

EXPERT COMMITTEE ON TUBERCULOSIS

Report on the Fifth Session

Geneva, 11-16 September 1950

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EXPERT COMMITTEE ON TUBERCULOSIS

Fifth Session

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* Indicates member unable to attend.

EXPERT COMMITTEE ON TUBERCULOSIS

Report on the Fifth Session¹

The Expert Committee on Tuberculosis held its fifth session (second session of enlarged committee) in Geneva from 11 to 16 September 1950.

Dr. J. H. Holm was re-elected Chairman of the committee and Dr. M. S. Abaza Bey, Vice-Chairman. Dr. H. E. Hilleboe was appointed Rapporteur.

Dr. Martha M. Eliot, Assistant Director-General, Department of Advisory Services, met the members of the committee and explained the general plans of WHO and the new regulations on expert committees and panels. Dr. Eliot stressed the need for long-range planning in tuberculosis control and the importance of relating these activities to general public-health programmes. Comments on these subjects will be found in the specific recommendations of the committee which follow.

¹The Executive Board, at its seventh session, adopted the following resolution :

I. The Executive Board,

Having considered the report of the Expert Committee on Tuberculosis on its fifth session,

1. THANKS the members of the committee for their work ;
2. AUTHORIZES the publication of the report ;
3. ENDORSES the recommendation that international field staff be trained at special centres, to the extent that funds may be available within the present budget allocations for tuberculosis ;
4. CONSIDERS that a meeting of a subcommittee on chemotherapy should not be called in 1951 but that the Director-General should report to the eighth session of the Executive Board on the desirability of convening such a meeting in 1952 when additional data on current hospital trials and laboratory research will be available ;
5. REQUESTS the Director-General to take the recommendations concerning future plans for BCG-vaccination programmes into account in his negotiations with UNICEF and the Joint Enterprise on joint activities in this field ;
6. REQUESTS the Director-General to take into account the relevant recommendations when considering future activities in tuberculosis research ;
7. DECIDES that the recommendation concerning international co-operation in the institutional care of the tuberculous should not be implemented by WHO for the present in view of the administrative and financial difficulties involved, and
8. REQUESTS the Director-General to prepare a guide for protection against tuberculosis not only for nursing personnel serving the tuberculous but for all nursing personnel.

(Resolution EB7.R83, *Off. Rec. World Hlth Org.* 32)

1. Consideration of Comments by the Executive Board at its Fifth Session² and by the Third World Health Assembly,³ on the Report on the Fourth Session of the Expert Committee on Tuberculosis⁴

The comments of the Executive Board and the World Health Assembly were noted; their commendations were deeply appreciated by members of the committee. It was noted that the Executive Board had strongly suggested that health administrations should give the widest publicity to the Annex to the report on the fourth session—"Plan for control programmes: suggestions for the control of tuberculosis in countries with undeveloped and underdeveloped programmes".⁵ The committee, therefore, recommends that the Director-General contact national governments, publishers of health journals, and the International Union against Tuberculosis, to enlist their aid in publicizing this document.

2. Training of Personnel in Tuberculosis Control

General statement

In the report on its fourth session the committee stressed the need for trained personnel for successful tuberculosis-control work, and recommended that training centres be established in each region.⁶

It is, however, preferable to delay the inception of a demonstration and training centre until personnel have been properly prepared. Uniformity of the basic curriculum and high quality of teachers are more important than the establishment of a large number of centres in a short period of time. A good teaching centre often requires many years to develop. The committee recommends that, rather than establishing too many centres at a time, emphasis be placed on developing centres with properly trained personnel, if necessary over a longer period of time.

After hearing a progress report on the centres that have been started and those being planned, the committee made the following further suggestions on this subject:

² *World Hlth Org. techn. Rep. Ser.* 1950, 7, 3

³ Resolution WHA3.61, *Off. Rec. World Hlth Org.* 28, 37

⁴ *World Hlth Org. techn. Rep. Ser.* 1950, 7

⁵ *World Hlth Org. techn. Rep. Ser.* 1950, 7, 14

⁶ *World Hlth Org. techn. Rep. Ser.* 1950, 7, 6

(a) *Training of international teams*

In countries with underdeveloped programmes it will be necessary for WHO to contribute part or the whole of the staff of a new training centre. Such staff should have at least one month's instruction in advance, preferably as a team, and in one or more international training centres where field work is actually going on. In this way uniformity may be achieved in teaching the various control measures (e.g., mass radiography, BCG vaccination, and laboratory examinations) to the several categories of personnel. It is recommended that WHO arrange for some training centres to accept international personnel for this purpose.

