewise forwarded, together with the protocols designed for this work, to the selected bacteriological institutes.

The following have agreed either to carry out research work on the suggested lines, or to comply as much as possible with the proposed procedure in their present work: Robert Koch Institute, Berlin; State Institute of Serotherapy, Vienna; Bacteriological Institute, Liège; State Serum Institute, Copenhagen.

III. — *Rabies: Action taken on the Resolutions of the International Rabies Conference.*

The International Rabies Conference invited the Health Organisation to publish statistics of the results of anti-rabies treatment in the different anti-rabies institutes of the world.¹ Reports on the results of treatment obtained in Pasteur institutes continue to be received, and in the preparation for publication of the data contained in these reports the Health Section has been fortunate enough to obtain the help of Colonel A. G. McKendrick, Director of the Research Laboratory of the College of Physicians, Edinburgh. It is hoped that the first report will be published before the next session of the Health Committee.

IV. — *Dengue.*

As a result of the epidemic of dengue which broke out during the summer and autumn of 1928 in Greece and other countries in the Eastern Mediterranean basin, the Health Committee decided to study the frequency and distribution of *Ædes Ægypti*.

¹ See Resolution adopted by Health Committee at its eleventh session.

Information was sought from the following countries :

Algeria	Italy	Kingdom of the Serbs,
Bulgaria	Malta	Croats & Slovenes
Cyprus	Morocco	Syria
Spain	Palestine	Tunis
France	Roumania	Union of Soviet Socialist
Greece		Republics
and has been received from :		
Algeria	Italy	Kingdom of the Serbs,
Bulgaria	Morocco	Croats & Slovenes
France	Palestine	Tunis
Greece		Union of Soviet Socialist
		Republics

The information when complete will be embodied in a general report.

V. — *Danger resulting from the Use of X-rays.*

Since the last meeting of the Health Committee, replies to the circular letter addressed to Public Health Administrations asking for information on the laws and regulations in force in their countries to obviate the dangers attendant upon the use of X-rays have been received from : (1) Germany, (2) Australia, (3) Czechoslovakia, (4) Hungary and (5) the Union of South Africa.

Germany had already forwarded the regulations in force on the Reich — we were recently informed that draft regulations have been drawn up concerning the supervision of Radium Institutes which will soon be discussed with experts. The results of this discussion will be forwarded to us.

In *Australia* there are not at present any laws or regulations in force, dealing with the dangers of X-rays. The protection of the operators is more or less left to the makers installing the X-ray plants. The recommendations as to protective measures of the British X-rays and Radium Protection Committee are closely followed. This subject is now under investigation by the Industrial Hygiene Division of the Department of Health.

In *Czechoslovakia* the drafting of regulations to eliminate dangers attendant upon the use of X-rays has been entrusted to a special Commission of the Electrotechnic Association.

In *Hungary* a committee has been constituted to study the dangers due to X-rays and to submit proposals for combating this danger. This problem had already been studied by Professor F. Rakotzi, of the Medical Faculty of Budapest, and his recommendations have been distributed to members of the Health Committee.

The Department of Public Health of the *Union of South Africa* stated that the question had been referred to all authorities and Institutes of the Union using X-rays and that the general consensus of opinion was that the matter calls for further study and investigation by experts, with a view to framing suitable laws and regulations. It was considered that the interest now being shown by the Health Organisation of the League of Nations in this matter was opportune and worthy of support.

VI. — *Survey of Health Conditions in the Islands of the Pacific.*

The enquiry which began in October 1928 is proceeding according to plan. A report is expected from Dr. Cilento and Dr. Hermant on the progress of the survey, which it is hoped may be distributed before May 2nd.

V.

LIST OF PUBLICATIONS PRINTED¹ DURING 1928 AND THE FIRST QUARTER OF 1929.

I. — *Service of Epidemiological Intelligence and Public Health Statistics.*

Periodicals.

1. *Weekly Bulletin* (bilingual), Nos. 97 to 177.
2. *Monthly Epidemiological Report* (bilingual), Nos. 110 to 121.
3. *Weekly Fasciculus* (bilingual), Nos. 148 to 203 (Epidemiological information received from Singapore).

Series.

1. *Statistical Handbooks :*

C.H. 669. — Official Vital Statistics of Switzerland, by Dr. Marcel Ney, Director of the Federal Statistical Bureau, with the Co-operation of Dr. H. Carrière, Director of the Federal Health Department at Berne. 1 volume. Size 18.5 × 24 cm. (88 pages.) May 1928.

¹ Unless otherwise stated, all the above documents have been edited, or will be edited, both in English and French.

- C.H. 741. — Official Vital Statistics of the Irish Free State and Northern Ireland (in preparation).
- C.H. 771. — Official Vital Statistics of Scotland (in preparation).
2. *Handbooks on the Organisation and Working of Public Health Services in Various Countries :*
- C.H. 683. — Public Health Services in New Zealand. (Part II of this brochure gives information on the vital statistics of the Dominion of New Zealand pages 43 to 84). 1 volume. Size 18.5 × 24 cm. (84 pages.) July 1928.
3. *International Health Year-Book.*
- C.H. 599. — International Health Year-Book 1927. (Third year.) Reports on the Public Health Progress of Twenty-seven Countries in 1926. 1 volume. Size 18.5 × 24 cm. (801 pages.) February 1928.
- C.H. 733. — International Health Year-Book 1928. (Fourth Year.) Reports on the Public Health Progress of Various Countries in 1927. (In preparation.)

II. — *Special Studies and Investigations.*

(a) *International Commission for the Study of Sleeping-Sickness.*

- C.H. 629. — Final Report of the League of Nations International Commission on Human Trypanosomiasis. 1 volume. Size 19.5 × 25 cm. (392 pages.) April 1928.
- C.H. 743. — Report of the Second International Conference on Sleeping-Sickness held in Paris, November 5th to 7th, 1928. 1 booklet. Size 19 × 25 cm. (90 pages.) December 1928.

(b) *Malaria Commission.*

- C.H./Malaria/100. — Programme of the Malaria Course for 1928. (Third year.) 1 booklet. Size 16 × 23.5 cm. (31 pages.) (Mixed French-English-German-Italian.) March 1928.
- C.H./Malaria/127. — Programme of the Malaria Courses for 1929.
- C.H./Malaria/121. — Report on the Work of the Malaria Commission at the Conference held in Geneva, June 25th to 29th, 1928. 1 brochure. Size 18.5 × 24 cm. (22 pages.) July 1928.

(c) *Permanent Commission on Standardisation of Sera, Serological Reactions and Biological Products.*

- C.H. 717. — Report of the Permanent Commission on Standardisation of Sera, Serological Reactions and Biological Products on the Conference held in Frankfurt-on-Main from April 25th to April 28th, 1928. 1 fasciculus, Size 21 × 33 cm. (8 pages.) May 1928.
- C.H. 726. — Report on the Work of the Laboratory Conference on the Serodiagnosis of Syphilis held at Copenhagen, May 21st, to June 4th, 1928 (in preparation).
- C.H. 734. — Memorandum on Cardiac Drugs, Thyroid Preparations, Ergot Preparations, Filix Mas, Suprarenal Preparations, Vitamins, Pituitary, Salvarsan, Oil of Chemopodium, Insulin, by Professor Knaffl-Lenz (Vienna). 1 volume. Size 15.5 × 24 cm. (69 pages.) August 1928. (English only).

(d) *Syphilis and Cognate Subjects.*

- C.H. 750. — Report on the Meeting of Experts on Syphilis and Cognate Subjects, held at Geneva, October 8th to 10th, 1928. 1 fasciculus. Size 21 × 33 cm. (7 pages.) October 1928.

(e) *Commission on Smallpox and Vaccination.*

- C.H. 739. — Report of the Commission on Smallpox and Vaccination on the Session held at Geneva from August 22nd to 25th, 1928. 1 fasciculus. Size 21 × 23 cm. (12 pages.) September 1928.

(f) *Commission of Expert Statisticians.*

- C.H. 730. — Essai d'une statistique comparative de la morbidité devant servir à établir les listes spéciales des causes de morbidité, par le Dr. F. Roesle, Chef du Service des statistiques médicales au " Reichsgesundheitsamt " de Berlin. 1 brochure. Size 18.5 × 24 cm. (117 pages.) December 1928. (French only.)

(g) *International Rabies Conference.*

C.H. 531. (1). — Report on the Work of the International Rabies Conference held at the Pasteur Institute Paris, from April 25th to 29th 1927 ; organised by the Health Organisation of the League of Nations. 1 volume. Size 16 × 24 cm. (171 pages.) January 1928.

(h) *Interchange of Public Health Personnel.*

C.H. 691. — Health Organisation in British India. 1 volume. Size 18.5 × 24.5 cm. (388 pages.) March 1928. English edition only. (French in preparation.)

C.H./E.P.S./136. — Collective Study Tour organised by the Health Organisation of the League of Nations in the Baltic and North Sea Ports from September 12th to October 13th, 1926. 1 volume. Size 18.5 × 24 cm. (17 pages.) July 1928.

C.H./E.P.S./144. — L'Hygiène publique en Italie : Forty-eight Lectures given in Italy to the Public Health Officers of Nineteen Countries during the Public Health Interchange organised by the Health Organisation of the League of Nations from September 16th, to November 10th, 1928. 1 volume. Size 13 × 20 cm. (308 pages.) August 1928. (French only.)

(i) *Health Experts on Infant Welfare.*

C.H. 737. — Report on the Conference of Health Experts on Infant Welfare held in London on July 3rd, 4th and 5th, 1928. 1 fasciculus. Size 21 × 33 cm. (6 pages.) September 1928.

(j) *Meeting of Experts for the Study of Vaccination against Tuberculosis by the BCG Vaccine.*

C.H. 745. — Report of the Technical Conference for the Study of Vaccination against Tuberculosis by the BCG Vaccine, held in Paris, at the Institut Pasteur, from October 15th to October 18th, 1928. (In course of preparation.)

III. — *Special Studies.*

C.H. 681. — The Food of Japan, by Egerton Charles Grey. 1 volume. Size 16 × 24 cm. (161 pages.) July 1928. (English only.) (Out of print.)

IV. — *Reports, Minutes of Sessions of Health Committee and Constitutional Questions.*

A. *Geneva Office.*

1. *General Work.*

A.10.1928.III. (C.H. 682). — Annual Report of the Health Organisation for 1927. 1 fasciculus. Size 21 × 33 cm. (60 pages.) February 1928.

2. *Health Committee Sessions.*

C.579.M.205.1927.III. — Minutes of the Eleventh Session of the Health Committee, held at Geneva from October 28th, to November 3rd, 1927. 1 volume. Size 21 × 33 cm. (181 pages.) January 1928.

C.254.M.79.1928.III. — Minutes of the Twelfth Session of the Health Committee, held at Geneva from April 30th, to May 5th, 1928. 1 volume. Size 21 × 33 cm. (125 pages.) July 1928.

C.555.M.175.1928. (C.H.769 (1)). — Report to the Council on the Work of the Thirteenth Session of the Health Committee, held at Geneva from October 25th to October 31st, 1928. 1 fasciculus, Size 21 × 33 cm. (46 pages.) November 1928. (French or English).

C.3.M.3.1929. — Minutes of the Thirteenth Session of the Health Committee held in Geneva from October 25th, to 31st, 1928.

B. *Far-Eastern Bureau.*

C.179.M.55.1928.III. (C.H.705). — Annual Report for 1927 and Minutes of the Third Session of the Advisory Council, held in New Delhi, from December 26th to 29th, 1927. 1 fasciculus. Size 21 × 33 cm. (67 pages.) April 1928.

ANNEX 3.

REPORT ON THE WORK OF THE CONFERENCE OF HEALTH EXPERTS
ON INFANT WELFARE HELD AT ROME ON MARCH 25TH TO 28TH, 1929.

(Submitted to the Committee on May 4th, 1929.)

The Conference of Health Experts on Infant Welfare met in the Central Statistical Institute of the Kingdom of Italy, on the invitation of the President of the Institute. The following attended the Conference :

- Dame Janet CAMPBELL, Senior Medical Officer, British Ministry of Health, London (*Chairman*).
- Professor A. COLLETT, Specialist in Children's Diseases, Oslo.
- Professor R. DEBRÉ, "Médecin des hôpitaux", Paris.
- Professor C. GINI, President of the Central Statistical Institute of the Kingdom of Italy, Rome.
- Professor E. GORTER, Director of the University Child Clinic, Leyden.
- Professor E. NOBEL, of the University Child Clinic, Vienna.
- Professor F. ROTT, Director of the State Institute for the Prevention of Infant Mortality, Berlin-Charlottenburg.

1. The Chairman called the attention of the Conference to the great loss which they had suffered since the last session by the death of Professor Clemens PIRQUET, of Vienna, whose name for many years had been known throughout the civilised world as a leader in the campaign for infant welfare. It was decided to communicate to the Medical Faculty of the University of Vienna the profound sympathy of the Conference for the loss which it had suffered — a loss which would be felt in many countries where Professor Clemens Pirquet's work was well known.

2. The Conference adopted the following agenda :

I. *Enquiry into Infant Mortality.*

(a) Communication of the national reports received up to date (Austria, France, Germany, Great Britain, Netherlands, Norway).¹

(b) Discussion of the principal results.

(c) Comparison of these results.

(d) Conclusions :

1. General recommendations regarding the prevention of mortality amongst infants under one year, resulting from present knowledge of this subject and in the light of the experience gained from the enquiry.

2. Future studies and scientific investigations to be undertaken with a view to elucidating problems for which a solution is still lacking.

(e) Additions to the data already obtained, with a view to completing them, and the use which may be made of these data.

II. *Studies of Immunisation against Scarlet Fever and Diphtheria.*

III. *Miscellaneous.*

I. ENQUIRY INTO INFANT MORTALITY.

1. The enquiry into infant mortality has been carried on in twenty-nine urban and rural districts in Europe.² During a period of twelve months, the deaths of 7,503 infants have been investigated, of which 5,147 were live-births and 2,356 still-births.

¹ The reports on the Italian districts, where the enquiry was begun later than in the other countries, will be available in the near future.

² Details of the enquiry in the four countries of Latin America (Argentine, Brazil, Chile and Uruguay) will be available later on in the course of the year.

2. In order to permit the Conference to discuss the most important results which had been obtained by the enquiries carried out in various countries, a memorandum had been circulated in advance by the Health Section (C.H./P.E./79), and it was decided to ask the members concerned to make a statement on each district according to the following plan :

A. *Infant Mortality under one year.*

- (1) Description of district.
- (2) General economic conditions.
- (3) Population.
- (4) Birth rate.
- (5) General mortality.
- (6) Number of infants covered by the enquiry.
- (7) Mortality calculated on the basis of the infants born living during the period covered by the enquiry.
- (8) Value of the enquiry :
 - (a) Number of deaths classed under "cause unknown" through failure of the enquiry ;
 - (b) Value of the medical diagnoses ;
 - (c) Differences between the official statistics and the results of the enquiry.
- (9) Causes of death :
 - (a) Groups of clinical causes ;
 - (b) Seasonal distribution ;
 - (c) Age distribution ;
 - (d) Economic conditions, housing and supervision ;
 - (e) Nutrition.
- (10) Deaths which, in the opinion of the investigator, were preventable.

B. *Still-births.*

- (1) Number.
- (2) Percentage of live-births.
- (3) Causes, in the opinion of the investigator.
- (4) In relation to deaths during the first week.
- (5) Conclusions.

3. The Conference decided to classify the districts in the following order, as the problems were found to be everywhere the same in districts belonging to the same mortality group :

Classification of Districts according to their Infant Mortality Rates.

A. *Rural Districts.*

- I. Low Infant Mortality : 3-4.9% :
Hedmark (Norway) ;
Oxfordshire (England).
- II. Moderate Infant Mortality : 5-6.9% :
Lochois and Chinonais (France) ;
Lippe (Germany) ;
Staffordshire (England) ;
Emmen (Netherlands).
- III. High Infant Mortality : 7-9.9% :
Pays de Caux (France) ;
Pays de Bray (France).
- IV. Very High Infant Mortality : 10% and over :
Hoensbroek (Netherlands) ;
Gmunden (Austria) ;
Strelitz (Germany) ;
Schärding (Austria).

B. *Urban Districts.*

- I. Low Infant Mortality : 3-4.9% :
West Oslo (Norway) ;
Leyden (Netherlands) ;
Dordrecht (Netherlands) ;
Vienna (Districts VI, VII and VIII) (Austria).

II. Moderate Infant Mortality : 5-6.9% :

Croydon (England);
East Oslo (Norway);
Breda (Netherlands);
Maestricht (Netherlands).

III. High Infant Mortality : 7-9.9% :

Cassel (Germany);
Plaisance and the zone of fortifications (France);
Augsburg (Germany);
Sunderland (England).

IV. Very High Infant Mortality : 10% and over :

Vienna (District X) (Austria).

4. The Conference examined the most important problems in each of these classes.

Group I. — The problems relating to infant mortality in these districts are as follows in the order of their importance :

A. *Deaths associated with the pre-natal period (premature birth, still-birth), with confinement (obstetrical traumatism) and with the period immediately following birth,* usually supervised by obstetricians and midwives. Deaths from these causes almost reach two-thirds of all the deaths in the various districts.

B. *Deaths due to respiratory affections,* occasionally following acute specific infectious diseases, but more often not so associated. These acute specific infections do not constitute a real problem in these districts.

C. *A few deaths from digestive disturbances* are to be noticed in this class, but they play an extremely unimportant part.

Group II. — The problems in this group of districts with moderate mortality are as follows :

A. *Deaths associated with the pre-natal period (premature birth, still-birth), confinement (obstetrical traumatism) and with the period immediately following birth* continue to occur in the same measure as in group I; their importance is relatively less only because of the greater proportion of deaths due to other causes.

B. *Deaths from respiratory diseases.* — A similar conclusion may be adopted here; the absolute number of deaths from this cause remains about the same as in group I, their importance apparently decreasing because of the increasing proportion of deaths due to other causes.

In the majority of districts belonging to this group, acute, specific infectious diseases have a more important relation to respiratory diseases than in the preceding group.

C. *Digestive disturbances,* which were of small importance in group I, here assume a greater importance, except in one district (East Oslo).

Group III. — The characteristics of this group are the importance of (a) *digestive disturbances,* both in rural and urban districts, and (b) the *acute specific infectious diseases.*

The influence of *tuberculosis and syphilis* has become more apparent than in the preceding group. The inadequate care given to these children may result in infections which are localised in different regions, such as the skin.

In these districts, deaths due to *respiratory disturbances* and those associated with *confinement* are of still greater importance than in the preceding groups.

Group IV. — In this group, the mortality due to *digestive disturbances* has become very much greater. Simultaneously, a larger number of infant deaths is due to *acute specific and non-specific infectious diseases, to prematurity and to conditions immediately following birth.*

5. The Conference next considered the causes of infant mortality, which constitute important problems in the different districts :

A. *Deaths occurring before, during and immediately following Confinement.*

(1) Deaths occurring within the first week of life are included in this group, as it is recognised that the same causes operate in the causation of deaths at birth and deaths during the first few days of life.

(2) One of the most striking facts in this connection is the number of deaths for which no cause could be determined. This number is so large that great caution must be observed in drawing any conclusions. Insufficient enquiry (no autopsy) was responsible for a proportion of these deaths being classified under the heading of unknown causes. Nevertheless, there remain a large number of deaths in which searching enquiry elicited no cause, and this is a problem for medical science to solve.

(3) The number of still-births varies within relatively small limits in the different groups of districts. These variations are partially explained by the conditions associated with confinement, but in a large number of cases no explanation has been found.

(4) In certain districts, illness of the mother, such as toxæmia and uterine hæmorrhages are important causes of foetal death.

(5) Obstetrical traumatism, frequently associated with unsuitable conditions of confinement and the lack of proper obstetrical attention, plays an important part. It must be noted that in certain districts death of the infant at birth or during the first days of life was attributed to overwork of the mother. Lack of knowledge concerning the care that should be given, especially to premature infants, during the first forty-eight hours of life, was also held to be responsible.

(6) The experts were unable to explain the causes of premature birth, and were struck with the rapidity with which death frequently resulted in these cases.

B. *Respiratory Diseases.*

Influenza or an infection of the upper air passages seems to play an important part in infant deaths due to respiratory diseases. In the group of districts with high mortality, environment appears to be more important than in districts with lower mortality; in the former, other factors, such as digestive disturbances, leave the infant a ready victim to respiratory infection.

C. *Acute Specific Infectious Diseases.*

(1) Among the infectious diseases of infants, whooping-cough was a more important cause of death than measles in nearly all the districts.

(2) An appreciable number of deaths is due to these contagious diseases, and it must be remembered that deaths classed under other titles may have been due to these causes without being recognised as such.

D. *Syphilis and Tuberculosis.*

(1) The importance of syphilis varies slightly in the different districts. The data available appear to indicate that this disease did not exercise any considerable influence, and, in this particular, the enquiry failed to yield the information desired.

(2) Tuberculosis caused a limited number of deaths.

E. *Digestive Disturbances.*

(1) These causes vary most in the different districts. They constitute the most important cause in districts with a high infant mortality and almost completely disappear in districts with low infant mortality. Consequently, of all causes of death, they are the most easily prevented.

(2) In districts where deaths due to digestive disturbances have been completely or almost entirely eliminated, not only is breast-feeding more universal, but artificial feeding is properly carried out, even where general hygienic conditions are bad and housing insanitary.

(3) In districts with high mortality, digestive troubles not only lead directly to a large number of deaths, but also tend to increase the number of deaths under other headings.

F. *Relationship between Demographic, Social and Economic Conditions and the Infant Mortality Rates in the Different Districts.*

The Conference considered the results of the enquiry in relation to the data on demographic, social and economic conditions.

(1) Variations in the birth rate did not appear to influence the infant mortality rates, some districts with low mortality having low birth rates and others high birth rates, while a similar finding was recorded for districts with high infant mortality rates.

The fact that the age and sex distribution of the population was not taken into consideration prevents the adoption of any definite conclusions until the birth rates have

been corrected by calculating the coefficient of fertility (ratio of infants born living to women of child-bearing age).

(2) The data on housing and social conditions have furnished information of value for the study of each district and for the appreciation of the factors involved in infant mortality. Nevertheless, the Conference found it difficult to draw any general conclusions in view of the many complicated factors involved and the fact that the personal impressions recorded on this subject are difficult to compare.

It was decided that the data on these subjects should be subjected to further study.

Recommendations.

The enquiry has demonstrated the value of certain existing measures, such as infant welfare centres, the supervision of the mother and the child, and the benefits resulting from social legislation. On the other hand, the insufficiency of these measures in all the districts has become apparent.

Since, for certain causes, information is available in regard to preventive measures, while, for others, the position remains obscure, the recommendations must be divided into those dealing with questions in which medical research is needed, and those concerned with practical measures.

A. MEDICAL RESEARCH.

1. The enquiry has demonstrated that, among the most important problems, some are still obscure. These are prematurity, still-birth and infant deaths occurring within the first days of life. These problems call for further scientific researches undertaken jointly by obstetricians and pediatricians.

2. The ætiology of respiratory affections is much better known, but further studies on their prevention should be carried on by pediatricians and hygienists.

B. PRACTICAL SUGGESTIONS RESULTING FROM THE ENQUIRY.

I. *The Prevention of Prematurity, Still-birth and Infant Death during the First Days of Life.*

These recommendations concern not only those districts having a low infant mortality, where these are the only real problems, but even more so other types of district.

Medical Supervision of Pregnant Women.

1. Improvement in medical supervision of women during pregnancy — a most important measure and one which should be adapted to the conditions obtaining in cities and in rural areas. This supervision appears to have been insufficient in the districts included in the enquiry, even in those with low infant mortality.

2. Medical supervision of pregnant women may be carried out by means of maternal welfare centres, physicians and midwives. Special training should be provided for this purpose.

3. More maternal welfare centres should be organised to provide for the medical supervision of the expectant mother.

4. Medical supervision of the expectant mother implies a better understanding on her part of the necessity for such supervision from the beginning and during the whole period of pregnancy.

5. There should be a campaign against the employment of untrained women as midwives, and in certain countries the social status of the midwife should be raised.

6. There should also be medical supervision of women in industry who become pregnant.

Social and Legislative Measures for Pregnant Women.

1. Financial and other forms of assistance to pregnant women, and legislative measures, such as health insurance (with provision for dependents), should permit such women to rest during the latter months of pregnancy — a means of preventing still-birth and prematurity.¹

2. In the majority of the districts under consideration, the existing laws and financial assistance have been insufficient to permit pregnant women to take sufficient rest.

¹ Social remedies should be applied without partiality to legitimate and illegitimate children.

Measures during Confinement.

1. Untrained women should be prevented from acting as midwives, and midwives and physicians should be given a better training in obstetrics.
2. Access of parturient women to maternity hospitals should be facilitated whenever there is sufficient medical or social need.
3. Small maternity hospitals should be established in rural districts.

*Prevention of Deaths during the
First Days of Life.*

Attention should be called to the necessity for consulting child specialists with regard to new-born children, and to the need for improving public instruction and the training of midwives in the care of infants at and immediately following birth, especially of premature and weakly infants.

II. *Campaign against Respiratory Diseases.*

1. Apart from better housing conditions, the prevention of cross infection implies improvement of hygienic conditions and medical supervision of all infants gathered together in groups, as in hospitals, nursing-homes, etc.
2. The public should be better informed regarding these diseases and the danger of their spread from adults to infants, as well as in the methods of preventing such transmission.

III. *Campaign against Acute Specific Infectious Diseases.*

1. Attention should be called to the dangers of whooping-cough and measles, and to the need for employing the classic preventive measures, such as isolation, as well as the more recent methods, such as serum-prophylaxis and vaccination.
2. Every possible effort should be made to apply to infants all known preventive measures against syphilis and tuberculosis.

IV. *Measures against Digestive Disturbances.*

1. The success obtained in the districts with low mortality in the prevention of this group of causes of death indicates clearly the action to adopt. In these districts the campaign should be continued and extended to districts with higher infant mortality. Breast-feeding should be encouraged by measures of education and material assistance given to the nursing mother.
2. In the interests of artificially fed infants, infant welfare agencies which give advice to mothers and assist by other means, etc., should be developed.
3. Measures for the supervision and improvement of the milk supply should be organised.

V. *General Measures.*

These may be grouped as follows :

- (a) Education of the public in hygiene.
- (b) Education of physicians and midwives in hygiene.
- (c) Supervision of infancy by public health nurses.

(a) *Education of the Public in Hygiene.*

1. This implies the teaching of certain aspects of hygiene concerning infants, as a part of elementary and secondary school instruction.
2. The interest of teachers and professors should be developed in this direction, especially when women teachers are employed.
3. The establishment of schools of hygiene with courses not limited to physicians, midwives and nurses, but also open to the public. Education of the public may be

carried on by means of infant welfare centres, which should undertake still more widely than at present the training of mothers by dealing more fully with all the subjects relating to infant welfare.

(b) *Education of Physicians and Midwives in Hygiene.*

This training should not be limited to medical students and student midwives, but should extend to practising physicians and midwives, for whom systematic continuation courses should be organised. In medical schools, physicians and midwives should learn of the practical difficulties which will confront them in practice. Courses in pediatrics and particularly in diseases of infants should be compulsory.

(c) *Supervision of Infancy by Public Health Nurses.*

The enquiry shows that it is most desirable for infants living in each district to be visited by a public health nurse, who should persuade the mother to visit the family physician or the infant welfare centre even though the child is quite well. The public health nurse should also advise the mother on infant hygiene and breast-feeding. The influence of such nurses and of infant welfare centres is particularly valuable in dealing with certain groups of the population which resist the application of measures for the protection of infancy.

If proper provision be made for pregnant women and new-born children in the form of maternal and infant consultations, public health nursing, legislation providing for compulsory absence from work and a subsistence allowance before and after confinement, as well as an allowance for breast-feeding, a large proportion of the women and infants in need of these services will take advantage of them voluntarily.

Every central health administration should realise the advantages inherent in these provisions for infant and maternal welfare, and should develop them or encourage their development as rapidly as possible.

* * *

In view of the results secured by the enquiry, it is recommended that the Health Administrations of the different countries should carry on studies of a similar character, which will serve as a basis for the establishment and application of preventive measures, and will complete the official statistical information on infant deaths which the enquiry has proved to be insufficient in many districts.

In view of the fact that the enquiry has stimulated the greatest interest in all the districts in the prevention of infant mortality, it is also recommended that the investigators should furnish periodically information on the various districts and on the progress achieved.

* * *

The Conference awaits with interest the results of the enquiry in Italy and the complete report on the enquiries in Vanves and the German districts, covering all live births as well as still-births and infant deaths, and requests the Health Committee, in addition to the publication of a general report, to undertake or assist in the publication of the national reports, in order that the detailed results of the enquiry may be made known to those most concerned with the prevention of infant mortality, including the public.

II. IMMUNISATION AGAINST SCARLET FEVER AND DIPHTHERIA.

After hearing the description of the studies on scarlet fever and diphtheria carried on in Europe by the two Rapporteurs, and as a result of the discussion which took place during the session, the Conference requested the Health Committee to facilitate the continuation of the study of these two important subjects, with the object of drawing up a plan of work in co-operation with the physicians and hygienists in the different countries who are experts in this field.

III. MISCELLANEOUS: PREVENTION OF WHOOPING-COUGH, MEASLES AND RICKETS.

The Conference again drew attention to their previously expressed views on the studies which should be carried out concerning the prevention of whooping-cough, measles and rickets.

REPORT TO THE HEALTH COMMITTEE OF THE FAR-EASTERN COMMISSION

(Submitted to the Committee on May 5th, 1929).

The Far-Eastern Commission, at a meeting held on April 4th, considered the Minutes of the fourth session of the Advisory Council of the Eastern Bureau, held in Singapore from February 14th to 16th, 1929, together with the Annual Report of the Director of the Bureau and the budget proposals for 1930 (C.H.793).

The Commission approved the resolutions adopted by the Advisory Council and associated itself with the expression of appreciation of the generosity of the Governments of French Indo-China, Netherlands East Indies, British India, British North Borneo, Shanghai, Madagascar and Japan, in affording wireless facilities for the dissemination of information emanating from the Bureau. The Commission noted with satisfaction the progress in the different countries with regard to plague investigations, and considers that continued co-ordinated research, according to the programme drawn up by the Plague Commission in Calcutta, 1927, should yield important results.

The Commission learnt with satisfaction of the nomination of Professor Ishiwara as the Japanese member of the Plague Commission, and recommends that this nomination be accepted.

The Commission was glad to learn of the continuance of the enquiry into the efficiency and working of quarantine stations in the Far East, and of the investigations into the value of oral vaccination, dried smallpox vaccine and bacteriophage.

The Commission recommends that the thanks and appreciation of the Health Committee be addressed to Colonel Graham, the Chairman, and the Members of the Advisory Council, for the continued interest they have taken in the welfare of the Bureau; and it associates itself with the Advisory Council's congratulations to the Director and his staff on the efficient manner in which the Bureau was administered during the past year.

The Commission suggests that the Advisory Council might consider at a future session the possibilities of increasing the information obtained concerning the appearance and progress of the more important epidemic diseases in the interior of countries in the Far East. In cases in which telegraphic information concerning such outbreaks is not indicated, the possibilities of sending reports by means of air-mail services might be borne in mind.

The Commission took note of the remarks of Dr. van Lonkhuyzen concerning the obvious dangers which would ensue, were laboratory experiments with imported yellow-fever virus and *Stegomyia* mosquitoes to be carried out in tropical areas in which these mosquitoes are excessively prevalent but where yellow fever has never occurred, and of the promise of the Medical Director to obtain further information with regard to this matter from the Director of the Singapore Bureau.

The Commission recommends the adoption of the budget estimates for 1930 as passed by the Advisory Council, and suggests that an expression of the Health Committee's sincere appreciation be conveyed to the administrations of China, the Federated Malay States, French Indo-China, Hong-Kong, Japan, the Netherlands East Indies, the Philippine Islands and the Straits Settlements, for their continued generous financial contributions towards the upkeep of the Bureau. The Commission suggests that steps be taken to sanction the acceptance of Mr. Forstall's donation to the Bureau of 500 gold dollars as a contribution towards the expenses of some special object of research in which the Bureau is interested.

In conclusion, the Commission proposes the following resolution for adoption by the Health Committee:

"The Health Committee approves the report of its Far-Eastern Commission and the resolutions adopted by the Advisory Council of the Eastern Bureau at its fourth session held in Singapore from February 14th to 16th, 1929, together with the budget estimates for 1930 attached thereto".

THE SURVEY METHOD OF STIMULATING PUBLIC HEALTH ADMINISTRATION
IN THE UNITED STATES OF AMERICA: PRESENTED BY DR. H. S. CUMMING,
SURGEON-GENERAL, UNITED STATES PUBLIC HEALTH SERVICE, TO THE
HEALTH COMMITTEE ON MAY 6TH, 1929.

The modern public health movement is usually considered as taking its definite beginning in 1848 with the creation of England's General Board of Health. It is perhaps significant that that was the first time that public health was recognised as an important administrative function of government.

The "Golden Age of the 80's" with its remarkable discoveries of parasitic micro-organisms as specific etiological factors in disease, marks the introduction of scientific preventive medicine. The triumphs of the nineteenth century served to weaken the fetters of superstition and tradition, although there remain many relics of the past expressed in public health laws and regulations that are not in accord with our present-day knowledge.

Only a few decades ago, and largely through ignorance, man was practically helpless to protect himself against disease. The "inertia of inheritance" which even now hampers many public health authorities is responsible to a considerable degree for the lack of more rapid progress. Public opinion represents the *vis a tergo* that is required to support medical officers of health and encourage them to substitute our growing knowledge for the traditional ignorance of the past.

Progress in medical sciences and advances in knowledge of public and personal hygiene, biology, physiology and other related sciences have placed in our hands many effective weapons against ill-health and premature death. As Osler has said: "The list of diseases which we can positively cure is an ever-increasing one; the number of diseases the course of which we can modify is a growing one; the number of incurable diseases (which is large and which will probably always be large) is diminishing."

Progressive public health officers have abandoned the older idea of "unarmed neutrality" and the practice of "watchful waiting" for epidemics to establish a foothold, and there has been substituted a policy of armed offensive and the doctrine based upon an ounce of prevention as being worth much more than a pound of cure.

It is well to remember that the present status of our knowledge of public health is not due to the work of any one man or group of men nor does it represent the product of any one generation. In this respect it has not become a monopoly and it is gratifying to know that the measure of success so far obtained has been the result of the spirit of national and international unselfishness on the part of those who have labored in the interest of public health. We have made mistakes but, fortunately, we have learned to profit by them, with the result that there is to-day much less confusion and a very decided gain in practical efficiency generally.

In any attempt to consider or criticise the many obvious shortcomings in present-day public health practice, it is well to keep in mind the fact that its development has been largely a matter of circumstance. Exigencies of the moment, such as epidemics and threatening health hazards, have, in no small way, determined the present structure of our public health machinery and methods.

The Public Health Movement in the United States of America.

As a comparatively young nation in the history of world events, without the fixed principles established by centuries of growth, the United States has possibly done more experimenting in public health work and tested out more theories than other nations, but we have not fully agreed upon any concrete plan of public health procedure.

In the United States, the established doctrine of States' Rights has materially influenced the scheme of health service that has been developed. Because of our system of self government, the greatest progress has been made in local health services and it is realised that plans that fit into our national scheme may be less readily and successfully applied in other countries.

Possibilities of the Future.

If the progress made by civilisation during the past century is continued for the next hundred years, it would be difficult to predict the conditions of human existence that would then prevail. It seems safe, however, to prophesy that many sciences will make almost unbelievable advances before the end of the present century.

Recently an eminent British authority (the Earl of Birkenhead) expressed it as his opinion that epidemics will be abolished a hundred years hence and, further, that cures for such scourges as cancer and tuberculosis will have been developed. This same authority is confident that the living chemistry of the human body will hold fewer secrets from the biologists and that some, at least, of the mysteries of heredity will be solved. Heredity and eugenics may then be overshadowed by the prospect of ectogenetic birth so that the functions of marriage may be changed and government authorities able to determine the character of future citizens.

Predictions of that sort deserve serious reflection in planning for further development in public health work. If the history of the past hundred years is to be any guide for the future, it is conceivable that many of the public health doctrines of to-day will soon be obsolete and useless, and that a new technique of health service will be necessary. Indeed, already, sanitary practices rather universally adopted are meeting with scepticism in the minds of progressive health authorities, and these practices are being continued chiefly because no better alternatives have as yet suggested themselves.

BRIEF HISTORY OF EARLY SURVEYS.

A brief review of the development of the survey method of studying public health administration and sanitary problems is essential to any understanding of the role played by surveys in the development of the public health movement.

The list of items included in the schedules used as the basis of early sanitary surveys probably represents in outline the status of public health work of the period covered and the activities that were supposed to be essential elements in public health practice.

One of the earliest surveys undertaken in the United States, and possibly in any country for that matter, was published as "An Account of the Weather and Diseases of South Carolina" (by Dr. Lionel Chalmers, London) in 1799. In 1813, "A Picture of Cincinnati and Miami County" by Dr. Drake, represented a sanitary survey of that Ohio district.

In 1842, Edwin Chadwick, impressed with the seriousness of conditions among the poor of England, collected data that formed the basis of a "Report on the Sanitary Condition of the Labouring Population of Great Britain." This report and the subsequent activities of Chadwick and others led to the Public Health Act of 1848, marking the beginning of a sanitary awakening in that country.

In the following year, 1843, the medical section of the National Institute at Washington, D.C., collected, by means of a questionnaire, certain data concerning the health of cities. The rather incomplete replies that were received as the result of this enquiry were published in the *Boston Medical and Surgical Journal*, 1844-45. This Institute's report to the American Medical Association called attention to the general apathy, even among physicians, to the subject of hygiene, referring to the feeling of satisfaction with respect to the healthfulness of one's own community that so often prevailed at that time.

A survey by Sir Robert Rawlinson in England, 1844-45, was published by the General Board of Health and served as a basis of far-reaching laws in England.

The American Medical Association, in 1844, appointed a Committee on Public Hygiene to prepare a schedule of questions which appears in the Reports and Papers of the American Public Health Association, Volume II, 1876. This schedule was prepared for making a survey of the principal cities in the United States. Nine items were included in this questionnaire and probably indicate the character of the information considered important at that time.

Stimulated by the example set by this survey schedule several State medical societies attempted to collect "medical topography", based on statistics of disease and including (1) causes which modify health, such as locality, hydrography, topography, geology and meteorology; (2) mortuary tables; and (3) prevalent diseases. This schedule emphasised the importance of conditions more directly concerned with disease and sickness.

It was pointed out that a satisfactory medical topography should have reference not only to the causation but to the prevention and cure of disease, but that this science had made but little progress for a thousand years.

In the efforts directed toward sanitary reform in the United States, one of the most outstanding figures is that of a layman, Lemuel Shattuck, called the "Edwin Chadwick of America." In 1845, Shattuck, convinced of the need of better protection facilities, made a sanitary survey of Boston, which was published in that year as a "Census of Boston". As a result of his activities, the Massachusetts legislature, in 1849, authorised an expenditure, not to exceed \$5,000, to provide for a Sanitary Commission which was to undertake a sanitary survey of the entire State. The purpose of this survey was to "ascertain the causes which favorably or unfavorably affect the health of the inhabitants."

The report of this Commission, appearing in 1850, was one of the most comprehensive and carefully planned surveys undertaken up to that time in the United States and it represents largely the activities and views of Shattuck who acted as chairman of the commission.

This remarkable survey and report, undertaken almost entirely by a layman, concluded with fifty recommendations, including very detailed provisions for both State and local health services and stressing the need of adequate health organisation in every city and town. It preceded the establishment of the Massachusetts State Board of Health by about twenty years, but, nevertheless, Shattuck's observations of 1850 are to be found among the more fundamental requirements of modern public health practice and his efforts undoubtedly influenced the subsequent trend of public health law and of the provisions made for public control of sickness and disease in the United States.

In 1860, a "Scheme of Sanitary Statistics" was proposed by Dr. John Sutherland and presented at the International Statistical Congress at London. The list of items included in the schedule drawn up at that time were quite comprehensive and presented in considerable detail, indicating a recognition of the extensive domain of public health.

Under the direction of Dr. Elisha Harris, sanitary superintendent of New York City, a sanitary survey of nearly 15,000 tenement houses in that city was conducted in 1869. This survey consisted of careful inspections as to drainage, excreta disposal and refuse disposal, ventilation, air and sunlight, over-crowding, vaccination history, etc. As a result of this survey, definite conclusions were presented with respect to the hygiene and sanitation of tenement houses and the health of their occupants.