When international teams are sent to various countries to conduct demonstrations and training, they should be allowed to remain in one centre for at least one year to do effective work. One such team cannot cover two or more centres satisfactorily at one time.

(b) *Training of national personnel*

In the training of national personnel to take over the work of the demonstration and training centres, it is necessary to keep in mind the various WHO standards for personnel and procedures. It is desirable that certain national personnel of the centres should supplement their training at the demonstration and training centres by additional training at international centres.

(c) *Curriculum*

The committee recommends that a panel be formed to work out the details of the curricula to be used in national demonstration and training centres. These curricula should be adapted to the particular conditions of the country in which the centre is located; for this, those engaged in tuberculosis work in the country should be consulted.

3. Mass Radiography in Tuberculosis Programmes

The Executive Board, in accepting the report of the committee on its fourth session, stressed the principle that mass radiological examinations should be undertaken only when collateral facilities exist for following up the cases discovered. The committee welcomes this special emphasis on one of its recommendations, and wishes to clarify the issue further by setting forth criteria for the use of mass radiography.

General statement

Mass radiography is recognized by the committee as an important part of a tuberculosis-control programme. It has been used extensively both for morbidity studies and as a case-finding technique. To be of value for either purpose, personnel and facilities must be available to provide the collateral services necessary to establish an exact diagnosis. Especially necessary is the laboratory examination of specimens for tubercle bacilli by modern methods. It is unwise to spend funds on x-ray equipment that will be used only to take large numbers of films, without laboratory and clinical follow-up of the persons found to show abnormal shadows.

(a) Morbidity studies

The committee recognizes that morbidity studies may be necessary in some countries to determine the extent of the problem, and for administrative purposes before planning programmes. Such studies should be carefully planned beforehand, preferably by WHO and national authorities jointly. In countries without survey facilities, WHO will need to carry out surveys, at the request of governments. The committee recommends that one or more teams be developed by WHO for such purposes.

For accuracy of results, the laboratory and clinical follow-up examinations must be completed as soon as possible after x-raying.

In countries with underdeveloped programmes, the committee points out the desirability of combining tuberculin-testing with mass radiography, to increase the value of the study.

(b) Mass radiography for case-finding

Mass radiography of apparently healthy groups can lead to the diagnosis of previously unknown cases capable of spreading the disease. It can also discover many early and treatable cases of the disease; even when no hospital beds are available these can often be supervised at home or as outpatients. For full benefit, therefore, not only must clinical and laboratory facilities be available for completing the diagnosis, but supervisory services must be provided also.

The discovery of cases of tuberculosis by mass radiography in large population groups should be followed by examination of contacts.

Wherever possible, provision should be made for periodic repetition of the mass x-raying of population groups for the detection of additional early cases of tuberculosis.

(c) *Results of morbidity studies and mass radiography surveys*

In giving mass radiography results, it is desirable to list the number of cases found to have tubercle bacilli present in their discharges after careful laboratory examination as well as the total number of persons discovered to have significant shadows. It is important also to distinguish newly discovered from previously known cases. Cases of tuberculosis should not be reported to the health department on the basis of x-ray film results alone.

In making morbidity studies the relative value of samples of the general population, admissions to general hospitals, industrial workers, and other special groups must be considered.

4. General Hospitals and Tuberculosis Control ⁷

The committee recognizes that general hospitals can make a valuable contribution to the control of tuberculosis in all countries, including those with undeveloped programmes. In the larger general hospitals, therapeutic facilities and well-trained personnel should be available. The general hospital can augment, without interference, the services in the sanatoria, dispensaries, laboratories, and physicians' offices throughout any country. It is possible to reach large segments of the population for case-finding with relatively little expense and effort, simply because the people come to the wards and outpatient clinics for diagnosis and treatment of their ailments.

It is recommended that the general hospitals carry out a number of functions in tuberculosis control, as follows :

(a) Routine x-ray examination of all new patients in wards or outpatient clinics should be performed ; if the annual numbers are large, miniature radiography will be economical and effective.

(b) A reasonable proportion of beds should be allocated for the establishment of a tuberculosis service ; if possible a separate block or section, but in any event separate wards, should be used. This service should be under the control of specialists, possibly the same as those directing any associated tuberculosis dispensary.