In 1875, a schedule for sanitary surveys was prepared by a Committee of the American Public Health Association. This schedule included over 500 items and was intended to be applied to all cities of over 5,000 population or approximately 325 communities. In this committee's report of 1875, a summary is given of the programme of State boards of health and the sanitary organisation and health of seventy cities.

Reference has been made to some of the earlier surveys in order to invite attention to the fact that the importance of systematic study of health problems was distinctly recognised and appreciated long before public health activities became organised. Some of these early surveys undoubtedly were instrumental in focusing attention upon the need of sanitary reform, and it is interesting to note that in these earlier efforts to stimulate and encourage public officials to provide more effectively for public health measures, the names of two laymen, Chadwick and Shattuck, occupy a prominent place.

TYPES OF SURVEYS DEFINED.

A "survey", by definition, is the process or result of a critical inspection or examination, undertaken for the purpose of looking over or ascertaining all the facts, as to quantity, quality, or status of the objective of the survey.

In the field of public health activities, the survey may be likened to the physical examination in the hands of the medical clinician. A searching and painstaking examination is necessary before attempting to arrive at a diagnosis and it is equally essential that a correct diagnosis be formulated preliminary to prescribing treatment. To secure the confidence and collaboration of the patient who has sought this advice, it is necessary to carefully explain to him the significance of the physical findings which justify the remedies prescribed. It is, furthermore, advisable at times to arrange for a consultation of specialists to establish or confirm the diagnosis and decide upon the treatment best suited to the conditions found. To enhance the chances of recovery or cure, it is wise to arrange for the necessary follow-up and convalescent care or else the full value of expert diagnostic and therapeutic skill may not be realised.

A survey of any phase of public health activity undertakes the same history taking, physical examination, and laboratory analysis with a community acting as the patient. A critical examination or investigation, conducted by a qualified and experienced community physician, alone or with a trained corps of special public-health experts, will make it possible to set forth the conditions affecting, directly or indirectly, the health of the community. It may or may not be necessary to call in, as consultants, specialists in some of the various fields of public health before an analysis and interpretation of the findings can be completed, and the remedy suggested and administered.

This represents, without detail, the more or less general objective of a public health survey. Unfortunately, while it is often possible to complete a satisfactory physical examination and to fully establish the diagnosis and select appropriate treatment, it is frequently difficult to arrange for the administration of the necessary remedy and follow-up.

In order to make some differentiation as to the variety of the investigations that have been classed as surveys, it seems desirable to apply the term *public health survey* to those studies that include all the activities, resources, and conditions affecting in any way the health of a community. It may be either intensive or extensive, and it should include the organisation, administration and activities of both the official and the so-called voluntary health agencies. It should also include vital statistics, morbidity, water supplies and sewage disposal and, in short, all conditions of hygienic or sanitary importance. The public health survey may be supplied equally well to a rural area, a village, town, city or State.

In the light of our present knowledge it seems desirable to restrict the use of the term *sanitary survey* to those studies of various environmental conditions affecting the health of the community either directly or indirectly, such as water supplies, excreta disposal methods, milk and food sanitation, housing, insect and rodent infestation.

Many *special surveys* have been made by various agencies and individuals, having as their chief objective the study of some special phase of community health, such as maternal and infant welfare school hygiene, hospitals, dispensaries or clinics, nursing, and midwifery. *Special surveys* have also been made in the fields of industrial and mental hygiene. Important

morbidity surveys have yielded valuable information and many of the diseases that contribute materially to the annual mortality lists have been subjected to special surveys and critical epidemiological studies, particularly such diseases as diphtheria, scarlet fever, encephalitis, septic sore-throat, poliomyelitis, influenza and common colds, goitre and cancer. Other special surveys have been made of hookworm disease, pellagra, trachoma, smallpox and malaria, and special mosquito and rat-flea surveys have been undertaken. This list also includes water supplies, sewage disposal methods, and the shell-fish industry. In fact, during the past twenty years practically every angle and phase of health, hygiene, sanitation, disease, and medico-social problems have been made the subject of special surveys.

Several extensive surveys have included large groups of cities or communities. These *group surveys* have had as their objective either a comprehensive and systematic public health survey, a sanitary survey, or a special study of some particular phase of public health work in a predetermined group of communities. Properly conducted these group surveys should give a fairly representative cross-section and, if comparable data is collected, it then becomes possible not only to compare one community with another but to draw conclusions with respect to the more fundamental principles that appear to have been reasonably successful as shown by the experience of a representative group of cities. By means of such surveys an enormous mass of valuable data is available for studies of relative values and the selection of those elements of practice that can be considered in the light of standard methods.

One of the most useful functions of the survey method of studying public health activities is the opportunity offered to estimate the progress made from year to year in a given community or in the general trend of the public health movement. For this purpose, *periodic surveys* are as essential as the periodic medical examination of the individual which permits a careful check upon one's physical and mental condition and frequently offers excellent opportunity to forestall disaster. The necessity of collecting comparable data at frequent intervals is at once apparent.

Under certain conditions, the survey of some phase of public health work by means of a questionnaire is undoubtedly justifiable. The collection of data, entirely by correspondence usually, is less expensive than elaborate field studies, but it is no easy matter to devise a set of questions that will return the exact information desired. The existing lack of uniformity in the book-keeping and records of public health agencies generally makes it extremely difficult, if not impossible, to secure comparable data in this manner, nor is it possible to check or verify the answers received. Surveys conducted by personal visits of trained investigators have many distinct advantages over the questionnaire method which perhaps lends itself better to certain statistical studies. As a rule material assembled by circular letter is intended solely for the information and use of the collecting agency, and the questionnaire frequently becomes a nuisance that deserves a suitable remedy.

THE TECHNIQUE OF MAKING SURVEYS.

Plans for Surveys vary. — The steps to be taken in arranging for and carrying out a health survey depend upon the conditions leading up to the necessity or occasion for the particular survey under consideration. If it is intended solely for the collection of data for special study by some agency or individual, it is desirable and usually necessary to secure in advance the consent and collaboration of the health authorities and private agencies of the communities to be studied. Plans for the survey should be carefully arranged beforehand and the desired information should be collected with as little inconvenience as possible to those interviewed. If such a study is carried on by some recognised public health agency, having a practical objective in view, no embarrassments or obstacles should be encountered.

If, on the other hand, a study of the public health problems of a community is to be undertaken because the community has realised the need of such a survey and a proper request for it has been presented by some representative body or individual, the programme requires careful preliminary arrangement and the entire conduct of the survey must be adapted to the existing situation.

No precise plan of procedure, under these latter conditions, can be laid down. Usually it is necessary to organise the community in preparation for the survey and it is desirable to arrange for a "survey committee" that should include the health officer and representatives of all important voluntary health agencies, civic organisations, the medical, nursing and dental professions, and other bodies or individuals whose support seems necessary to the success of the survey. This committee not only assists the director of the survey in establishing contacts but it may also be of service in collecting information. If sufficient interest is aroused and the need for reorganisation or expansion of the public health programme is urgent, as shown by the evidence brought out during the survey, this committee should aid materially in securing the adoption of the improvements or reforms recommended.

The use of a Survey Schedule. — In order to collect and record the information and data considered essential for subsequent analysis, it is desirable to make use of some outline or schedule that will permit the entry of the data in a systematic and orderly manner. Such a schedule serves as an invaluable guide to the surveyor and it enables him at any time to check up on the data required to complete the survey.

The need of a carefully detailed schedule was recognised at the very beginning of the extensive field surveys undertaken by the United States Public Health Service in 1914. In attempting to systematically review the public health activities of large groups of cities, the many advantages and the real economy in the use of a common schedule led to the preparation and subsequent use of a survey schedule.

The schedule used by the Public Health Service during the survey of the hundred large cities in 1923, was a revision of a somewhat similar schedule prepared for the survey of the eighty-three large cities in 1920 under the auspices of the American Public Health Association. A special schedule was also drawn up by the American Child Health Association for its survey of the eighty-six smaller cities in 1923.

The use of a common schedule in group surveys and whenever it is desired to undertake any comparative analysis of items in groups of cities, or of the progress made from time to time, becomes indeed a necessity, especially when a number of field workers are engaged in the study. Comparable data, systematically recorded in an orderly manner, cannot otherwise be secured.

Without attempting to outline any of the schedules now in use, those who are interested in their contents and general arrangement may examine the schedule used by the United States Public Health Service in the 1923 surveys. (Copy presented).

The Survey itself. — The programme to be developed for the field activities of a survey depend, of course, upon the type of investigation proposed, and no attempt can be made at this time to outline the details of any plan to be followed. Adequate provisions must be made for the general conduct of the survey, as well as for the history-taking, the physical examination; the laboratory analysis, the diagnosis, the decision as to treatment, and the final report of the survey with its recommendations.

Qualifications of Survey Personnel. — Too much emphasis cannot be placed upon the qualifications of the individual or individuals who assume the rôle of a community physician. Training and experience in public health organisation and administration is necessary and at the same time, a sufficient knowledge of medicine, hospitalisation, nursing, social welfare, and such practical understanding of the fundamentals of mental hygiene, industrial hygiene, milk and food sanitation, housing, water supplies, sewage disposal, insect and rodent control, refuse disposal, city planning and other health problems, as will enable him to complete a satisfactory diagnosis and outline adequate treatment. A surveyor must, of course, possess tact, discrimination, perspective, judgment and an abundance of sound common sense. He must also be able to distinguish between intention and performance.

Trained and experienced personnel, possessing all of these qualifications are not always readily available. As a rule, preference is given to the expert medical officer especially if he is to carry on the survey unassisted or serve as director. Sanitary engineers and non-medical men holding special diplomas in public health training have accomplished satisfactory surveys, but, all things considered, the qualified medical officer seems best equipped to render this important service.

For a comprehensive survey in a large community, it is usually necessary for the director of the survey to arrange for a corps of trained field investigators and for the diagnosis and treatment it may also be necessary to call, in consultation, experts in the various special fields of public health activity.

The Survey Report. — When a survey is intended to serve as a basis of reform in a local health service, and the essential data have been assembled, analysed, and expertly interpreted, a careful report should be prepared in which all important findings are entered together with such comments as seem necessary to support the conclusions and recommendations.

Reports of individual surveys have an historical value that should not be overlooked. Under the form of government existing in the United States, it would be desirable to have State health departments serve as a central collecting agency for the reports of surveys made within their respective jurisdictions. In this way valuable material would be available for study and comparative analysis.

Results. — The results that may be expected from a purely local survey depend largely upon the provisions made for a consistent follow-up of the treatment prescribed. When the needs are urgent, and a judicious publicity has aroused sufficient interest and support, the improvements that have followed public health surveys in many instances have been very gratifying.

RECORD OF SURVEYS IN THE UNITED STATES.

No complete record of even the approximate number of public health surveys that have been made in United States is available. An almost endless variety of surveys have been undertaken by all sorts of agencies, both official and voluntary, many of which are not published or made a matter of record.

In the January 1929 issue of the American Medical Association Bulletin, a total of 3,781 public health surveys are listed, and the four accompanying tables (see pages 84 to 87) are taken from that bulletin.

A glance at Table I indicates the great variety of surveys that has been carried out in the United States, a total of fifty-five varieties by twenty-eight different organisations.

In this list, the United States Public Health Service is credited with 1,971 surveys, beginning in 1902. Surveys reported by State health departments come next in frequency with a total of 830. The United States Chamber of Commerce reported 214; the American Social Hygiene Association, 154; the American Child Hygiene Association, 146; the American Public Health Association, 110.

Table II shows the distribution of this list of surveys by years and according to the organisations making the survey. This table shows considerable fluctuation in numbers from year to year, as perhaps might be expected, and by itself does not indicate any consistent development of survey work.

The large number of surveys credited to the United States Public Health Service in 1914 (1,037) represents extensive surveys in connection with studies of hookworm disease, malaria, rural sanitation, school hygiene and shell-fish control. The record is incomplete for 1914 as well as for other years, owing to the fact that the actual number of individual field surveys in these and other studies has not been published.

A table showing the distribution of surveys by organisations and by years according to States, and another table showing the various activities surveyed by States is added to show the geographic and annual distribution of the surveys tabulated.

From these tables, it would appear evident that there has been no uniform geographic distribution of the surveys. This is not especially significant as indicating that one State or section has had more need of the stimulation that comes from careful stock-taking. For the most part it probably means that, in those States ranking high in the number of surveys credited, the desire to promote better health service has exceeded that of other States and cities.

There are, undoubtedly, certain duplications in the list. With a large number of agencies active in the several fields of public health work, it is not surprising that re-surveys of the same activity in a community are recorded. Different agencies have different objectives, and a proportion of these studies are conducted merely for the sole purpose of fact-finding. It must also be evident that the findings and recommendations of one survey soon become outgrown if progress is being made or if, unfortunately, retrograde influences are at work, so that re-surveys are desired to provide a current reckoning.

RELATIVE IMPORTANCE OF CERTAIN PUBLIC HEALTH PROBLEMS
AS SHOWN BY THE FREQUENCY DISTRIBUTION OF SURVEYS.

It is interesting to compare the frequency distribution of surveys according to the objectives studied. From the tabulation under consideration the following list of surveys has been selected in order to show the relative importance of the different public health problems as indicated by the frequency with which each has been subjected to special study or review.

Distribution of 3,406 Surveys according to Type of Activity studied.

Type of Survey	Number of Surveys	Percentage of Total
School health-service	1,002	29.4
Venereal diseases.	586	17.2
Public health administration.	482	14.2
Health education.	365	10.7
Sanitation, general.	194	5.7
Communicable diseases	119	3.5
Water supplies.	94	2.8
Parks, resorts and camps	88	2.6
Mental hygiene.	70	2.1
Milk sanitation.	64	1.9
Malaria	59	1.7
Goitre.	59	1.7
Stream pollution	51	1.5
Child health	51	1.5
Hospitalisation.	48	1.4
Tuberculosis	41	1.2
Maternal and infant mortality.	33	1.0
Total	3,406	100.0

Table II.

		ENQUÊTES D'HYGIÈNE PUBLIQUE PUBLIC HEALTH SURVEYS																				NON PRÉCISE NOT STATED					
		RÉPARTITION PAR ANNÉE ET PAR ORGANISATION DISTRIBUTION BY YEARS ACCORDING TO ORGANIZATION.																									
		1902	1906	1907	1909	1910	1911	1912	1913	1914	1916	1916	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928		
AAMP																					2	2	2	2	3		11
ACHA																					3	89	14	29	7	4	146
ACS																					1	1	1	1	1		10
AMA																					1	1	1	1	1		20
APHA																	13	70					9	18			110
ASHA																					2	3	73	74	2		154
BMR								1	10	6	6	5	5	1	3		2	1	8	2	1	11				62	
CB										1		3		3	5	6	2	3	7	14	3	11	17		3	78	
CF																							7			7	
CIW																	1									1	
IHB																								1		1	
JBSC																							1			1	
MIT																									15	15	
MLIC														1	4	1	1								4	11	
MMF																				2		1				3	
NAM																							1			1	
NCLC															1	2	1	1								5	
NCMH										1	2	3	11	6	4	5	11	8	6	2	2			2		63	
NOPHN																							3	6		9	
NSPB																						1	1	2		8	
NSPI																									1	1	
NTA																						4	6	1		11	
NYDEU																							1			1	
RSF																										1	
SDM				22	1	2		2		2	13	8	6	7	13	29	18	37	39	186	268	70	77	1	29	630	
USCC																										214	214
USPHS	1				1	2	2	4	42	103	37	24	6	17	12	46	31	11	132	139	1	9	2	1	1	1971	
DIVERS- MISCELL.				1	2	3	4	10	4	5	9	6	3	6	4	4	1		2		4	3	2		17	90	
TOTAL	1	1	23	5	8	7	18	59	105	72	58	35	45	47	52	135	69	204	436	323	251	172	2	290		3636	

Out of 3,406 surveys, covering a fairly wide range of the more important health problems, studies of school health service head the list with 1,002 surveys or 29.4 per cent of the total ; nearly twice the frequency of the next highest activity on the list, namely, venereal diseases having 586 surveys or 17.2 per cent of the total. Public health administration, representing 14.2 per cent and health education, 10.7 per cent come next. These four activities comprise slightly over 71 per cent of the total surveys under consideration.

This would seem to indicate that by far the greatest attention had been given to the problem of school health-supervision, and this is probably quite in keeping with the relative importance of this problem. Venereal disease is still receiving the attention it no doubt deserves.

The importance of developing an effective machinery for the administration of all health activities is indicated by the fact that public health administration stands third on the list. There has been a decided improvement and development in the science and art of public health administration but emphasis should still be placed upon the necessity of further perfection in the technique of health-department management in order that all essential health services may be properly integrated in a well-balanced public health programme.

Health education, occupying fourth position in the list, has finally become recognised as a most powerful factor in the modern public health movement. The effectiveness of a community health service as well as the healthfulness of the community and its individual members depends in no small measure upon the ability of the health authorities to induce the individual to take a more active part in the community's health programme.

General sanitation, water supplies and stream pollution are still receiving appropriate attention. Increasing attention is being given to the sanitation of parks, resorts and tourists' camps. Malaria is still a problem and, in the United States, milk sanitation has recently received added impetus by the campaign for safe milk supplies now being carried on by the United States Public Health Service.

The control of communicable diseases, although standing fairly high on the list, deserves increased efforts to devise more effective means of combating all preventable diseases. But little, if any, progress has been made in the prevention of respiratory infections and the increasing mortality from cancer, heart disease and renal conditions is a challenge that must be accepted.

Mental hygiene is, fortunately, beginning to receive more thoughtful attention. Very few health departments have provided facilities for the prevention or control of mental diseases and disorders although this problem is a very pressing one. The institutional care of the insane and mental defectives has remained largely a matter of State responsibility.

Maternal and infant mortality continue to occupy a prominent position in the field of unfinished business. The record of survey studies credited to child health and maternal and infant mortality on the list presented does not represent the full extent of the attention being given to these problems. There is urgent need of a more serious effort, however, to promote the welfare of mothers and infants.

Other activities listed deserve appropriate consideration but mention has been made only of the more urgent ones. The relative importance of the problems confronting public health authorities to-day have been brought home to us as a result of the information and definite knowledge of conditions forthcoming from the numerous survey studies that have been undertaken.

SURVEYS LEAD TO EFFORTS TO DEVISE EFFECTIVE METHODS OF PROMOTING PUBLIC-HEALTH ADMINISTRATION.

The public health survey is a method of stocktaking that is essential to sound business management in public health affairs. In the United States the extensive surveys that have been undertaken by the United States Public Health Service, State health departments, and such non-official agencies as the American Public Health Association and the American Child Health Association, have made it possible to compare the health services of different cities and, of even more importance, to determine some of the defects and shortcomings of public health effort.

With the development of the technique of public health surveys, evidence accumulated in support of the definite benefits that frequently followed carefully planned surveys. The inadequacy of provisions made for effective health service in so many areas, especially in rural communities, and the improved service resulting from brief contacts during surveys, led to the search for more effective means of impressing upon local authorities the advantages and benefits to be derived from adequate whole-time health service.

It is desired to refer briefly, at this time, to the following developments in the public health movement in the United States :

1. Health demonstrations ;
2. The appraisal method of measuring health services ;
3. Plans for " ideal " health department organisation.

1. *Health Demonstrations.*

Having established the need of developing and extending whole-time health service, especially in small towns and rural areas, it was also evident that more rapid progress might be expected if these communities could be shown, objectively, the advantages of adequate service. Realising that the cost of such a service frequently exceeded the funds these communities were able or willing to contribute, efforts to assist these communities gradually took the form of " health demonstrations. "

Nearly ten years ago, following surveys of representative rural areas, the United States Public Health Service began to promote greater interest in better provisions for rural health service. Out of this have grown the " demonstrations " or co-operative projects which undertook to set up whole-time county health units. That this method of stimulation has been fairly effective is evidenced by the fact that, at the end of the calendar year 1928, there were reported a total of 461 whole-time county health units, as compared with thirty-seven such units in 1918, an increase of 424 counties in ten years.

The campaigns against hookworm disease and malaria also contributed to improvement in rural hygiene and sanitation. In addition to the Public Health Service, the International Health Board of the Rockefeller Foundation rendered material assistance in these various demonstration projects.

Several private agencies, foundations, and endowment funds have likewise supported various " demonstrations " and mention should be made of the American Child Health Association, the Commonwealth Fund, the Milbank Memorial Fund, and others including some of the large insurance companies.

Aside from the demonstrations intended to build up an adequate local health organisation, both in rural areas and in a few selected towns and cities, several special demonstrations have been undertaken, especially to develop child hygiene, mental hygiene and other special activities.

The demonstrations have been organised with the intention of transferring full responsibility to the community as soon as it is prepared to properly maintain it. Although it is too early to draw definite conclusions there is evidence that these demonstrations have contributed very materially to the development and improvement of local health service.

2. *The Appraisal Method of measuring Health Services.*

One of the earliest attempts to apply specific ratings to various health services was developed in 1914, in connection with studies of stream pollution undertaken by the United States Public Health Service. These studies endeavoured to examine critically the various factors responsible for the prevalence of typhoid fever as indicated by information and data collected by field surveys of all the communities located on the Ohio River watershed.

In order to compare the conditions found in different communities, a scheme of sanitary ratings or relative values was carefully devised by which specific numerical values were assigned to those factors, such as water supplies, sewage-disposal methods, and other items of sanitation, that seemed definitely related to the incidence of typhoid fever.

After many revisions a " sanitary rating " schedule was finally adopted and specific weight factors were assigned to the conditions considered responsible for typhoid fever. The following is a copy of the rating schedule :

Form No. 1.

SANITARY RATING.

Of

Note. — (m) = Percentage of population to which rating is applied.
 (n) = Percentage rating of factor.
 (p) = Percentage milk pasteurised.
 (r) = Percentage added for pasteurisation.

I. Water Supply :

Public Supply No. 1	(m)	×	(n)	=
" " No. 2	(m)	×	(n)	=
" " No. 3	(m)	×	(n)	=
Private : -Cisterns-	(m)	×	(n)	=
Wells	(m)	×	(n)	=
Total				= × 40 =

II. Sewage Disposal :

A. Sanitary Sewers :

Indoor closets	(m)	×	(n)	=
Outdoor " "	(m)	×	(n)	=

B. Cesspools and Privies :

1. Cesspools	(m)	×	(n)	=
2. Privy vaults (a)	(m)	×	(n)	=
" " (b)	(m)	×	(n)	=
" " (c)	(m)	×	(n)	=
3. Pail privies	(m)	×	(n)	=
4. Surface privies	(m)	×	(n)	=
Total				= × 25 =

III. Sanitary Regulation :

A. Milk Supply :

1. Typhoid prevalence producing area	(n)	×	0.20	=
2. Typhoid control on dairy farms	(n)	×	0.20	=
3. Production and distribution	(n)	×	0.60	=
Total rating raw milk				=
Pasteurisation-Add (p)				× (r) =
Final total				= × 40 =

B. Direct Control of Typhoid :

1. Reporting and study of cases	(n)	×	0.50	=
2. Prophylaxis	(n)	×	0.50	=
Total				= × 40 =

C. General Sanitary Control :

1. Control of fly prevalence	(n)	×	0.80	=
2. Protection of foodstuffs	(n)	×	0.20	=
Total				= × 20 =
Total A, B and C.				= × 32 =

IV. Domestic Environment and Habits of Population =

Total Sanitary Rating =

The following summary illustrates the relative values assigned to specified items on the basis of their contribution to the incidence of typhoid fever :

	Weighting factor
I. Water supplies	40
II. Sewage disposal.	25
III. Sanitary regulation	100 % 32
A. Milk sanitation	40 %
B. Direct control of typhoid	40 %
(Reporting and study of cases)	
(Prophylaxis)	
C. General sanitary control.	20 %
(Control of fly-prevalence)	
(Protection of foodstuffs)	
IV. Domestic environment and habits of population.	3
Total sanitary rating	100

In order to test the validity of these rating factors as well as the percentage ratings given to the various elements considered under each of the four items, the sanitary ratings and annual typhoid fever death rates of 156 cities were compared, as shown by the following table :

Sanitary Ratings, 1914: Relation between Sanitary Ratings and Typhoid Fever Death Rates in Twenty Groups of Cities in Ohio Valley.

Group No.	Number of Cities	Population (Average, 5 years) 1910-1914	Sanitary Rating : Percentage	Typhoid : Mean Annual Death Rate 1910-1914
1	1	192,913	89.7	16.9
2	1	120,282	87.2	18.1
3	6	153,372	85.3	21.8
4	13	150,280	77.7	23.7
5	1	247,012	74.4	24.7
6	8	123,148	73.0	29.1
7	5	149,941	71.4	28.8
8	1	112,680	68.9	45.3
9	9	136,251	68.8	24.2
10	12	213,148	68.7	34.3
11	8	152,120	66.6	20.0
12	4	137,269	64.7	41.4
13	8	151,701	62.5	33.1
14	9	128,165	60.7	37.9
15	7	127,702	56.0	37.3
16	14	128,175	53.8	42.3
17	15	123,509	49.7	41.5
18	16	125,862	42.6	42.0
19	6	116,524	34.4	56.1
20	7	120,025	22.9	64.7
Total	156	2,910,079		

(Coefficient of correlation = $r_{xy} = -.9030 \pm .0279$)

In this comparison it will be noted that groups of cities having high sanitary ratings experienced low typhoid fever death rates and that in general these ratings varied quite regularly in inverse proportion to the corresponding death rates. For the group of cities tested, it will also be noted that the coefficient of correlation between the ratings and death rates for the groups thus compared was exceptionally high, indicating that the ratings selected reflect with considerable accuracy the relative values of the conditions chosen as responsible for incidence of typhoid fever.

A somewhat similar comparison of the sanitary ratings of water supplies of twenty-four of these same communities with the corresponding typhoid death rates by Freeman (Reprint from Public Health Reports No. 395, United States Public Health Service) likewise supports the validity of the ratings used.

Relative Values of State Health Work. — In his report on a personal survey of all State health departments in the United States, carried out during 1914 and 1915, Dr. Charles V. Chapin presented a rating sheet in which he assigned arbitrary numerical values to the various items selected as representing the more essential elements of an effective health service.

The relative standing of the several States in respect to their total ratings corresponded in general with the relative values that would have been given to their activities by any process of evaluation.

Rating Sheet used by Chapin in his 1914-15 Survey of State Health Departments.

A. Supervision of Local Health Officers : (100)	
Personal supervision	60
Conferences	20
Bulletins	20
B. Communicable Diseases : (160)	
Notification	30
Direct control	80
Intensive work	50
C. Tuberculosis : (140)	
Notification	20
Sanatoria	20
Hospitals	20
Dispensaries	20
General education	30
Intensive work (direct control)	30
D. Diagnostic Laboratory : (80)	
Scope of work	10
Amount	70
E. Distribution of Sera and Vaccines : (50)	
Varieties	10
Amount	40
F. Vital Statistics : (100)	
Deaths	40
Births	40
Tables	20
G. Child Hygiene : (70)	
Intensive work	40
Literature to mothers	10
Prevention of ophthalmia	10
Supervision of midwives	10
H. Education : (100)	
Newspapers	30
Bulletins	30
Exhibits	30
Lectures	10
I. Food : (60)	
Milk supervision	40
Sanitary handling of food	20
J. General Sanitation : (40)	
School construction	20
Public institutions	10
Hotels and camps	10
K. Control of Water and Sewage : (100)	
Approval of plans	40
Surveys	30
Supervision	30
L. Extra credits : (as allowed)	—
	Total 1,000

In 1920, Chapin published another rating schedule for health work (*Health News*, N.Y. State Dept. of Health, December 1920) in which he made several revisions of the items rated in his earlier report. The schedule of relative values prepared by him in 1923 for the Committee of the American Public Health Association shows still further revision and modification of the ratings assigned to the various activities.

Other Attempts to evaluate Health Activities. — In 1916, Franz Schneider, Jr., of the Russell Sage Foundation, published an article (*Relative Values in Public Health Work*, A.J.P.H., Vol. VI, No. 9, September, 1916) in which he assigned relative values to activities directly concerned with the control of communicable diseases. He also set up numerical values for different causes of preventable deaths and included another table in which he distributed disease values according to lines of health-department activity.

The New York State Health Department, in 1919, revised a rating scheme that had been adopted by that department for the purpose of "scoring" health activities in the cities of that State with a view to encouraging local authorities to improve their health service.

Olesen, of the United States Public Health Service, in 1920, also offered a table of relative values of public health activities.

The "Appraisal Form for City Health Work". — The tendency to standardise in other fields has led to a very definite attempt to establish standards for various items of health service. This idea of standardisation, based upon relative values, has become crystallised in the "Appraisal Form for City Health Work", sponsored by the present Committee on Administrative Practice of the American Public Health Association, the American Child Health Association, together with a group of health officers and representatives of other national voluntary health agencies.

The origin of the present "appraisal form" dates back to 1923, following the publication of the report of this Committee of the American Public Health Association on the survey of eighty-three large cities (*Public Health Bulletin*, No. 136). At that time, Dr. Charles V. Chapin prepared for the Committee an outline of a schedule of relative values in respect to the essential items of public health work. Out of this grew the first "appraisal form" which was published for experimental use in 1925. In order to keep abreast of progressive thought and experience it was carefully revised and republished in January 1929, and it is proposed to revise the form every three years.

Briefly, this appraisal form "contains a list of the major health activities now common to practically all cities; sets forth their relative values in a public health programme; and presents a set of standards for evaluating the adequacy or inadequacy of the different activities under any branch of public health work."

Combined with the appraisal form, as published, there is a schedule which calls for the collection of data essential to appraisalment. This schedule contains fourteen sections each representing a specific field of public health activity, whether carried on by the official authorities or by non-official agencies. To each section or activity are assigned values totalling 100 points and a weighted value of factor is applied to each section in order to adjust the total score to 1,000.

The fourteen sections, together with the weighting factors, are shown in the following summary:

	Weighting factor.
A. Vital statistics	0.5
B. Communicable disease control.	1.6
C. Venereal disease control	0.5
D. Tuberculosis control	0.9
E. Maternity hygiene.	0.8
F. Infant hygiene	0.8
G. Pre-school hygiene.	0.8
H. School hygiene	1.2
I. Food and milk control.	0.7
J. Sanitation	0.8
K. Laboratory	0.6
L. Popular health education.	0.4
M. Cancer control	0.2
N. Heart disease control	0.2

The relative numerical values are based upon certain fixed elements of service representing group judgment and decided upon as a result of recent surveys. These values, therefore, become definite "standards" actually attained in a reasonable proportion of the cities surveyed.

A full record of the progress of this appraisal movement will be found in the third edition (1929) of the Appraisal Form for City Health Work, published by the American Public Health Association and in the reports of the Committee published in the Association journal and elsewhere. (Copy of Appraisal Form for City Health Work, Third Edition, 1929, appended).

An "Appraisal Form for County Health Work" has been prepared and published (1926) for experimental use. A similar appraisal form for State health work is now under consideration by a special sub-committee. Other sub-committees have been arranged for the consideration of (1) standard health department reports; (2) model health department ordinances; and (3) model record forms.

In undertaking to devise appraisal forms for health work, the Committee recognised that it might "invite unjustified and damaging criticism of departments having low scores; and it might... lead to undue standardisation and to stagnation on the part of cities having high scores." By applying appraisals only with the approval and on the request of the health officer concerned, by avoiding any comparisons of total scores, and by making provisions for periodic revisions of the appraisal forms, it was expected that these hazards will be avoided.

The present appraisal form has been confined, for the most part, to activities the relative value of which can be measured by such criteria as number of visits of infants to clinics, tuberculosis cases hospitalised, laboratory tests performed, etc. It does not undertake to give any credits to funds available or to the adequacy of efficiency of personnel, items representing resources rather than performance. It does not utilise mortality and morbidity rates as measures of results, nor does it directly measure the "healthfulness" of a community.

It is too early to draw conclusions with respect to the permanent value of such an appraisal method as a stimulus to the development or perfection of public health administration. The difficulties encountered in these theoretical measurements are obvious. The assignment of arbitrary numerical values to any phase of public health work is rather unscientific in the absence of any valid criteria upon which to base such evaluations. The value of "group judgment", in the absence of definite proof of ratable value of any activity, deserves full consideration, but efforts to further perfect public health services should not be influenced solely by the undoubted appeal and potentialities of the appraisal idea, to the extent that health officers are encouraged to loose initiative in the matter of scientific research in the development and trial of new theories of practice.

3. Plans for "Ideal" Health Department Organisation.

Growing out of the extensive surveys made by the United States Public Health Service, the American Public Health Association and the American Child Health Association, and to meet the frequent demands for standard or "ideal" plans of health organisation for cities of different sizes, three such plans have been prepared as follows:

- (a) "An Ideal Health Department for a City of 100,000 Population" (1922)
- (b) "A Proposed Plan of Organisation of Community Health Service for a City of 50,000 Population" (1925);
- (c) "The Organisation and Budget of a Health Department in a City of 20,000 Population" (1924) (Revised to apply to a County or District of 30,000).

Each of these plans includes all health activities whether supported by official or non-official agencies. They do not contain provisions for such services as garbage disposal, street cleaning, plumbing and building inspection, operation of water supply and sewage disposal systems, industrial or mental hygiene, or the care of sick poor.

In each plan, there are included elements of the best practice of the time, as represented by the cities which excel in each particular item of service. These plans are intended to present schemes of adequate health service which may be used as guides in judging the efficiency actually achieved in practice and for developing well-balanced programmes.

There are certain requisites common to each plan. For both large and small cities, as well as for the rural community, each plan calls for a board of health and provision is made for its organisation and for the appointment of the health officer. The importance of trained personnel is emphasised as well as security of tenure of office, adequate funds, adequate laws, etc.

At the American Health Congress, held at Atlantic City in 1926, a symposium on plans of public health organisation led to a revision of the three plans above mentioned. With certain adjustments of the original scheme, these three plans have since been republished by the American Public Health Association (*American Health Congress Series*, Vol. II, Part IV, *Community Health Organisations*, 1927).

From these revised forms the following summaries of organisations and budgets have been abstracted. Details of the plans will be found in the publication cited above.

- (a) *Plans for a City of 100,000 Population.* — The original plans for "An Ideal Health Department for a City of 100,000 Population" were prepared by Winslow and Harris and based upon data derived from the survey of eighty-three cities made by the Committee of

the American Public Health Association in 1920 with the assistance of the United States Public Health Service (see *Public Health Bulletin* No. 136, United States Public Health Service).

In the revised plan the following summary of organisation and budget is presented :

Plan for a Large City.

Bureau and Division	Salaries	Maintenance	Total	Cents per Capita
I. Administration	\$	\$	\$	
A. Administration	11,000	2,500	13,500	13.5
B. Public Health Education . .	2,200	2,000	4,200	4.2
II. Vital Statistics	4,000	500	4,500	4.5
III. Communicable Disease Control				
A. Epidemiology	6,800	2,000	8,800	8.8
B. Tuberculosis	6,400	1,500	7,900	7.9
C. Venereal Diseases	6,400	2,500	8,900	8.9
IV. Child Hygiene				
A. Maternity, Infant and Pre-school Hygiene	9,000	1,500	10,500	10.5
B. School Hygiene	20,500	2,000	22,500	22.5
VI. Sanitation	8,500	1,000	9,500	9.5
VII. Foods				
A. Milk	4,500	1,000	5,500	5.5
B. Food and Drugs	4,500	600	5,100	5.1
VIII. Laboratories	8,000	2,000	10,000	10.0
Total for fundamental health activities other than nursing and hospitals	91,800	19,100	110,900	110.9
V. Public Health Nursing	79,390	6,800	86,190	86.2
Communicable Disease Hospital ¹			20,000	20.0
Grand Total	\$171,190	\$25,900	\$217,090	217.1

(b) *Plan for a City of 50,000 Population.* — In “A Health Survey of Eighty-six Cities”, published by the American Child Health Association in 1925, there was presented “A Proposed Plan of Organisation of Community Health Service for a City of 50,000 Population”. In its revised form, the following is a recapitulation of the organisation and budget recommended :

Plan for a City of 50,000 Population.

Service	Salaries	Maintenance	Total	Cents per Capita
I. Administration, education and records (including vital statistics) . . .	\$ 8,200	\$ 2,500	\$ 10,700	21.4
II. Communicable disease control (including tuberculosis and venereal diseases)	3,250	3,000	6,250	12.5
III. Child Hygiene (including maternity, infant, pre-school and school) . .	10,950	1,600	12,550	25.1
IV. Public health nursing (including bedside nursing)	44,000	4,000	48,000	96.0
V. Inspection	7,100	500	7,600	15.2
VI. Laboratories	3,100	1,000	4,100	8.2
Total (without hospitalisation) . .	76,600	12,600	89,200	178.4
Hospitalisation of communicable diseases		5,000	5,000	10.0
Grand Total	76,600	17,600	94,200	188.4
Less income from nursing service . .			3,200	6.4
Net Total	\$76,600	\$17,600	\$91,000	182.0

¹ Exclusive of tuberculosis hospital which may be included in the health department budget in certain cities.

(c) *Plans for a Community of 30,000.* — In 1924 a plan for “The Organisation and Budget of a Health Department in a City of 20,000 Population” was prepared by Hiscock on the basis of data collected in a survey of twenty small towns chiefly in Connecticut (see A.J.P.H., March 1924).

In order to set up a reasonable plan of organisation for small communities, it was realised that approximately one-half of the entire population of the United States is living in small towns and rural areas and that a large proportion of all counties contain less than 50,000 population. It has been demonstrated that a district with a population of at least 20,000 is sufficiently large for the development of whole-time health service.

For the third plan, a county or district of 30,000 population was chosen and a tentative organisation and budget for such a community was presented as follows :

Plan for a County or District of 30,000 Population.

Service	Personnel	Approximate Cost (including transportation and supplies)	Cents per Capita
I. Administration, education and records (including vital statistics) and	Health officer, clerk-stenographer, medical assistance (part-time)	12,500	41.7
II. Communicable disease control (Including tuberculosis and venereal diseases)			
III. Child hygiene (including pre-natal, infant, pre-school and school	Medical assistance in health conferences, etc.	6,650	22.2
IV. Public-health nursing (including bedside nursing)	Supervisor and five staff nurses ¹	11,500	38.3
V. Inspection (including milk, food, sanitation)	Food and milk inspector, sanitary inspector	5,200	17.3
VI. Laboratory	Bacteriologist-Chemist	3,200	10.7
Total (without hospitalisation)		39,050	130.2
Hospitalisation of communicable diseases		3,000	10.0
Grand Total		\$42,050	140.2

CRITERIA OF FUTURE PROGRESS.

Without attempting any further review of the conditions and problems now confronting public health authorities, I desire, in conclusion, to propose certain criteria upon which, in my opinion, satisfactory progress in the public health movement will depend :

1. A critical and comprehensive review of present methods and practices, by means of intensive research.
2. The selection and retention of those theories and principles that appear to have demonstrable value.
3. The development of new theories and principles in the light of our present knowledge and as the result of further experimentation.
4. Improved methods of public health organisation and administration for applying, under varying conditions, approved principles of practice.
5. A carefully-developed technique of health promotion or popular health education on the part of public health authorities so that enlightened individuals will practice the essential principles of health, hygiene and sanitation, both public and private.

Progressive development and perfection of the science and art of public health administration will depend upon individual and collective efforts to assemble the facts and data that are necessary to a full understanding of methods and procedures now in use, together with an intelligent and scientific interpretation and evaluation of each principal involved.

Notwithstanding the encouraging progress made in the enrichment of our knowledge of preventive medicine, hygiene, and sanitation, the art of public health administration undoubtedly will profit by a thorough and systematic house cleaning.

¹ If nine staff nurses, \$7,200 should be added, making a grand total of 164.2 cents per capita.

Preliminary to any reorganisation or expansion of our present methods of practice, it is essential to arrange for the collection of reliable and comprehensive data, sufficiently adequate and representative, and so collected as to [permit] comparative analysis and integration in each field of activity.

Rapid advances in transportation, permitting an increasing intercourse between countries, have profoundly affected the international aspects of disease transmission and control. Ultimate conquest of those diseases that are dependant upon contact infection will manifestly be promoted by the harmonious and collective action of all national health authorities.

World sanitation, like world peace, is not only possible but it should be regarded as a necessity. The desire for further conquest of disease has been responsible for bringing many nations closer together. Success in the eradication of preventable diseases will depend in a great measure upon the extent to which the public health activities of all nations are still further co-ordinated.

ANNEX 6.

C.H.786.

REPORT OF THE SECOND SESSION OF THE COMMISSION
OF EXPERT STATISTICIANS HELD IN BERLIN FROM APRIL 3rd TO 5th, 1929.

(Submitted to the Committee on May 7th, 1929).

1. The second session of the Commission of Expert Statisticians met at Berlin on April 3rd, 4th and 5th, 1929, to continue :

“ . . . the study of the documents transmitted to the Health Section by the Governments which comply with its request and of the preparatory work incident to the revision of the Nomenclature now in use . . . ”

(Extract from a resolution adopted by the Health Committee during its eighth session in October 1926.)