(c) All cases of sputum-positive tuberculosis discovered in the general wards should be moved immediately to the special service. It is undesirable to nurse an open case in a general ward, particularly if children are present. However, care must be taken not to send persons with only

⁷ See McDougall, J. B. (1950) *Bull. World Hlth Org.* 3, 325

a tentative diagnosis of tuberculosis into the same room as sputum-positive cases.

(d) Only nurses who are reactors to tuberculin should be allowed to care for the tuberculous patients. It is suggested that non-reactors to tuberculin be given BCG vaccination to enable them to work in such services.

(e) All hospital employees should be examined for tuberculosis before employment, and at reasonable intervals thereafter, by x-ray film examination, and, if indicated, by laboratory and clinical examinations.

(f) The tuberculosis services in the general hospitals should be used for teaching tuberculosis care and control to student nurses (and, if applicable, to medical students).

(g) Newly diagnosed cases of tuberculosis discovered in the general hospital should be notified to the local health officer so that arrangements may be made to examine all contacts.

(h) Whenever possible, tuberculosis dispensaries should be associated with general hospitals, unless tuberculosis dispensary facilities are available in the neighbourhood.

(i) The above recommendations should apply also to hospitals for the mentally ill and mentally deficient, and to infectious disease hospitals. It is strongly urged that these hospitals set aside facilities for the care of the tuberculous, either as units in the hospital, or, if the number of cases is large enough, as separate institutions.

5. Chemotherapy in Tuberculosis

The committee finds no reason to modify its previous views on the inadvisability of unrestricted distribution and indiscriminate use of streptomycin in the treatment of tuberculosis.⁸ In spite of the lower toxicity of new methods of administration and less frequent emergence of streptomycin-resistant strains of tubercle bacilli, risks are still present.

After a full discussion of recent developments and investigations in antibiotic and drug therapy in tuberculosis, the committee again urged that a panel be called as early as possible in 1951 to consider this complex subject in all its clinical, laboratory, and administrative aspects. It is suggested that one member of the committee serve on the panel so as to provide proper liaison. The use of combined therapy, either by a combination of drugs or by drugs associated with other methods of treatment, requires special consideration because of recent developments in this field.

⁸ *World Hlth Org. techn. Rep. Ser.* 1950, 7, 7

The report on the first session of the Expert Committee on Antibiotics⁹ had been received by the committee, which welcomed its offer of collaboration.

The papers on streptomycin and other drugs presented at the Eleventh Conference of the International Union against Tuberculosis (held in Copenhagen, 3 to 6 September 1950) had been received, and would be used by the members of the committee and the proposed panel in their deliberations.

6. Future Plans for the BCG-Vaccination Campaign

The committee heard reports from the Director of the Joint Enterprise on the international BCG campaign, and discussed at length the plans for the future. The committee was informed of WHO plans to undertake, within its resources, jointly with the United Nations International Children's Emergency Fund (UNICEF), the functions that the Joint Enterprise has exercised in assisting governments in their BCG-vaccination programmes. Because of this important change in responsibility for the BCG campaign, the committee recommends some additional points of guidance to supplement its previous suggestions on BCG vaccination :

(a) Every effort should be made to fulfil requests from countries wishing to start BCG-vaccination programmes, so that all nations may be treated alike. The same requirements as set forth in the previous reports of the committee should, of course, be followed.

(b) Countries that have started their BCG programmes under the Joint Enterprise should be encouraged to continue vaccination so that the number of vaccinated children remains high. It is urged also that the BCG-vaccination campaign be used to assist in developing other preventive health measures among children. It is further recommended that the BCG programme be used to stimulate development of all other phases of tuberculosis control, and that it have proper relation to these other phases. In countries where public-health services with trained personnel exist, the BCG campaign should be developed in conjunction with these services. The personnel of these services can then be trained to carry on this work as an integral part of the public-health programme.

(c) The committee recommends that continued financial support from UNICEF be earnestly solicited so that the campaign, which has already accomplished so much for tuberculosis control and public health, may be continued at the same high level of quality and with the same extensive coverage of so many parts of the world. It is hoped that UNICEF will

⁹ *World Hlth Org. techn. Rep. Ser.* 1950, 26

continue to accept responsibility also for other phases of tuberculosis control, because of the great contribution of tuberculosis control to the health and welfare of children. The committee expressed the hope that WHO will seek funds also from other organizations to augment its limited resources.

(d) The committee recommends that the policies hitherto adopted by the Joint Enterprise shall be continued by the new association of WHO and UNICEF in BCG campaigns.

7. Tuberculosis Research

The committee received the progress report of the WHO Tuberculosis Research Office, drawn up by its Director and supplemented by documents on the several projects under way. The committee was impressed with the quality of the research activities and the preliminary results.