2. The following attended :

Chairman :

Professor Harold WESTERGAARD, Professor of Statistics at the University of Copenhagen.

Dr. Haven EMERSON, Professor of Public Health Administration, Columbia University, New York ; and Mr. Edgar SYDENSTRICKER, Director of Research, Milbank Memorial Fund, and Statistician, United States Public Health Service, Washington, D.C.

Professor Corrado GINI, Professor of Statistics at the University of Rome, President of the Central Statistical Institute of Italy, Rome.

M. Michel HUBER, Director of the “ Statistique Générale de la France ”, Paris.

Dr. E. ROESLE, Director of Medical Statistics, Reichsgesundheitsamt, Berlin.

Mr. S. P. VIVIAN, Registrar-General of England and Wales, London ; and Dr. Major GREENWOOD, Professor of Epidemiology and Vital Statistics at the University of London.

The following were invited to participate in the discussion of certain subjects :

Dr. Walter PRYLL, Chief of the Medical Service of the Allgemeine Ortskrankenkasse, Berlin ;

Dr. SIEGFRIED ROSENFELD, Chief of the Statistical Section of the Public Health Office, Federal Ministry of Social Welfare, Vienna ;

Dr. Gustav SEIFFERT, Medical Counsellor of the Ministry of the Interior (Bavaria), Munich.

Dr. J. W. NIXON, Chief of the Statistical Section at the International Labour Office, Geneva.

Dr. L. TELEKY, Provincial Medical Inspector of Industry, Düsseldorf, who had been invited to take part in the discussion on morbidity statistics, was unable to attend.

3. The Commission adopted the following agenda :

A. Preparation of the Fourth Revision of the *International List of Causes of Death* (Collaboration between the Health Organisation of the League of Nations and the International Institute of Statistics).

B. Questions connected with the Uniform Definition of Still-birth.

- C. Morbidity Statistics and the Establishment of a Nomenclature of Diseases :
- (a) Results of the preliminary enquiry regarding morbidity statistics in various countries.
 - (b) Memorandum by Dr. Roesle on the comparative study of morbidity.
 - (c) List of diseases proposed by Dr. Roesle.
 - (d) Report by Dr. Teleky on the morbidity statistics of the Rhineland Sickness Insurance Funds.
 - (e) Principles underlying the collection and tabulation of morbidity statistical data suitable for adoption by Sickness Insurance Funds and other Public Health Welfare Organisations.

D. The Collection and Analysis of Data concerning the Results of BCG Vaccination (Resolution of the Clinical Committee of the BCG Conference held in Paris, October 1928).

E. Miscellaneous : Statistical Chapters of *International Health Year-Book*.

After full discussion, in which the Commission was assisted by the experts who had been invited to attend, a series of resolutions was adopted containing the views of the Commission on the various subjects included in the agenda.

4. *Preparatory Steps Incident to the Forthcoming Revision of the International List of Causes of Death.*

The Commission of Expert Statisticians, having asked, at its last session, that Governments be requested by the Health Organisation to express their views on the resolutions adopted by the Commission with regard to the revision of the *International List of Causes of Death* :

(a) Wishes to express its gratitude to the Governments which have complied with its request ;

(b) Notes with satisfaction the agreement reached between the International Institute of Statistics and the Health Organisation for the joint study of this question, and recommends that the replies received from the various Governments be referred to the Joint Commission set up to prepare the work for the International Conference in October 1929 ;

(c) Invites the particular attention of the Joint Commission to the recommendation which was adopted in March 1927 with regard to the detailed list (document C.H.576, Section III, under 1. *List of Causes of Death*) ;

(d) Recommends that the Joint Commission be asked to prepare a short statement on the origin, value and progress of the International List by way of annex to the recommendations which the Joint Commission will prepare for the International Conference which will meet at Paris on October 16th, 1929 ;

(e) Expresses the hope that the said Conference will consider the possibility of standing arrangements being made to ensure the study of questions relating to the International List in the intervals between the decennial revisions, bearing in mind the agreement reached on this subject between the International Institute of Statistics and the Health Organisation of the League.

5. *The Uniform Definition of Still-Birth.*¹

The Commission of Expert Statisticians :

(a) Considers that the definition of still-birth proposed by the Health Committee in 1925 fulfils satisfactorily the requirements of international statistics ;

(b) Recommends that this definition should be adopted by countries in which there are no important legal or practical objections ;

(c) Notes with satisfaction that the definition in use in certain countries (notably Great Britain and the United States of America), although not identical with the international definition, as a matter of fact gives comparable results, taking into consideration the conditions prevailing in the practice of those countries ;

(d) Recommends that, in other countries, in addition to the statistics of still-births based on the legal definition, another tabulation should be made based on the definition proposed by the Health Committee. The results obtained by this means will permit the authorities of these countries to judge whether this added tabulation should be made regularly or only experimentally to measure the effect of the differences existing between the two definitions.

¹ This resolution was adopted on the recommendation of a sub-committee set up in March 1927, consisting of Mr. HUBER, Mr. VIVIAN and the late Dr. DAVIS.

6. *Morbidity Statistics.*

A Sub-Committee on this subject was appointed during the session and their report, which follows, was accepted by the Commission.

It is understood that the resolution under which this Sub-Committee is appointed consists merely of an elaboration of the opinions of the Commission as expressed in its action of March 1927 as follows (last paragraph, page 3, document C.H.576) :

“ The Commission would suggest that a detailed plan of further study could best be prepared after a close analysis of this report. ”

This refers to the material which has been presented to the Commission in various documents during the past two years and further elaborated by Dr. Roesle, Dr. Pryll, Dr. Seiffert, and various members of the Commission at its session of April 3rd.

The collected information being now available, the Sub-Committee believes it sufficient to limit its recommendations to the three items mentioned in the resolution of its appointment, dealing with :

- (a) Alphabetical lists of the names of diseases and pathological conditions used by physicians ;
- (b) Systematic classification of diseases and pathological conditions ;
- (c) Special studies of disease prevalence.

Recommendations.

After discussing these three subjects in some detail, and hearing the further arguments of Dr. Pryll as a guest at the meeting, the Sub-Committee recommends :

(a) That each country be requested to prepare an alphabetical list of the terms descriptive of diseases and pathological conditions used by the physicians serving its population.

(b) That, in view of the great importance of developing comparable morbidity data, for the scientific study of the conditions of life and health in the various countries, and with the hope of providing a basis for the control or prevention of prevalent diseases, each country be encouraged to undertake the preparation and application of a systematic classification of the names of diseases and pathological conditions, according to some such list as the *International List of Nosology and Causes of Death* as will be determined in October 1929 for the following ten years, or a list which may be specially prepared for the purpose of morbidity statistics and based upon the *International List*.

(c) That the countries which make use of such a systematic classification of morbidity data should be requested each to report its experience to the Health Organisation of the League of Nations. This would enable the latter to continue its efforts to develop interest in this important subject. A study of the results may eventually make it possible to propose an *International List* suitable for general application.

(d) That the Health Organisation should consider the possibility of undertaking scientific studies of the prevalence of diseases, particularly of diseases of great importance to public health.

(e) That in such studies all relevant factors such as age, sex, economic status and mortality must be taken into consideration and the epidemiological services of the League and the various countries should be invited to assist in these studies.

7. *Statistical Appraisal of Data Concerning the Results of Vaccination by Means of BCG.*

The resolution of the Clinical Commission of the International Conference on Vaccination Against Tuberculosis by Means of BCG (held in Paris in October, 1928) was submitted to the Commission of Expert Statisticians with the request that the latter should indicate the most reliable methods of collecting and collating morbidity and mortality data concerning infants who had been vaccinated against tuberculosis by means of BCG as well as of infants not so vaccinated.

To facilitate the work of the Commission in this regard, the Chairman, Dr. Westergaard held a preliminary consultation with Dr. S. Rosenfeld and Professor A. Schlossmann (Director of the Clinic for Diseases of Children, Düsseldorf).

After considering the views expressed by these experts the Commission adopted the following resolutions :

“ The Commission of Expert Statisticians has considered the request for advice presented by the Clinical Committee of the BCG Conference on the best statistical method for appraising the prophylactic value of BCG vaccination against tuberculosis, and the suggestions offered by the special Sub-Committee formed to study this point.

“ It is of the opinion that :

“ 1. Any enquiry for the purpose of appraising the prophylactic value of a specific procedure, such as BCG, must be conducted according to the procedure of scientific experiments, and its results must be judged by the application of rigorous statistical methods :

“ (a) It is essential to use the method of sampling in selecting experimental (vaccinated) and control (unvaccinated) groups, preferably by vaccinating alternate infants in tuberculosis families, in which the factors referred to in the special Sub-Committee's report (document C.H.BCG.37) are comparable.

“ (b) Both experimental and control groups should be *continuously* observed for the entire period of the study with the utmost care by competent diagnosticians and other qualified persons for the detection of tuberculosis in the infants and in persons with whom they are in contact, and for observing changes in the conditions that may affect the tuberculosis situation in the households considered.

“ (c) Provision should be made for adequate statistical assistance throughout the entire study in order that proper consideration be given to its statistical phases, such as the preparation of forms suited to local conditions for recording all observations, the significance of the numbers included in the groups, the use of life tables or other methods in expressing and estimating results, etc.

“ It is assumed that uniform practice in diagnosis, in autopsy determination of causes of death, and in other details of professional observations, will be strictly followed for the experimental and the control groups of infants and for the households in which they are found.

“ 2. For the scientific conduct of such an enquiry, it is essential that it be made under a responsible director with competent medical, statistical and other associates who will assist in collecting and analysing the original records.

“ 3. While observations carried on according to this procedure for a comparatively short period, such as two years, on a sufficiently large number of infants should yield definite conclusions as to the protective value of BCG vaccine within these ages, it is desirable to continue such observations for a period of not less than five years in order to ascertain the duration of the protection conferred.

“ 4. In accordance with the recommendations of the Clinical Committee of the BCG Conference, the detailed results of each inquiry, together with the original records, should be forwarded before publication to the Health Organisation. ”

ANNEX 7.

CH.790.

FOURTH DECENNIAL REVISION OF THE INTERNATIONAL LIST OF CAUSES OF DEATH.

JOINT COMMISSION.

(International Institute of Statistics and Health Organisation of the League of Nations), entrusted, on behalf of the French Government, with the task of co-ordinating the replies of Governments concerning the Fourth Revision.

Paris, April 9th to 12th, 1929.

REPORT OF THE CHAIRMAN OF THE MIXED COMMISSION, SUBMITTED TO THE HEALTH COMMITTEE ON MAY 7TH, 1929.

1. Constitution of the Commission.

The Fourth Revision of the International List of Causes of Death will be carried out by an International Conference that the French Government has convoked for October 10th, 1929, in Paris, in a manner similar to that in which previous Conferences were convoked in 1900, 1909 and 1920. As on former occasions, the International Institute of Statistics, as a mandatory of the French Government, has been charged with the task of carrying out the preparatory work and of drawing up proposals for submission to the Conference, proposals

which it adopted during its session held in Cairo in January 1928, based on the report of a Sub-Commission.¹ In April 1928, the French Government sent invitations to all Governments asking them to be represented by official delegates at the Conference in October 1929. The invitation was accompanied by a copy of the report of the International Institute, and Governments were asked to forward such observations as they desired to make concerning it before January 1st, 1929, so that the replies could be co-ordinated by the Rapporteur and distributed, thus furnishing a solid basis for the discussions of the Conference.

In the meantime, the League of Nations Secretariat had forwarded to the Government of France as well as to that of other countries the recommendations on the same subject that had been elaborated by the Commission of Expert Statisticians of the Health Organisation during the first session of that Commission, held in Geneva in March 1927.

As the result of an exchange of letters between the Minister for Foreign Affairs of France and the Secretary-General of the League of Nations, it was agreed that the co-ordination of the replies received from the various Governments should be undertaken, in March or April 1929, by a Joint Commission consisting of four members nominated by the International Institute of Statistics and four nominated by the Health Organisation of the League of Nations. In addition, the President and the Secretary-General of the Institute and the President of the Health Committee and the Medical Director of the League of Nations Secretariat would have the right of attending its meetings.

The Joint Commission, thus constituted, met in Paris from April 9th to 12th, 1929 in the committee-room of the Statistique générale de la France, 97, quai d'Orsay.

The members of the Commission were as follows :

1. *Members nominated by the International Institute of Statistics :*

Dr. DUNLOP, Registrar-General of Scotland, Edinburgh.

Dr. JITTA, President of the Health Council of the Netherlands, The Hague.

M. HUBER, Director of the Statistique Générale de la France, Paris.

M. JAHN, Director of the Central Statistical Office of Norway, Oslo (who was unable to attend the meeting).

2. *Members nominated by the Health Organisation :*

Professor HAVEN EMERSON, Columbia University, New York.

Professor GINI, President of the Central Institute of Statistics, Rome.

Dr. ROESLE, Director of Medical Statistics, Reichsgesundheitsamt, Berlin.

Dr. STEVENSON, Technical Adviser to the Registrar-General of England and Wales, London.

The following also took part in the meeting :

M. DELATOUR, President of the International Institute of Statistics.

Dr. SEMMELINCK, representing M. Methorst, Secretary-General of the International Institute of Statistics.

Dr. CHODZKO, Vice-President of the Health Committee of the League of Nations (representing its President, Dr. Th. Madsen).

Dr. Norman WHITE (representing Dr. Rajchman, Medical Director, Health Organisation of the League of Nations).

The following were also present :

M. BUNLE, Statistician at the Statistique générale de la France.

Mr. MARTIN, Assistant Registrar-General, London.

Dr. LOMBARDY, Chief Medical Statistical Officer of the French Army.

M. STOUMAN, Member of the Health Section of the League of Nations Secretariat.

Mr. SYDENSTRICKER, Statistician of the United States Public Health Service, and Director of Research, Milbank Memorial Fund, New York.

Dr. TOMANEK, Member of the Health Section of the League of Nations Secretariat.

M. HUBER, Rapporteur of the International Institute of Statistics, was elected Chairman.

2. *Replies from Governments.*

The Commission examined replies addressed to the French Government by the authorities of the different countries invited to take part in the October Conference concerning the report and the proposals adopted by the International Institute of Statistics which had accompanied the invitation. They also examined the replies from Governments addressed to the Secretariat of the League of Nations concerning the recommendations made by the Commission of Expert Statisticians of the Health Organisation of the League of Nations.

¹ Report on the Preparatory Work for the Fourth Decennial Revision of the International List of Causes of Death, by M. Michel Huber, Director of the Statistique générale de la France. *Bulletin of the International Institute of Statistics*, Vol. XXIII 2nd edition, Imprimerie nationale, Cairo, 1928.

The Commission desires to express its thanks to all Governments which have been good enough to forward observations and criticisms. These observations have been used for the final revision of three draft lists : a detailed list, an intermediate list and a short list, comprising approximately 200, 90 and 40 rubrics respectively.

3. *The Detailed List.*

The Commission was called upon to harmonise the various suggested modifications of the International List of 1920 (206 headings). It took as a basis of study the draft list of the International Institute of Statistics, which also contained 206 rubrics, and the draft list adopted by the American Public Health Association in Chicago on October 17th, 1928. The latter list of 190 rubrics was prepared by a special committee presided over by our colleague, Professor Haven Emerson, and of which the late lamented Mr. William H. Davis, Statistician of the Census Office, which is entrusted with the statistics of causes of death in the United States, was also a member.

The work of the Commission was greatly facilitated by the detailed observations which had been forwarded by the competent authorities of certain countries, notably those of Austria, Great Britain and the Netherlands.

About five sittings of the Commission were devoted to an examination of the rubrics of the Detailed List.

Reference will be made here only to such changes as possess a certain importance, and not to modifications of minor interest.

In Group I, "Infectious Diseases, etc.", the Commission suppressed the names of certain diseases which only cause an appreciable number of deaths in a few countries, but recommended that a note should be added to the tables at the foot of the page, giving the number of deaths caused by each of the diseases included under the headings "Other Infectious Diseases, etc."

Group XI, "Pregnancy, Labour, Puerperal State", has been completely rearranged.

In Group XVII, "Violent or Accidental Deaths", the Commission considered it desirable to reduce the number of headings in the following manner : 147, Suicides ; 148, Homicides ; 149, Accidents, with obligatory subdivisions indicated by letters. Finally it was recommended that, in addition to the main table, a separate tabulation of accidental deaths should be made according to locality : "Mines and Quarries", "Accidents connected with means of Transport", etc.

The draft list drawn up by the Commission comprises in all 155 rubrics (see Appendix 1).

4. *The Intermediate List.*

The Intermediate List, which figured in the first draft nomenclature presented to the International Institute of Statistics by the late Dr. Bertillon in Chicago in 1893, has not been retained since the 1900 revision.

The Commission had before it three draft lists ; that of the International Institute of Statistics (Cairo, January 1928), which comprises 89 headings ; that of the Commission of Expert Statisticians of the Health Organisation of the League of Nations (Geneva, March 1927), which contains 90 rubrics ; and finally that of the American Public Health Association (Chicago, October 1928), which has 89 rubrics.

The decisions already taken with regard to the Detailed List greatly facilitated the elaboration of the Intermediate List, which contains the same groups as the former, the number of separate rubrics being reduced to 86 (see Appendix 2).

5. *The Short List.*

As in the case of the Intermediate List, the Commission had three draft lists to consider, drawn up respectively by the International Institute of Statistics, the Commission of Expert Statisticians of the Health Organisation of the League of Nations and the American Public Health Association.

The first of these had been drawn up in such a manner as to facilitate comparison between statistics tabulated in accordance with any one of the three lists — Detailed, Intermediate or Short. In addition to important diseases bearing a separate number, diseases had been grouped in such a way that the same 18 groups figure in the Short as in the Detailed and Intermediate Lists. In other words, instead of including under a single heading, "Other Diseases", placed at the end of the List, all diseases not mentioned separately, these diseases have been split up under several headings, distributed methodically in their appropriate places throughout the Short List. The Commission considered that this method in no wise prejudiced the accepted principle that comparability was much more useful for well-defined diseases than for groups of diseases ; it moreover possesses certain practical advantages. A Short List of 42 rubrics (Appendix 3) was accordingly adopted, compressed from the Intermediate List, as was the Intermediate List from the Detailed List, each of the three Lists retaining the same 18 groups.

6. Causes of Dead-Birth.

A list of causes of intra-uterine death, comprising 13 headings, was attached to the International List of Causes of Death (1920 Revision). This list appears to have been used only in the Netherlands.

The Commission also considered a similar nomenclature drawn up by the Health Experts on Infant Welfare of the Health Organisation of the League of Nations, at their Vienna meeting (September 26th to 28th, 1927).

The latter nomenclature, drawn up by specialists for the special purpose of limited enquiries, is well adapted to that end, but the Commission unanimously agreed that it was too detailed to serve as a basis for general statistics.

Though a reduction of the number of rubrics was desirable, it was decided to preserve their methodical arrangement and division into three groups : foetal death during pregnancy, death due to premature expulsion of the foetus, and death during labour. The list thus reduced to 13 headings in three groups is attached to the draft international lists drawn up by the Commission (Appendix 4).

7. Various Recommendations.

The Commission finally considered the recommendations adopted in Berlin on April 8th, 1929, by the Commission of Expert Statisticians of the Health Organisation with regard to the forthcoming Revision of the International List, recommendations which were transmitted to it by the representatives of the Health Organisation (Appendix 5).

The Commission could do no more than take note of the paragraphs (a), (b) and (c). Paragraph (d) draws attention to the recommendation adopted by the Commission of Expert Statisticians in March 1927 concerning the Detailed List, which reads as follows :

“ The Commission (of Expert Statisticians) considers that it would be important to secure agreement regarding the further subdivision of each of the 90 rubrics in so far as they do not concern merely the peculiar prevalence of certain diseases omitted in the List (such as plague, cholera, malaria, typhus) . . . The Commission believes that this agreement could most readily be secured by a conference of experts from the countries intending to use a more detailed list. This meeting should not take place before the third revision of the International Nomenclature.”

In order to grasp the significance of this recommendation, it should be recalled that the Commission of Expert Statisticians was not concerned in March 1927 with the Detailed List; it merely elaborated a draft Intermediate List of 90 rubrics. In accordance with this recommendation, the elaboration of the Detailed List would be a subdivision of the 90 rubrics, to be effected by experts of only such countries as utilise that List.

The Commission considers it preferable that the International Conference should, as heretofore, decide upon the Detailed List as well as the Intermediate and Short Lists. But, to obviate the inconvenience referred to, it considers that the Conference might adopt a method of work (for example, by setting up special commissions) which would enable countries specially interested in the Detailed List — that is to say, countries which use that List or which may wish to use it in the near future — to secure acceptance of a list agreed upon among themselves.

In conformity with paragraph (e) of the recommendation, the Commission requested its Chairman to have a note prepared regarding the origin, utility and developments of the International List of Causes of Death.

Paragraph (f) relates to a permanent arrangement for the study of questions relating to the International List of Causes of Death.

From the present date up to October 16th next, when the International Conference is to meet, the Commission is of opinion that it will suffice if the Joint Commission remains in existence ; the results of its work will be communicated to all countries by the French Government. The Chairman of the Commission, who is also the Rapporteur nominated by the French Government, will ensure centralisation of all information and, if necessary, will be able to convene a meeting of the Commission on October 14th or 15th, on the eve of the International Conference.

As regards the subsequent decennial period, the Conference will formulate its own wishes, but the Commission desires to associate itself now with the recommendation that a permanent, intimate relationship be maintained, based on the agreement concluded between the International Institute of Statistics and the Health Organisation of the League of Nations.

Finally, the Commission suggested that the International Conference of October 1929 should recommend that the statistics of causes of death be tabulated for one or two years in accordance with both the new and old Lists, in order that comparability of these statistics may be maintained during the period of transition from the old International List of 1920 to the new List.

(Signed) Michel HUBER,
Chairman of the Commission.

Appendix 1.

DRAFT LISTS DRAWN UP BY THE JOINT COMMISSION.

I. DETAILED LIST (155 headings).

The subdivisions indicated by letters are optional unless otherwise stated (No. 27, "Other forms of tuberculosis"; 98, "Pneumonia"; 118, "Nephritis"; 126, "Abortions"; 131, "Toxæmia of Pregnancy"; 147, "Suicides"; 148, "Homicides"; 149, "Accidents"). When the subdivision of a heading appears to be necessary, the subdivisions indicated in the present List should be adhered to in order that the comparability of the data may be maintained in such cases.

I. *Epidemic, Endemic, Infectious and Parasitic Diseases.*

1. Enteric fever (typhoid fever).
2. Paratyphoid fever.
3. Typhus fever.
4. Undulant fever.
5. Smallpox.
6. Measles.
7. Scarlet fever.
8. Whooping-cough.
9. Diphtheria.
10. Influenza :
 - (a) With special mention of respiratory complications.
 - (b) Without mention of respiratory complications.
11. Asiatic cholera.
12. Dysentery :
 - (a) Amœbic.
 - (b) Bacillary.
 - (c) Not specified or due to other causes.
13. Plague :
 - (a) Bubonic.
 - (b) Pneumonic.
 - (c) Septicæmia.
 - (d) Not specified.
14. Erysipelas.
15. Acute poliomyelitis and acute poliomyelitis.
16. Epidemic lethargic encephalitis.
17. Meningococcal meningitis.
18. Glanders.
19. Malignant pustule and anthrax (*Bacillus anthracis*).
20. Rabies.
21. Tetanus.
22. Tuberculosis of the respiratory system.
23. Tuberculosis of the meninges and central nervous system.
24. Tuberculosis of the intestines and peritoneum.
25. Tuberculosis of the vertebral column.
26. Tuberculosis of the bones and joints (vertebral column excepted).
27. Tuberculosis of other organs (obligatory subdivision) :
 - (a) Of the skin and subcutaneous cellular tissue.
 - (b) Of the lymphatic system (mesenteric and retroperitoneal glands excepted).
 - (c) Of the genito-urinary system.
 - (d) Of other organs.
28. Disseminated tuberculosis :
 - (a) Acute.
 - (b) Chronic.
 - (c) Not specified.
29. Syphilis :
 - (a) Congenital.
 - (b) Acquired.
 - (c) Not specified.
30. Gonococcus infections and other venereal diseases.
31. Purulent infections, non-puerperal septicæmia.
32. Malaria :
 - (a) Malarial fever.
 - (b) Malarial cachexia.
33. Ankylostomiasis.
34. Hydatid cysts :
 - (a) Of the liver.
 - (b) Of other organs.

- 35. Other diseases caused by helminths or by protozoal parasites.
- 36. Mycoses.
- 37. Other epidemic, endemic or infectious diseases.

Note. — Indicate separately at the foot of the page the number of deaths due to the different causes.

II. *Cancer and Tumours.*

Cancer and all malignant tumours :

- 38. Of the buccal cavity and pharynx.
- 39. Of the respiratory organs.
- 40. Of the œsophagus, stomach, duodenum and liver :
 - (a) Of the stomach and duodenum.
 - (b) Other organs.
- 41. Of the peritoneum, intestines and rectum.
- 42. Of the uterus.
- 43. Of the breast.
- 44. Of the skin.
- 45. Of other organs and of organs not specified.
- 46. Benign tumours and tumours not specified as malignant.

Note. — Include only tumours properly so called (new growths). Exclude hypertrophies, dilatations, cysts, etc., referred to under other headings.

III. *Rheumatic Diseases, Diseases of Nutrition and of Endocrine Glands and other General Diseases.*

- 47. Acute articular rheumatic fever.
- 48. Chronic rheumatism, osteoarthritis.
- 49. Gout.
- 50. Diabetes mellitus.
- 51. Scurvy :
 - (a) Barlow's disease.
 - (b) Scurvy.
- 52. Beriberi.
- 53. Pellagra.
- 54. Rickets and osteomalacia.
- 55. Diseases of the pituitary gland.
- 56. Diseases of the thyroid gland.
 - (a) Goitre simplex.
 - (b) Exophthalmic goitre.
 - (c) Myxœdema and cretinism.
 - (d) Other diseases of the thyroid gland.
- 57. Diseases of the thymus gland.
- 58. Addison's disease not specified as of tuberculous origin.
- 59. Other general diseases.

IV. *Diseases of the Blood and Hæmatopoietic Organs*

- 60. Hæmorrhagic diatheses :
 - (a) Simple purpura.
 - (b) Hæmophilia.
 - (c) Others.
- 61. Anæmia :
 - (a) Pernicious, progressive.
 - (b) Others.
- 62. Leucæmia and aleucæmia :
 - (a) True leucæmia.
 - (b) Aleucæmia (Hodgkin's disease).
- 63. Diseases of the spleen.
- 64. Other diseases of the blood and hæmatopoietic organs.

V. *Intoxication and Chronic Poisoning.*

- 65. Alcoholism (acute and chronic).
- 66. Chronic lead poisoning :
 - (a) Occupational.
 - (b) Others.
- 67. Other chronic poisoning :
 - (a) Occupational.
 - (b) Others.

VI. *Diseases of the Nervous System and Organs of Special Sense.*

68. Encephalitis (not epidemic) :
 - (a) Abscess of the brain.
 - (b) Others.
69. Simple meningitis.
70. Progressive locomotor ataxy.
71. Other diseases of the spinal cord.
72. Cerebral apoplexy, hemiplegia :
 - (a) Cerebral hæmorrhage.
 - (b) Embolism or cerebral thrombosis.
 - (c) Hemiplegia and cause not specified.
73. General paralysis.
74. Dementia præcox and other psychoses.
75. Epilepsy.
76. Convulsions (non-puerperal) :
 - (a) Under 5 years of age.
 - (b) 5 years and over.
77. Other diseases of the nervous system :
 - (a) Chorea.
 - (b) Neuritis.
 - (c) Paralysis agitans.
 - (d) Disseminated sclerosis.
 - (e) Others (softening of the brain included).
78. Diseases of the organs of vision.
79. Diseases of the ear and mastoid process :
 - (a) Of the ear.
 - (b) Of the mastoid process.

VII. *Diseases of the Circulatory System.*

80. Pericarditis.
81. Acute endocarditis.
82. Chronic endocarditis and valvular disease (including endocarditis not specified).
83. Myocarditis :
 - (a) Acute.
 - (b) Chronic.
 - (c) Not specified.
84. Diseases of the coronary arteries and angina pectoris.
85. Other diseases of the heart :
 - (a) Functional disease of the heart.
 - (b) Others and not specified.
86. Aneurism (aneurisms of the heart (85 b) excepted).
87. Arteriosclerosis (of coronary arteries excepted).
88. Gangrene (gangrene of the lung (103 c) excepted) :
 - (a) Senile.
 - (b) Other.
89. Embolism and thrombosis (other than of the brain, lungs and coronary arteries).
90. Other diseases of the arteries.
91. Diseases of the veins (varices, hæmorrhoids, phlebitis, etc.).
92. Diseases of the lymphatic system (lymphangitis, etc.).
93. Idiopathic abnormalities of blood pressure.
94. Other diseases of the circulatory system.

VIII. *Diseases of the Respiratory System.*

95. Diseases of the nasal passage and annexa.
96. Diseases of the larynx.
97. Bronchitis :
 - (a) Acute.
 - (b) Chronic.
 - (c) Not specified.
98. Pneumonia (obligatory subdivision) :
 - (a) Broncho-pneumonia (including capillary bronchitis).
 - (b) Lobar pneumonia.
 - (c) Not specified.
99. Pleurisy.
100. Congestion, œdema, embolism, hæmorrhagic infarction and thrombosis of the lungs.
101. Asthma (including hayfever).
102. Pulmonary emphysema.
103. Other diseases of the respiratory system (tuberculosis excepted) :
 - (a) Chronic interstitial pneumonia (including occupational diseases of the respiratory system).
 - (b) Diseases of the mediastinum.
 - (c) Other diseases, including gangrene of the lung.

IX. *Diseases of the Digestive System.*

- 104. Diseases of the buccal cavity and annexa, of the pharynx and tonsils (including adenoid vegetations).
- 105. Diseases of the œsophagus.
- 106. Ulcer of the stomach or of the duodenum :
 - (a) Of the stomach.
 - (b) Of the duodenum.
- 107. Other disease of the stomach (cancer excepted).
- 108. Diarrhœa and enteritis (under 2 years of age).
- 109. Diarrhœa and enteritis (2 years and over).
- 110. Appendicitis.
- 111. Hernia, intestinal obstruction :
 - (a) Hernia.
 - (b) Intestinal obstruction.
- 112. Other diseases of the intestines.
- 113. Cirrhosis of the liver :
 - (a) Alcoholic cirrhosis.
 - (b) Not specified as alcoholic.
- 114. Other diseases of the liver (including acute yellow atrophy of the liver).
- 115. Diseases of the gall-bladder and of biliary passages (including biliary calculus).
- 116. Diseases of the pancreas.
- 117. Peritonitis, cause not specified.

X. *Diseases of the Genito-Urinary System.*

- 118. Nephritis (obligatory subdivision) :
 - (a) Acute.
 - (b) Chronic.
 - (c) Not specified.
- 119. Other diseases of the kidney, renal pelvis and ureters (excluding kidney disease of pregnancy) :
 - (a) Pyelitis.
 - (b) Others.
- 120. Calculi of urinary passages.
- 121. Diseases of the bladder (excluding tumours) :
 - (a) Cystitis.
 - (b) Others.
- 122. Diseases of the urethra, urinary abscess, etc.
 - (a) Stricture of the urethra.
 - (b) Others.
- 123. Diseases of the prostate.
- 124. Non-venereal diseases of the male genital organs.
- 125. Non-venereal diseases of the female genital organs and mammary gland :
 - (a) Of the ovary, Fallopian tubes and parametrium.
 - (b) Of the uterus.
 - (c) Others.

XI. *Pregnancy, Labour and Puerperal State.*

- 126. Abortion (obligatory subdivision)¹ :
 - (a) With septic conditions.
 - (b) Without septic conditions being mentioned (including hæmorrhage).
- 127. Ectopic gestation.
- 128. Other accidents of pregnancy (hæmorrhages excluded).
- 129. Puerperal hæmorrhage :
 - (a) Placenta prævia.
 - (b) Other hæmorrhages.
- 130. Puerperal septicæmia (not specified as consequent upon abortion).
- 131. Toxæmia of pregnancy (obligatory subdivision) :
 - (a) Albuminuria or eclampsia.
 - (b) Other forms.
- 132. Phlegmasia alba dolens, embolism, puerperal sudden death (not specified as septic).
- 133. Other accidents of labour.
- 134. Other conditions of the puerperal state not specified (including puerperal diseases of the mammary glands and puerperal dementia).

¹ If there were not this subdivision, it would not be possible to ascertain the total number of deaths from puerperal septicæmia 126 (a) and 130.

XII. *Diseases of the Skin and Cellular Tissue.*

- 135. Furuncle.
- 136. Phlegmon, acute abscess.
- 137. Other diseases of the skin and annexa and of the cellular tissue.

XIII. *Diseases of the Organs of Locomotion.*

- 138. Osteomyelitis.
- 139. Other diseases of the bones (tuberculosis excepted).
- 140. Diseases of the joints and other organs of locomotion :
 - (a) Joints (tuberculosis excepted).
 - (b) Other organs of locomotion.

XIV. *Malformations.*

- 141. Malformations (dead birth excluded) :
 - (a) Congenital hydrocephalus.
 - (b) Spinabifida and meningocele.
 - (c) Congenital malformation of the heart.
 - (d) Others.

XV. *Early Infancy.*

- 142. Congenital debility.
- 143. Premature birth.
- 144. Result of labour.
- 145. Other diseases peculiar to infancy :
 - (a) Atelectasis.
 - (b) Jaundice and sclerema of the newborn.
 - (c) Others.

XVI. *Senility.*

- 146. Senility :
 - (a) Accompanied by senile dementia.
 - (b) Other forms.

XVII. *Violent or Accidental Deaths.*

- 147. Suicides (subdivision obligatory) :
 - (a) By solid or liquid poisons or by absorption or corrosive substances.
 - (b) By poisonous gas.
 - (c) By hanging or strangulation.
 - (d) By drowning.
 - (e) By fire-arms.
 - (f) By cutting or piercing instruments.
 - (g) By jumping from high places.
 - (h) By crushing.
 - (i) Other suicides.
- 148. Homicide (subdivision obligatory) :
 - (a) Infanticide (murder of infants of less than 1 year of age).
 - (b) Murder of persons of 1 year of age and over by firearms.
 - (c) Murder of persons of 1 year of age and over by cutting or piercing instruments.
 - (d) Other homicides.
- 149. Accidents¹ (subdivision obligatory) :
 - (a) Attack by venomous animals.
 - (b) Poisoning by articles of food.
 - (c) Absorption of toxic gases.
 - (d) Other acute accidental poisonings (except by gas).
 - (e) Results of conflagration.
 - (f) Accidental burns (other than those caused by conflagration).
 - (g) Accidental mechanical suffocation.
 - (h) Accidental drowning.
 - (i) Injury inflicted by fire-arms (war wounds excepted).
 - (j) Injury inflicted by cutting and piercing instruments (war wounds excepted).

¹. All accidental or violent deaths should be included under the headings Nos. 147 and 153 so that each death without exception is included under one or other of the 155 rubrics of the above List.

For certain deaths included under Nos. 149 and 159 a second independent tabulation is recommended as follows :

- 1. Accidents in mines and quarries.
- 2. Accidental injury by machinery.
- 3. Accidents connected with methods of transport :
 - (a) Railways and tramways.
 - (b) Motorcars and motorcycles.
 - (c) Other land methods of transport.
 - (d) Transport by water.
 - (e) Transport by air.

- (k) Injuries resulting from falling, crushing, landslide.
 - (l) Cataclysm (all deaths attributed to a cataclysm of whatever nature).
 - (m) Injuries inflicted by animals.
 - (n) Hunger or thirst.
 - (o) Excessive cold.
 - (p) Excessive heat.
 - (q) Lightning.
 - (r) Accidental electric shocks.
 - (s) Other accidents.
- 150. Violent deaths (accident, suicide, homicide) of which the nature is unknown.
 - 151. War wounds.
 - 152. Execution of civilians by belligerent armies.
 - 153. Capital punishment.

XVIII. *Causes of Death not Determined.*

- 154. Sudden death.
- 155. Causes of death not specified or ill defined.

Appendix 2.

2. INTERMEDIATE LIST (86 headings).

(The numbers given in brackets indicate the numbers in the Detailed List.)

I. *Epidemic, Endemic, Infectious and Parasitic Diseases.*

- 1. Enteric and paratyphoid fevers (1 and 2).
- 2. Typhus fever (3).
- 3. Smallpox (5).
- 4. Measles (6).
- 5. Scarlet fever (7).
- 6. Whooping-cough (8).
- 7. Diphtheria (9).
- 8. Influenza (10).
- 9. Asiatic cholera (11).
- 10. Dysentery (12).
- 11. Tuberculosis of the respiratory system (22).
- 12. All other forms of tuberculosis (23 to 28).
- 13. Syphilis (29).
- 14. Purulent infections and septicæmia (31).
- 15. Malaria (32).
- 16. Diseases caused by protozoa (33 to 35).
- 17. Other epidemic, endemic, infectious and mycotic diseases (4, 13 to 21, 30, 36 and 37).¹

II. *Cancer and Tumours.*

- 18. Cancer and malignant tumours (38 to 45).
- 19. Benign tumours or tumours not specified as malignant (46).

III. *Rheumatic Diseases, Diseases of Nutrition and of Endocrine Glands and other General Diseases.*

- 20. Acute articular rheumatic fever (47).
- 21. Chronic rheumatism and gout (48 and 49).
- 22. Diabetes mellitus (50).
- 23. Vitamine deficiency diseases (51 to 54).
- 24. Diseases of the thyroid gland (56).
- 25. Other general diseases (55, 57 to 59).

IV. *Diseases of the Blood and Hæmatopoietic Organs.*

- 26. Pernicious and other anæmias (61).
- 27. Leucæmia, Hodgkin's disease, and other diseases of the blood and hæmatopoietic organs (60, 62 to 64).

¹ Other infectious diseases should be specified when they cause a marked mortality, and certain of them (plague, yellow fever, relapsing fever, leprosy) should be specified even if they cause only one death.

V. *Intoxication and Chronic Poisoning.*

- 28. Alcoholism (chronic or acute) (65).
- 29. Chronic intoxication (66 and 67).

VI. *Diseases of the Nervous System and Organs of Special Sense.*

- 30. Simple meningitis (69).
- 31. Progressive locomotor ataxy (70).
- 32. Cerebral apoplexy, hemiplegia (72).
- 33. General paralysis (73).
- 34. Dementia præcox and other psychoses (74).
- 35. Epilepsy (75).
- 36. Other diseases of the nervous system (68, 71, 76 and 77).
- 37. Diseases of the eye, ear and annexa (78 and 79).

VII. *Diseases of the Circulatory System.*

- 38. Pericarditis (80).
- 39. Acute endocarditis (81).
- 40. Chronic endocarditis and valvular disease (82).
- 41. Myocarditis (83).
- 42. Diseases of the coronary arteries and angina pectoris (84).
- 43. Other diseases of the heart (85).
- 44. Aneurism (86).
- 45. Arteriosclerosis and gangrene (87 and 88).
- 46. Embolism and thrombosis (other than of the brain, lung and coronary arteries) (89).
- 47. Other diseases of the circulatory system (90 to 94).

VIII. *Diseases of the Respiratory System.*

- 48. Bronchitis (97).
- 49. Pneumonia (98).
- 50. Pleurisy (99).
- 51. Other diseases of the respiratory system (tuberculosis excepted) (95, 96, 100 to 103).

IX. *Diseases of the Digestive System.*

- 52. Ulcer of the stomach or duodenum (106).
- 53. Diarrhœa and enteritis (under 2 years of age) (108).
- 54. Diarrhœa and enteritis (2 years and over) (109).
- 55. Appendicitis (110).
- 56. Hernia, intestinal obstruction (111).
- 57. Cirrhosis of the liver (113).
- 58. Other diseases of the liver and biliary passages, including biliary calculus (114 and 115).
- 59. Other diseases of the digestive system (104, 105, 107, 112, 116 and 117).

X. *Diseases of the Genito-Urinary System.*

- 60. Nephritis (118).
- 61. Other diseases of the kidney, renal pelvis and ureters (119).
- 62. Calculi of urinary passages (120).
- 63. Diseases of the bladder (excluding tumours) (121).
- 64. Diseases of the urethra, urinary abscess, etc. (122).
- 65. Diseases of the prostate (123).
- 66. Non-venereal diseases of the genital system (124 and 125).

XI. *Pregnancy, Labour and Puerperal State.*

- 67. Accidents of pregnancy (126(b) 127, 128).
- 68. Puerperal hæmorrhage (129).
- 69. Puerperal septicæmia (126(a), 130).
- 70. Toxæmia of pregnancy (albuminuria and eclampsia) (131).
- 71. Other puerperal diseases (132 to 134).