The committee recommends that this important work be continued and expanded into other promising fields of tuberculosis control. The committee also recommends that re-assessment of the oral method of BCG vaccination be included in the activities of the Office.

The Expert Committee on Biological Standardization was asked to study the question of the relative potency of wet and dry BCG vaccines.

The committee recommends that the question of a uniform method of assessing the potency of tuberculins against the international standard be referred to the Expert Committee on Biological Standardization for action. There is a special need for this because of the many different methods now in use, which give so many different results.

Because of the urgent and practical need for a single test-dose of tuberculin, this subject was fully discussed with representatives of the Office. It is recalled that a panel of specialists on tuberculin and BCG vaccination met in June 1948 and recommended a final screening Mantoux test with 10 tuberculin units (TU), a positive reaction being indicated by a degree of induration of not less than 6 mm in diameter on the third day.¹⁰ To meet the present need for a single test the committee recommends that the screening test-dose be 5 TU, and that the degree of induration be 5 mm or more at the end of three days.

The committee recommends that the WHO Tuberculosis Research Office be requested to investigate the question of which dosage of tuberculin should be used in surveys for determining the level of tuberculosis infection in the country.

¹⁰ *Off. Rec. World Hlth Org.* 15, 11

8. Notification of Tuberculosis

It is sound public-health policy to have compulsory notification of infectious disease so as to give the health officer information on the extent of the problem in his area. Notification enables the health officer to provide for proper supervision of new cases and their contacts. The individual concerned also benefits by obtaining all help possible from community health resources, once his disease has been notified to the health officer. Experience in many countries has amply demonstrated that notification of tuberculosis has greatly strengthened the whole control programme.

It is recommended that compulsory notification in which the names of individuals are given, and which leads to an improvement in the statistical and epidemiological aspects of antituberculosis campaigns, should only be established after appropriate facilities for diagnosis, treatment, and follow-up of patients have been developed.

The committee recommends that only physicians be allowed to make notifications. The committee further recommends that physicians report pulmonary and other forms of tuberculosis diagnosed by them, with a specific entry on the report as to whether or not tubercle bacilli have been found in any of the bodily discharges.

9. International Co-operation in Institutional Care of the Tuberculous

It was pointed out that some countries in Europe have vacant beds in several of their institutions that are available for the care of the tuberculous.

It is recommended that the Director-General obtain detailed information from all countries in Europe on this question, and transmit this information to all countries concerned with institutional facilities, in the hope that beds for the tuberculous may be used on an international, as well as on a national, basis.

Similar information on the international availability of tuberculosis nurses should be circulated.

10. Nursing of the Tuberculous

As requested at the fourth session of the committee,¹¹ the Director-General of WHO reported on the problem of nurses in the institutions. No specific solution is available as yet.

¹¹ *World Hlth Org. techn. Rep. Ser.* 1950, 7, 11

Various countries have had success in the use of nurse aides. The committee recommends that such plans be extended to other countries, provided that the auxiliary workers are supervised by fully trained nurses. The committee feels also that more personnel must be trained to teach hygiene to the tuberculous and their families.

It is recommended that the Director-General prepare a training plan, including curricula, for short courses to train aides for nursing and home visiting.

It is recommended further that the Director-General prepare a guide for protection against tuberculosis, not only for nursing personnel serving the tuberculous, but for all nursing personnel.

11. Bovine Tuberculosis

The committee recognizes the seriousness of human infection with bovine tuberculosis in countries where the disease in cattle is prevalent. There is danger of transmission of infection by direct contact between diseased cattle and farm workers and their families, as well as from infected food products.

The committee welcomes the formation of the Joint WHO/FAO Expert Group on Zoonoses, to serve as technical experts on this international problem.

The systematic control and eventual eradication of bovine tuberculosis is an essential part of the general tuberculosis campaign. Experience has shown that joint effort by the agricultural and health representatives in a country is the only certain way to achieve success. For these reasons, the committee recommends that in each country joint commissions of medical and veterinary physicians and their co-workers be organized to control activities. This will mean mutual aid in both personnel and financial resources. All means of enlisting public support should be sought to produce the necessary funds to carry forward all phases of control.

The publicity associated with the campaign will increase the public's knowledge about tuberculosis and gain their acceptance and support of public-health measures in general.

Reduction in bovine tuberculosis helps to improve the economic and nutritional standards of a country, by improving the quality of the milk and the productivity of the cattle.