XII. *Diseases of the Skin and Cellular Tissue.*

- 72. Diseases of the skin and cellular tissue (135 to 137).

XIII. *Diseases of the Organs of Locomotion.*

- 73. Diseases of the organs of locomotion (tuberculosis and rheumatism excluded) (138 to 140).

XIV. *Malformations.*

- 74. Congenital malformations (dead birth excepted) (141).

XV. *Early Infancy.*

75. Congenital debility (142).
76. Premature birth (143).
77. Results of labour (144).
78. Other diseases special to early infancy (145).

XVI. *Senility.*

79. Senility (146).

XVII. *Violent or Accidental Deaths.*

80. Suicide (147).
81. Homicide (148).
82. Accidents (149).
83. Other violent deaths (suicide, homicide, accident) of which the nature is unknown (150).
84. War wounds (including execution of civilians by belligerents (151 and 152).
85. Capital punishment (153).

XVIII. *Causes of Death not Determined.*

86. Causes not specified or ill defined (154 and 155).

Appendix 3.

3. THE SHORT LIST.

(The numbers in brackets refer to those of the draft Detailed List.)

I.

1. Enteric and paratyphoid fever (1 and 2).
2. Typhus fever (3).
3. Smallpox (5).
4. Measles (6).
5. Scarlet fever (7).
6. Whooping-cough (8).
7. Diphtheria (9).
8. Influenza (10).
9. Asiatic cholera (11).
10. Tuberculosis of the respiratory organs (21)
11. Tuberculosis of other organs (23 to 28).
12. Syphilis (29).
13. Malaria (32).
14. Other epidemic, endemic, infectious or parasitic diseases¹ (4, 12 to 21, 30, 31, 33 to 37).

II.

15. Cancer and malignant tumours (38 to 45).
16. Benign tumours or tumours not specified as malignant (46).

III, IV, and V.

17. Chronic rheumatism and gout (48 and 49).
18. Diabetes mellitus (50).
19. Chronic and acute alcoholism (65).
20. Other general diseases and chronic poisonings (47, 51 to 64, 66, and 67).

VI.

21. Progressive locomotor ataxy and general paralysis (70 and 73).
22. Cerebral apoplexy, hemiplegia (72).
23. Other diseases of the nervous system and organs of special sense (68, 69, 71, 74 to 79).

VII.

24. Diseases of the heart (80 to 85).
25. Other diseases of the circulatory system (86 to 94).

¹ Other infectious diseases should be specified when they cause a marked mortality, and certain of them (plague yellow fever, relapsing fever, leprosy) should be specified even if they cause only one death.

VIII.

26. Bronchitis and pneumonia (97 and 98).
27. Other diseases of the respiratory organs (excluding tuberculosis) (95, 96, 99 to 103).

IX.

28. Diarrhœa and enteritis (108 and 109).
29. Appendicitis (110).
30. Diseases of the liver and biliary passages (113 to 115).
31. Other diseases of the digestive system (104 to 107, 111, 112, 116 and 117).

X.

32. Nephritis (118).
33. Other diseases of the genito-urinary system (119 to 125).

XI.

34. Puerperal septicæmia (126 to 130).
35. Other diseases of pregnancy, labour and the puerperal state (126*b*), 127 to 129, 131 to 134).

XII and XIII.

36. Diseases of the skin, cellular tissue and of the organs of locomotion (135 to 140).

XIV and XV.

37. Congenital debility, malformations, premature birth, etc. (141 to 145).

XVI.

38. Senility (146).

XVII.

39. Suicide (147).
40. Homicide (148).
41. Violent or accidental death (suicide and homicide excepted) (149 to 153).

XVIII.

42. Causes not specified or ill defined (154 to 155).

Appendix 4.

4. CAUSES OF DEAD BIRTH.

I. *Death of Fœtus during Gestation.*

1. Syphilis and other chronic diseases.
2. Toxæmia of pregnancy (eclampsia, albuminuria, retro-placental hæmorrhage).
3. Malformations rendering the fœtus non-viable.
4. Other causes and unspecified causes.

II. *Death by Premature Expulsion.*

5. Mother overworked.
6. Violent traumatism causing premature labour.
7. Abnormal placental insertion.
8. Acute infectious diseases.
9. Chronic infectious diseases, especially syphilis.
10. Other causes and unspecified causes.

III. *Death of Fœtus during Labour.*

11. Abnormal presentation and prolapse of umbilical cord.
 12. Obstacles to expulsion of fœtus.
 13. Other causes and unspecified causes.
-

Appendix 5.

C.H./Exp.Stat./94.

PREPARATORY STEPS INCIDENT TO THE FORTHCOMING REVISION OF THE INTERNATIONAL LIST OF CAUSES OF DEATH.

Resolution adopted by the Commission of Expert Statisticians of the Health Organisation, at its meeting in Berlin, April 3rd to 5th, 1929.

The Commission of Expert Statisticians,

Having asked, at its last session, that Governments be requested by the Health Organisation to express their views on the resolutions adopted by the Commission with regard to the revision of the International List of Causes of Death :

(a) Wishes to express its gratitude to the Governments which have complied with its request ;

(b) Notes with satisfaction the agreement reached between the International Institute of Statistics and the Health Organisation for the joint study of this question ;

(c) Recommends that the replies received from the various Governments be referred to the Joint Commission set up to prepare the work for the International Conference in October 1929 ;

(d) Invites the particular attention of the Joint Commission to the recommendation which was adopted in March 1927 with regard to the Detailed List (document C.H.576, Section III, " List of Causes of Death ") ;

(e) Recommends that the Joint Commission be asked to prepare a short statement on the origin, value and progress of the International List by way of annex to the recommendations which the Joint Commission will prepare for the International Conference which will meet in Paris on October 16th, 1929 ;

(f) Expresses the hope that the said Conference will consider the possibility of standing arrangements being made to ensure the study of questions relating to the International List in the intervals between the decennial revisions, bearing in mind the agreement reached on this subject between the International Institute of Statistics and the Health Organisation of the League of Nations.

ANNEX 8.

C.H.785(1).

APPLICATION OF ARTICLE 10 OF THE INTERNATIONAL OPIUM CONVENTION OF FEBRUARY 19TH, 1925 TO MORPHINE ESTERS.

NOTE BY DR. CARRIÈRE, PRESIDENT OF THE OPIUM COMMISSION
SUBMITTED TO THE COMMITTEE ON MAY 7TH, 1929.

As a result of the following recommendation of the Health Committee, which the Council noted during its fifty-third session, held at Lugano in December 1928 —

“ The Health Committee :

“ Having taken note of the opinion formulated by the permanent Committee of the Office international d'hygiène publique on its report of May 15th, 1928 ;

“ Having noted that dilaudide, on the one hand, and benzoyl-morphine and, in general, the morphine esters, on the other hand, are capable of producing toxicomania ;

“ Decides to inform the Council of the League of Nations, in conformity with Article 10 of the International Opium Convention of February 19th, 1925, that dilaudide, on the one hand, and benzoylmorphine and the morphine esters generally are narcotics capable of producing harmful effects similar to those produced by products envisaged by the Convention, and that they should, in consequence, be brought within the scope of the Convention. ”

the British Foreign Office addressed a letter dated March 13th, 1929, to the Secretary-General, asking him to define the exact meaning of the phrase “ and the morphine esters generally ” which figures in the above recommendation.

The Foreign Office wishes to know in particular whether it was the Health Committee's intention to render all morphine esters without exception subject to the Convention.

The question of the application of Article 10 of the Convention to morphine esters has been discussed in detail on three occasions and by three bodies : the Committee of Experts of the Office international d'hygiène publique, the Permanent Committee of the Office international d'Hygiène publique, and the Health Committee at its session of October 1928.

Having taken part in these discussions, and after consulting on May 2nd, on the occasion of their presence in Geneva for the present session of the Health Committee, the members of the Opium Commission of the Comité Permanent of the Office international d'hygiène

publique, I am able to say categorically that, in the unanimous opinion of these three bodies, all morphine esters should be subject to the Convention, since there is good reason to believe that they are all habit-forming drugs and can provoke toxicomania. If, however, the innocuous character of any one of these esters can be clearly demonstrated, it should, after examination, be exempted from the Convention in conformity with Article 8.

I therefore propose the following resolution :

“ The Health Committee, in recommending at its thirteenth session the application of Article 10 of the International Opium Convention to ‘ benzoylmorphine and the morphine esters generally ’ referred to all the morphine esters without exception, since there is good reason to believe that they are all habit-forming drugs and can provoke toxicomania, while reserving the possibility, in conformity with Article 8 of the Convention, of exempting those esters whose innocuous character may be clearly demonstrated. ”

ANNEX 9.

C.H.778.

SLEEPING-SICKNESS.

NOTE ON REPORT OF THE SECOND INTERNATIONAL CONFERENCE ON SLEEPING-SICKNESS AND COUNCIL RESOLUTION OF DECEMBER 11TH, 1928.

1. The Second International Conference on Sleeping-Sickness took place in Paris from November 5th to 7th, 1928. The Report (document C.H.743) containing the resolutions and recommendations adopted, was considered by the Council at its fifty-third session on December 11th, 1928. The Council approved the recommendations contained in the Report as well as the observations made by the Rapporteur, M. Quiñones de León (document C.567.1928.III) ; a copy of both documents and of the Council Resolution was sent to members of the Health Committee early in January. The Report, together with the Council Resolution, was also officially communicated to the Governments of the six countries participating in the Conference, asking for co-operation in giving effect to the recommendations contained therein.

2. The Conference adopted a resolution expressing its appreciation of the utility and interest attaching to international meetings of this kind and expressed the hope that the Health Organisation would recommend the convocation of a third International Conference on Trypanosomiasis at some future date. In view of the economic and public-health importance of animal trypanosomiasis in Africa, it was recommended that any future international conference should consider human and animal trypanosomiasis as a whole and not confine its attention to sleeping-sickness.

3. The Health Committee suggested at its last session that the Conference might, with advantage, devote attention to the general health conditions of the native population in Africa. The Conference appreciated the desirability of enlarging the scope of the enquiry in this way and recommended that the Health Organisation should collect and analyse data concerning the prevalence and importance of sleeping-sickness in relation to other causes of morbidity. A study of relevant documentation received in the Health Section is being undertaken.

4. It will have been noted that the Conference made no recommendations for any further scientific research mission, but it put forward detailed proposals regarding numerous questions of scientific and practical importance that call for study in the different national laboratories and research centres. It further made suggestions regarding the manner in which the Health Organisation might assist workers in different national laboratories in keeping in touch with one another. The first suggestion relates to the setting up of a small expert committee to which all laboratories and research centres in Africa should communicate, say, once a year, an account of the work done, together with publications. The sub-committee would in its turn periodically transmit the collected papers, with a short survey of the progress made in *trypanosomiasis* research and prevention, to the Institutes and centres referred to as well as to the interested administrations. To encourage the co-operation of the institutes in this scheme, it was suggested that this committee might recommend to the Health Committee, say once a year, the award to one or other of these institutes of a “ bourse individuelle ” which would enable a member of its staff to visit some other country or countries where work of special interest to the laboratory selected was being carried out.

5. The Conference also recommended individual interchanges which would enable research workers in African laboratories to become acquainted with trypanosomiasis investigations carried out in laboratories in other territories. It is hoped that it may be possible to arrange for two such interchanges during the present financial year, to which end the countries concerned are being invited to submit nominations.

REPORT ON THE WORK OF THE FOURTEENTH SESSION
OF THE HEALTH COMMITTEE.

(Geneva, May 2nd to 8th, 1929).

1.

JOINT COMMISSION OF EXPERTS FOR THE STUDY OF THE RELATIONSHIP BETWEEN PUBLIC
HEALTH SERVICES AND HEALTH INSURANCE ORGANISATIONS.

Report of the Sub-Commission on Preventive Medicine.

The Sub-Commission on Preventive Medicine held its first meeting in December 1928. It presented a report (document C.H./S.H.A.M./8) concerning which the Health Committee adopted the following resolution :

“ The Health Committee,

“ Having considered the Report of the Sub-Commission on Preventive Medicine of the Joint Commission for the Study of the Relationship between Public Health Services and Health Insurance Organisations,

“ Decides to transmit to the Commission on Education in Hygiene and Preventive Medicine, for examination and report, the resolutions of the Sub-Commission regarding the desirability of medical practitioners and auxiliary medical personnel undergoing courses of instruction in preventive medicine. ”

2.

THE EASTERN BUREAU OF THE HEALTH ORGANISATION AT SINGAPORE.

The report on the work of the fourth session of the Advisory Council, held at Singapore from February 14th to 16th, 1929, and the annual report of the Director of the Eastern Bureau for 1928 were referred to the Far Eastern Commission, which presented a report thereon. The Health Committee adopted the following resolution :

“ The Health Committee,

“ Approves the report of its Far-Eastern Commission, as well as the resolutions adopted by the Advisory Council of the Eastern Bureau at its fourth session held in Singapore from February 14th to 16th, 1929, together with the budget estimates for 1930 attached thereto. ”

3.

THE SURVEY METHOD OF STIMULATING PUBLIC HEALTH ADMINISTRATION IN AMERICAN CITIES :
STUDIES ON THE COST OF MEDICAL CARE IN THE UNITED STATES.

The Health Committee,

Having heard a description by Surgeon-General Cumming and Professor Winslow of the survey method of stimulating public health administration in cities, and of the studies on the cost of medical care in the United States of America :

Recommends that an account of this method and of these studies, and of the results obtained, be included in the publications of the Health Organisation ;

Invites the Medical Director to prepare a report on the methods employed for the appraisal of public health activity in countries other than the United States of America, and, in collaboration with the schools of hygiene and health administrations interested, to collect and analyse information concerning the work of “ Health Centres ” and other similar activities in European countries.

4.

ENQUIRY INTO THE CAUSES OF INFANT MORTALITY.

The Health Committee,

Having considered the report on the work of the Conference of Health Experts on Infant Welfare, held at Rome in March 1929, and having heard the supplementary explanations of Professor Debré, Rapporteur of the Conference, on the work of the experts carried out in selected districts in Austria, France, Germany, Great Britain, the Netherlands and Norway,¹ and the results obtained, as well as the statement of the Medical Director relating thereto :

¹ The report on the selected districts in Italy will be presented at the next session of the Health Committee.

Approves that statement and the report of the Conference, and offers its best thanks to the Commission on the successful completion of its investigations, the results of which give valuable indications as to the relative importance of the various measures applied for the reduction of infant mortality rates and the promotion of infant welfare in general ;

Expresses its appreciation of the devotion and care with which numerous workers in the different countries have carried out the detailed work of the enquiry ;

Associates itself in particular with the recommendations of the Conference that Health Administrations of other countries be invited to undertake studies of a similar nature, the services of the Health Organisation being available for advice on the conduct of such studies ;

And recommends that the report of the Conference receive as wide a publicity as possible in order to stimulate interest in the important health problems connected with infant welfare and infant mortality.

5.

COLLABORATION WITH THE GREEK GOVERNMENT IN THE SANITARY REORGANISATION OF GREECE.

On the request of the Greek Government, the Council invited the Health Committee to give all possible technical assistance to the Government for the sanitary reorganisation of Greece. A delegation of the Health Committee met in Athens on April 7th, 1929, where the situation was examined in the light of detailed studies which had been previously made in Greece by experts and members of the Health Section. A report was prepared by the Commission, making proposals on the subject, and was presented to the Greek Government in Athens. This report (document C.162.M.63.1929.III) and a supplementary note by the Chairman (document C.H.798) was presented to the Health Committee which adopted the following resolution :

“ The Health Committee,

“ Having received the report of the Commission on its collaboration with the Greek Government in the sanitary reorganisation of Greece, as well as the statement made by the Chairman of the Commission at the present session when presenting that report :

“ Approves the action taken by the Commission and accepts the conclusions of its report :

“ Expresses its high appreciation of the work of the experts who have undertaken the preparatory work of the Commission ;

“ And offers its sincere thanks to the Greek authorities, including their technical officers, for the invaluable assistance which the Commission received at their hands. ”

6.

REPORT OF THE MEDICAL DIRECTOR.

The following resolutions were adopted on the report of the Medical Director and the budget estimates for 1930 :

A.

“ The Health Committee adopts the report of the Medical Director on the work accomplished since the thirteenth session (November 1928 to May 1929). ”

B.

“ The Health Committee,

“ Having taken note of the budget proposals of the Health Organisation for the year 1930 :

“ Submits to the Council the desirability of drawing the attention of the Assembly to the fact that normal increases in the salaries of the staff should be taken into consideration in determining the total of the budget, as was the case in the 1929 budget ;

“ In this connection desires to point out that the stabilisation of the budget of the Health Organisation would otherwise involve a progressive diminution in the credits available for technical studies ; thus, in the budget proposals for 1930, these credits do not amount to more than 62.8 per cent of the total budgetary provision, whereas for the year 1927 they amounted to 67.5 per cent, though there has been no increase in the personnel employed. ”

7.

SLEEPING-SICKNESS.

The Health Committee,

Having considered the report of the Second International Conference on Sleeping-Sickness, the report by M. Quiñones de León to the Council on the work of that Conference, and the resolution adopted by the Council relating thereto ;

Attaches special importance to the recommendation of the Conference that the Health Organisation of the League should collect and analyse facts obtainable in regard to the importance of human trypanosomiasis in relation to other causes of morbidity and expresses the hope that the administrations concerned will co-operate fully in this study ;

Recommends that the services of the Health Organisation be placed at the disposal of the administrations of those territories and that it employ its usual methods of enquiry and work in order to comply to the fullest practicable extent with the recommendation of the Conference ;

Endorses the recommendation of the Conference concerning the appointment of an expert committee to assist in co-ordinating trypanosomiasis investigations, and recommends that the following experts be invited to serve on that committee :

Dr. A. BAGSHAWE,
Professor E. VAN CAMPENHOUT,
Professor ALDO CASTELLANI,
Professor MESNIL,
Professor G. PITTALUGA,
Professor R. STRONG.

Requests the Medical Director to take all practicable action to give effect to the recommendations of the Conference concerning individual interchanges between laboratory staffs.

8.

CANCER COMMISSION.

The Chairman having reported on the progress of the work of the Sub-Commission on Occupational Cancer and having presented the report of the Sub-Commission for the Radiotherapy of Cancer, the Health Committee adopted the following resolution :

“ The Health Committee,

“ Notes the progress made with regard to the enquiry into occupational cancer ;
“ Expresses its great appreciation of the work and the report of the Sub-Commission entrusted with the study of the radiotherapy of cancer, and of its experts. ”

9.

REPORT OF THE COMMISSION OF EXPERT STATISTICIANS ON ITS SECOND SESSION AND REPORT OF THE CHAIRMAN OF THE JOINT COMMISSION OF THE INTERNATIONAL INSTITUTE OF STATISTICS AND OF THE HEALTH ORGANISATION, ON THE FIRST SESSION OF THE JOINT COMMISSION.

The Health Committee,

Having considered the report on the second session of the Commission of Expert Statisticians held in Berlin from April 3rd to 5th, 1929, and having taken note of the report of the Chairman of the Joint Commission of the International Institute of Statistics and of the Health Organisation, which met in Paris from April 9th to 12th, 1929, to prepare the work of the Fourth Decennial Revision of the International List of Causes of Death :

Expresses its appreciation of the work accomplished by the Joint Commission, approves the continuance of its activities, and recommends that the Health Organisation should, if circumstances require, consult this Commission on problems of nomenclature of morbidity ;

Takes note of the recommendations of the Commission of Expert Statisticians as to the statistical appraisal of data concerning the results of vaccination with BCG, and considers that the statistical desiderata therein set forth should be communicated to the Directors of Clinical Research and their statistical advisers who will be in charge of the studies to be carried out as a result of the Paris Conference ; and declares its readiness to arrange meetings between these experts to determine the best methods of carrying out the enquiries in the local circumstances ;

Hopes that reports on the progress and conclusions of such studies will be communicated to it as and when published.

10.

OPIUM.

The Health Committee, having considered a question put to it regarding the interpretation of a decision taken at its thirteenth session in regard to the application of Article 10 of the Opium Convention, adopted the following resolution :

“ The Health Committee,

“ Places on record that the recommendation made at its thirteenth session concerning the application of Article 10 of the International Opium Convention to ‘ benzoylmorphine and the morphine esters generally ’, should apply to all morphine esters without exception. The possibility of exempting, in conformity with Article 8 of the Convention, those esters, the innocuous character of which may hereafter be clearly demonstrated, is, however, reserved. ”

11.

PREPARATION PLACED ON SALE AND ALLEGED TO CONTAIN VITAMINS.

The Health Committee,

In view of the need for controlling preparations alleged to contain vitamins which are placed on sale in constantly increasing numbers in many countries :

Invites the Permanent Commission on Standardisation of Sera, Serological Reactions and Biological Products, to consider the elaboration of standardised methods for the examination of such preparations ;

And requests the Medical Director to obtain information regarding the methods employed by public health administrations to suppress the abuses to which the sale of such products may give rise.

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Abbreviations : Comm. = Commission. Conf. = Conference. Cttee. = Committee.
Int. = International. Resol. = Resolution.

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LEAGUE OF NATIONS

Geneva, September 20th, 1929.

Work of the Health Organisation

REPORT OF THE SECOND COMMITTEE TO THE ASSEMBLY

Rapporteur : M. Zdenek FIERLINGER (Czechoslovakia).

The reports on the work of the Health Organisation which have been submitted this year to the Assembly prove that this Organisation has faithfully adhered to the policy which it had adopted to avoid dispersal of effort and concentrate its attention on certain problems of international hygiene. It has refrained from repeatedly launching out into new enquiries, but during the past years has gone very thoroughly into the questions already before it, so that the various health administrations might benefit thereby.

Before entering into details, I must inform you that the Rockefeller Foundation is prepared to continue its generous assistance to the Health Organisation and has concluded a new agreement with the Council by which it undertakes to place at the disposal of the Health Committee for a period of five years from January 1st, 1930, an annual subsidy equal to the total grant which the Health Organisation was already receiving this year for certain phases of its work, and for the extension of the work it does through the Singapore Bureau.

The Assembly will doubtless wish to direct attention to this generous assistance, which is not only a recognition of the value of the League's health work, but also secures effective co-operation with a great American institution.

I do not propose to recapitulate the data contained in the annual reports ; I will merely quote a few examples in order to illustrate the Health Organisation's methods of work.

1. Let us take, for instance, the problem of syphilis. In 1924, the Health Committee, by means of preliminary enquiries, ascertained that the diagnosis of syphilis by blood-tests was not, owing to the different methods employed, of equal value in different countries, and that consequently it was more likely to mislead a practitioner than to give him a reliable guide. The matter was therefore submitted to a group of experts of acknowledged authority, who, after minute laboratory research, met at Copenhagen to study in detail the characteristics of the various methods of diagnosis. Further progress was achieved ; last year another meeting of the same experts reached conclusions which will enable laboratory workers and practitioners to employ these various methods with full knowledge of the facts. The work of the Health Organisation on syphilis accordingly began with a study of diagnosis.

Having compared the various methods of diagnosis, the Health Committee were led to compare the value of a group of remedies generally known under the name of Salvarsan and its derivatives.

The use of these preparations inaugurated the modern methods of treatment of a disease the effects of which upon the well-being of humanity are known to all. They can, however, only be employed in doses and under conditions determined by experimental study. Here, again, thanks to very minute laboratory work, followed by meetings and conferences of specialists, the Health Committee has secured agreement among the experts. At present, the International Standard is kept in the official institutes at Frankfort, London and Washington ; these institutes, on behalf of the Health Committee, place the standard preparation at the disposal of any administration which so requests, for the purpose of ascertaining whether the efficacy and safety of the preparations manufactured in its own country are equivalent to those of the international standard.

It may therefore be said that the Health Organisation has done much to bring into use effective non-toxic remedies in the campaign against syphilis throughout the leading countries of the world.

Last year, on the basis of new methods of diagnosis and with the assistance of remedies of known value, the Health Organisation began to consider what methods of treatment since

the war had given the best results. In recent years, there has been much discussion concerning the results obtained in the treatment of this disease. It had been hoped that the great efforts made with new remedies would bring about a very appreciable decrease in the number of cases. This was actually so for a few years, but latterly doubts have been expressed as to the value of the treatment and the decrease in incidence.

After the last session of the Assembly, the Health Committee set on foot enquiries into this subject in university clinics and dispensaries in Germany, Denmark, the United States of America, France and Great Britain. The results of the analysis of about 50,000 cases will be known towards the end of this year. The results of this enquiry should prove of great value in the fight against this terrible disease.

Had I to summarise this chapter in one sentence, I should say that, having compared national experiments on the diagnosis of syphilis and the value of remedies, the Health Committee hopes to reach certain practical conclusions concerning methods of treatment which may be placed at the disposal of the health services of all countries.

2. The same method has been followed in connection with the enquiry into infant mortality. This enquiry, first suggested by the Netherlands delegation, was entrusted to experts drawn from seven European countries. After preliminary investigations, these experts have, during the last few years, studied in twenty-seven districts the medical and social causes of 7,053 deaths among children under 12 months, and 2,356 deadbirths which occurred within a period of twelve months.

This enquiry is now finished. Conclusions have been drawn which will form the basis for fresh efforts to reduce infant mortality. The enquiry also showed the points which are still obscure and which will have to be made the subject of special investigations; for example, the fact that, out of every hundred deaths among children under one year, eighteen to thirty-four occurred during the first eight days of life.

These enquiries have largely contributed to stimulate interest in the districts studied.

Similar investigations instituted in four countries of Latin America (Argentina, Brazil, Chile and Uruguay) have also been completed and a general report will be submitted early next year.

The enquiry has also aroused keen interest in Denmark, and investigations on the same lines are being carried out. The Spanish and Roumanian Health Services have applied for the assistance of the Health Organisation for the same purpose. The Roumanian delegate has suggested that a Committee of Investigation should consider the creation of an International Child Welfare Institute, for the purpose of studying the physiological, moral and intellectual development of the child in all countries. The Second Committee believes that, if the Roumanian Government should make a concrete proposal in this direction, it would desire first to submit it for the consideration of the Council, which would doubtless refer it to its advisory committees. Certain South American countries and Japan have done likewise.

The Indian delegation has expressed the hope that the Health Committee would draw up, with the assistance of its member from India, a programme of investigation regarding this problem, which presents a very great importance for his country. I would therefore propose that the Health Committee should be asked to consider the possibility of complying with this desire.

May I congratulate the Netherlands delegation on the splendid results that have followed its proposal? As in the case of syphilis, the proposal has enabled the Health Committee to reach a number of valuable conclusions by comparing the data collected in various countries.

3. The same method has been applied with the same results by the Malaria Commission. This Commission, which was set up in 1923 and consists of the most distinguished malaria specialists, has conducted enquiries in the malarial districts of Europe, North America and Asia Minor, and, in a series of reports, has formulated a set of principles for directing anti-malaria measures. These principles, which were adopted by a Conference in June 1928, have already served as a guide to various health administrations that have applied to the Commission for assistance.

A few weeks ago a delegation of this Commission landed at Bombay at the invitation of the Indian Government. In conjunction with the health authorities of the various provinces, this delegation will study the programme and results of the anti-malaria measures adopted in India.

These distinguished German, American, Spanish, French and Dutch scientists will endeavour to establish with the Indian health services and Indian medical associations close and continuous co-operation which will benefit the Malaria Commission and, through it, the services of many other countries. The experience thus gained will be placed at the disposal of all those who are engaged in malaria work throughout the vast territory of India.

4. I would like here to mention the gratification of my Government at noting that its proposal to invite the Health Committee to consider how contact could be established between the various health services and sickness insurance organisations has been fully carried out. The work of the Joint Commission of Enquiry, set up by the Health Organisation in conjunction with the International Labour Office, has been the starting-point for a close comparison of national experiences and has already led to the preparation

of reports of undoubted value and to attempts in various countries to apply the conclusions reached. In my country, for instance, a special mixed committee has been set up to apply a general programme of co-operation between the various services, as suggested by the Joint Commission of the League of Nations Health Organisation and the International Labour Office.

A report of the Health Committee shows that we shall have at our disposal the results of systematic enquiries instituted in the United States of America regarding the important question of the cost of medical care. The Joint Commission is also to give advice in the reorganisation of the health services of Greece.

5. It is a matter for congratulation that the Health Committee has sought the assistance of the International Labour Office, of the International Institute of Agriculture and of the International Institute of Statistics whenever its work so required.

6. These examples will suffice to show how the results of the Health Committee's various enquiries are applied in the different branches of public health work.

7. The States Members of the League appreciate the opportunity afforded them of availing themselves of the experience acquired by the comparison of different national methods. Thus, in October 1928, the Greek Government sought the Health Committee's assistance in the reorganisation of its health service. This Government, which is undertaking an extensive programme of internal reforms, was confronted with the problem of public health, which is a fundamental factor in the economic restoration of the country.

After examining the programme of health improvement outlined by the Greek Government and after a careful survey of typical areas in Greece which lasted several months, the Health Committee submitted to the Government a series of recommendations on the matters referred to it.

These recommendations relate principally to the establishment and work of a modern Public Health Service, to the training of the personnel of that service, to health instruction, to the campaign against malaria, and to other related questions.

The plan was accepted by the Greek Government, which obtained from the Chambers the legislative sanction required for putting it into force, and for the adoption of all the measures to carry out all the recommendations.

A separate service, bearing the name of "Permanent Hellenic Health Service", will begin work in 1932 or 1933. A new health organisation of the Prefectures will be introduced in the districts selected for the application of the plan, which will extend to six districts during the first year and by about 1934 or 1935 will cover the whole country.

A School of Hygiene and new technical services will be set up at Athens under the name of the "Athens Centre". The duties of this centre will be to train all classes of health personnel, to direct and administer the work carried on in the districts chosen for the application of the plan, and to advise the Government on public health questions.

The Greek Government, in appointing those in charge of the centre, had recourse to foreign experts for three of the professors' posts, one of them as Director of the centre. The new services will therefore be able to give health experts both theoretical and practical training.

The anti-malarial dispensaries established in Macedonia by the Refugees Settlement Commission will also be transferred to the new organisation and converted into modern health centres.

Realising that the carrying out of this plan would necessitate methodical work demanding a great deal of technical preparation, the Greek Government asked that the Health Organisation's Commissions and technical services be placed at its disposal to the fullest possible extent in the subsequent development of the scheme.

The Assembly will, I am sure, desire to pay a tribute to the wisdom and foresight of the Head of the Greek Government, who is prepared to make the necessary financial sacrifices for the complete execution of the plan for the health reorganisation of his country.

The Assembly will appreciate the value of this example of international work. A second example is provided by the Health Organisation's activities in South America. A few weeks ago the President of Bolivia submitted a similar request to the Council of the League, and the latter asked the Health Committee to comply with that request, which involves the sending of an expert of the Health Section to co-operate with the Bolivian Health Administration in studying the reorganisation of its services. Upon the completion of this preliminary work, which will last from six to eight months, the Health Committee will study the position with the Bolivian Administration and will select the expert who is to act as the Administration's adviser for two years.

We shall no doubt be informed of the results at the next Assembly.

8. Lastly, in the course of the year, the Health Ministry of the Chinese National Government invited the Medical Director of the League of Nations to become a member of an International Committee of Technical Advisers.

This appointment opened the way for official co-operation between the Chinese Ministry of Health and the League Health Organisation. The Chinese Minister for Foreign Affairs sent to the Secretary-General on September 14th a telegram stating that the Chinese Government "would welcome a commission of experts from the Health Organisation of the League of Nations to come to China as soon as possible to make a survey on port health and maritime quarantine".

The Secretary-General replied that the Chinese Government's proposal would be transmitted to the competent League authorities with a view to taking the necessary steps for its execution, and that Dr Rajchman would reach Nanking early in November with one or two of the Secretariat experts, for the purpose of drawing up a detailed project to be submitted to the Health Committee.

When the Second Committee had terminated its discussions, the Council of the League of Nations considered the telegrams exchanged between the Chinese Foreign Minister and the Secretary-General; in order to complete my report, I quote the following passages from the report presented to the Council by His Excellency M. Quiñones de León:

"The Medical Director will probably be consulted in his capacity as a member of the International Advisory Council on the question which the Nanking Ministry of Health may desire to submit to that body; but the main object of his mission will be to consider on the spot, with the competent authorities, a scheme for co-operation with the Health Organisation, and to examine, in the first place, the Chinese Government's proposal regarding port health and maritime quarantine.

"The plan for co-operation, prepared with the competent Chinese authorities, will be considered by the Health Committee on the return of this mission to Europe, and will then at once be submitted to the Council."

The Council was unanimous in expressing its satisfaction to the Chinese representative upon learning of China's application to the League for the co-operation of the latter's technical organisations. The Council will be happy to furnish all the assistance necessary to carry out the great task which China is undertaking in order to secure its own development.

The Assembly will certainly wish to express its own appreciation of the co-operation thus effected, and will doubtless desire that this co-operation shall begin to take effect before its next session. The Assembly will then be interested to learn of the progress made in this work of international understanding and mutual assistance.

9. The Bolivian Government's request concerns all the health problems of that country, but in the study of leprosy the Health Committee will be able to assist many countries of Latin America next year.

At its last session, the Assembly considered the proposal that the Secretary of this Commission should go to South America. During his journey, which has now been concluded, he ascertained the wishes of the health administrations, and has suggested methods of applying them. It also provided an opportunity for discussing with the Governments, the experts and the health departments of all the countries of South America the details of enquiries into leprosy, infant mortality and syphilis, and of other methods of co-operation considered by the Eighth Assembly. The welcome given to the representative of the League is an indication of the interest taken by these countries in the work of the League.

It has thus been possible to arrange for continuous co-operation with the technical departments of the countries visited; the value of the international studies of the Health Organisation will thereby be enhanced and the experience thus acquired will be utilised in the spirit which inspires all the League's work.

This work, which will be done in 1930, will fulfil the programme of co-operation with Latin America contained in a report adopted by the Eighth Assembly. The execution of the first stages of this programme was approved by the last Assembly.

10. The Malaria Commission's journey to India and that of the Medical Director and his experts to China are not the only examples of the Committee's work in the Far East.

The Leprosy Commission's studies must necessarily relate to the two or three main foci of this disease which exist in the world. Once the investigations in Latin America have been organised, the Commission will go on to the countries of the Far East, as decided by the Health Committee at its session in May 1928. The Assembly will learn with interest that the Japanese Government has invited the Leprosy Commission to meet next spring at Tokio. The Secretary of this Commission will continue in certain Far-Eastern countries the studies begun in Latin America and report thereon.

Furthermore, the Advisory Council of the Singapore Bureau has accepted the very generous invitation of the Government of the Netherlands Indies to hold its session of February 1930 as the Government's guest at Batavia.

Apart from its duties as Epidemiological Intelligence Centre, the Singapore Bureau acts more and more as the Health Organisation's general agency for the Far East; the Batavia meeting is therefore of particular interest.

I have no doubt that the Assembly desires the Organisation's work in the Far East to be pursued. I need only remind it of the co-operation arranged with the Chinese Government.

The Japanese delegation has suggested that the Health Committee might include in its programme of work for next year the organisation of an interchange for port health officers of the Far East.

Further, the Indian delegate emphasised the interest which his country felt in the Health Committee's study of rural hygiene, and the value which would attach to a study by health experts of Far-Eastern countries together with experts of Near-Eastern and European countries (where similar sanitary and climatic conditions prevail) of the practical application of a modern health policy.

The Health Committee will doubtless desire to include the study of these questions in its programme of work for 1930.

11. The Committee, at the request of the International Pacific Conference held at Melbourne in December 1926, was instructed to make a preliminary enquiry into health conditions in New Guinea, the New Hebrides, New Caledonia, the Solomon Islands and Fiji. It has completed its work, and its report, containing specific recommendations for a health policy for preserving the races on these islands, will be published shortly.

12. The Annual Report gives details of the action taken as a result of the Second International Conference on Sleeping-Sickness, convened by the Council and held in Paris in November 1928.

On this occasion, also, a number of technical recommendations and specific tasks were entrusted to the Health Organisation. Laboratory and experimental work in Equatorial Africa carried out by Belgian, British, French, German, Italian and Portuguese experts have yielded important technical results.

The Governmental Conference in Paris further proposed a serious study of the documents in the possession of colonial administrations with a view to drawing up a health programme, more particularly from the demographic point of view. We await with interest the development of those important enquiries.

13. I must not omit to mention the regular work of the Health Organisation concerning the Epidemiological Intelligence Service and the studies on health instruction which have continued successfully.

The French delegation desires that a study of influenza should be undertaken by the Health Committee, and also that the Health Organisation should carry out a codification of the results obtained in health instruction, in order to promote thereby the training of a body of specialists. I am sure that the Health Committee will desire to study these points next year.

I would also like to emphasise particularly the great interest attached to the interchanges in Italy during the autumn of 1928, in Denmark and in Holland during the present year, the latter being specially devoted to problems of rural hygiene. It is also observed that an important tour is being arranged in France next year.

14. I must remind you that the Council of the League has referred to the Committee a resolution by the Health Committee with regard to the budget proposals of the Health Organisation for the year 1930. This resolution is as follows :

“ The Health Committee,

“ Having taken note of the budget proposals of the Health Organisation for the year 1930 :

“ Submits to the Council the desirability of drawing the attention of the Assembly to the fact that normal increases in the salaries of the staff should be taken into consideration in determining the total of the budget, as was the case in the 1929 budget ;

“ In this connection desires to point out that the stabilisation of the budget of the Health Organisation would otherwise involve a progressive diminution in the credits available for technical studies ; thus, in the budget proposals for 1930, these credits do not amount to more than 62.8 per cent of the total, whereas for the year 1927 they amounted to 67.5 per cent, though there has been no increase in the personnel employed.”

The Health Committee's observations were found by the Second Committee to be very sound.

With regard to the general question, I may be allowed to put before you the facts of the situation.

The Sixth Assembly (1925) fixed the budget of the Health Organisation at a million francs. The Health Committee had examined the situation and declared at the time that this stabilisation could only apply as long as the general budget of the League remained within the 1926 limits and as long as no new work was entrusted to the Committee.

During the past four years, the work of the Health Organisation, approved at each stage by the Council, has rapidly grown. Not only has the Committee undertaken enquiries and examinations — asked for in the Assembly by thirteen delegations¹ and several

¹ 1925 : Cuba, Czechoslovakia, France, Italy, Paraguay, Kingdom of the Serbs, Croats and Slovenes, Venezuela; 1926 : Cuba, Czechoslovakia, Uruguay; 1928 : Finland, Poland, Sweden,

States Members of the League — but it has, in consequence, had to extend its work more and more to extra-European countries, which, on the score of travel alone, involves very heavy expense.

Subsequent Assemblies have recognised the necessity of this extension of the Committee's work. I would remind you that, on the proposal of the Second Committee, the last Assembly congratulated the Health Organisation "on the increasing success of its far-sighted policy of practical collaboration with extra-European countries"; but the Second Committee thought that the time had come for the Assembly to decide whether it wishes this work to continue or whether it should be reduced to proportions which would no longer satisfy in the same degree the requests for assistance submitted by non-European Members of the League.

During the present Assembly, we have had fresh proofs of the attachment of those States to the League, both from the political point of view and from the point of view of their material contribution. I am sure that you share my opinion on the general question, and the Second Committee considered that the arguments in regard to the special questions were so strong that the Fourth Committee would desire to increase the credits necessary for the work of the Health Organisation in Latin America and the Far East. The Fourth Committee did actually grant these requests, recognising that, should the Assembly not vote the supplementary credits needed for the proposed programme of work, the result would be a delay of at least twelve months, which would be very regrettable, not only for the work itself but on general grounds. It is strongly in the interests of the League to show that its help is equally at the disposal of all its Members. It should also give proof of its desire to see the execution of work approved by the Council.

* * *

My report is, I fear, already too long. In conclusion, however, I may be allowed to submit to you, as a basis of discussion, the following draft resolution :

" The Assembly :

" Notes with satisfaction the results achieved by the policy which the Health Organisation has persistently followed of concentrating on certain well-defined branches of international public health ;

" It notes, in particular, that the Health Organisation systematically draws practical conclusions from the comparison of national experiences and places those conclusions at the disposal of Governments ;

" It desires to express its appreciation to the health administrations of the different countries as well as to the members of the Health Committee and to the experts who have contributed to this work ;

" It considers that the Health Organisation is pursuing, from an international point of view, a work of great importance, by co-operating and consulting with national health administrations in the different continents ;

" It approves the work carried out by the Health Organisation since the last Assembly,

" Takes note of the work of the Health Organisation in Latin America and in the Far East ; which necessitates the provision of supplementary credits ; and

" Approves the budget estimates relating thereto which have been placed before it."