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MINUTES ON THE TECHNICAL DISCUSSIONS

Held at the Bourse du Travail, Tunis,
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CHAIRMAN: Dr. Farouk PARTOW (Iraq)

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Present:

Participants

Dr. Z. G. Panos	Cyprus
Mr. Hailu Sebsebie	Ethiopia
Médecin Colonel P. Faure	France
Dr. M. Etemadian	Iran
Dr. A. T. Diba	Iran
Dr. P. Khabir	Iran
Dr. F. Partow (Chairman)	Iraq
Dr. A. Nabilsi	Jordan
Mr. A. El Ateeqi	Kuwait
Dr. A. Adwani	Kuwait
Dr. K. Borai	Kuwait
Mr. A. Jarrah	Kuwait
Dr. L. Khatri	Libya
Brigadier M. Sharif	Pakistan
Dr. H. Nassif	Saudi Arabia
Dr. A. Zaki	Sudan
Dr. A. R. Farah	Tunisia
Dr. A. Daly	Tunisia
Dr. A. Chedly	Tunisia
Dr. Bahri	Tunisia
Dr. W. Glynne	United Kingdom

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Deputy Secretary to the Sub-Committee	Dr. A. El Halawani
Regional Adviser on Tuberculosis	Dr. S. Bona de Santos

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UNRWA, Health Division	Dr. S. Flache
UNICEF	Mr. G. S. Dillon
IAEA	Dr. I. C. Roberts

Representatives and Observers of International, Non-Governmental, Inter-Governmental and National Organizations

League of Arab States	Dr. N. Nabulsi
International Statistical Education Centre	Mr. Faiz El Khuri
International Union Against Venereal Diseases and the Treponematoses	Dr. R. Ladjimi
League of Red Cross Societies	Dr. Brahim El Gharbi
United States Naval Medical Research Unit No.3	Dr. John R. Seal

The CHAIRMAN thanked the Committee for electing him Chairman of the Technical Discussions Group.

He drew the attention of the Committee to the provisional agenda (EM/RC10/Tech.Disc/1).

The provisional agenda was adopted unanimously.

Dr. BONA DE SANTOS, Regional Adviser on Tuberculosis, opening the Technical Discussions, said that in accordance with a decision taken by the Regional Committee at the previous session, a report had been prepared on tuberculosis control with particular reference to domiciliary treatment (EM/RC10/Tech.Disc/2) and a questionnaire on the subject had been sent to Governments, whose answers were contained in document EM/RC10/Tech.Disc/3 and Add. 1. The Report dealt with the technical and administrative aspects of tuberculosis programmes. There were some controversial points, particularly the question of the relative value of hospitalization and domiciliary treatment, but an attempt had been made to give an objective appreciation of all the factors involved. The report described the difficulties of tuberculosis control in a general manner, but conditions varied from country to country and it was hoped that members would give an account of their own problems. The information collected should prove useful and certain suggestions had been made for solving the problems of control. Those suggestions should not be

treated as specific recommendations but should be considered within the context of national priorities, resources, experience and culture.

Dr. FARAH (Tunisia) said that he preferred the expression "ambulatory treatment" to "domiciliary treatment": the former implied intermittent treatment over a long period of a patient living under normal conditions, whereas the latter suggested that the patient was confined to bed under supervision. Since, however, the term "domiciliary treatment" had been recommended, he would use it.

Tunisia had only recent experience of mass tuberculosis campaigns, but some conclusions had been reached which might be of interest. There were two campaigns, which were quite different in nature. The first was a project undertaken with WHO assistance for research in chemotherapy and chemoprophylaxis. It was nearing completion and the results obtained so far suggested that it would be useful to other countries outside Tunisia. The second was a mass campaign undertaken with the cooperation of WHO in the Sousse district. It was intended to be both preventive and curative. Although very little information on the extent of the disease had been available at the beginning, the Government had felt that the problem was too urgent to wait for a detailed survey. The campaign was intended to detect and supervise all carriers of tuberculosis and to protect the whole population against infection. That type of campaign had been chosen because of the impossibility of

providing hospital facilities quickly and because chemotherapy was preferred to sanatorium treatment. Between 12 January 1959 and 6 August 1960, 402,800 persons had been examined out of a total of 431,000. That indicated a favourable response to the campaign by the public, an essential factor for success. 6,203 persons had received treatment and 8,556 carriers with stabilized lesions had been placed under supervision. One conclusion which had been drawn was that such campaigns must not be limited to case-finding: an autonomous unit for supervision and domiciliary treatment was indispensable. Preliminary requirements for planning such a campaign included collection of data from local dispensaries, a general sociological survey of the population, cooperation with other bodies to ensure a uniform policy and the preparation of a plan for public health education.

Dr. BONA DE SANTOS said that WHO was grateful for the support of the Tunisian Government and people in carrying out the tuberculosis projects. Evaluation of the results obtained would provide a guide for furthering the campaign, not only in Tunisia, but also in other countries.

Mr. ATEEQI (Kuwait) said that fifteen years previously his Government had begun to pay particular attention to health problems. Large modern hospitals had been constructed and special emphasis had been laid on the prevention and cure of tuberculosis. Housing programmes had been undertaken to provide health accommodation. A netw rk of new asphalt roads had kept down dust, which was a means of tuberculosis transmission, and facilitated the transport of the nutritional material.

A newly established veterinary division was responsible for the inspection of sheep and cattle to detect and exclude diseased animals.

A division of environmental sanitation was doing a good deal to control arthropodes, including flies, which might be operative in the dissemination of tuberculosis, through undertaking insecticides spraying activities.

A division of health education was also concerned with the propagation of simple health instruction among the public. The water distillation plant of Kuwait was considered one of the largest in the world; there was no doubt that an ample supply of good water would assist greatly in the control of that disease through cleanliness of body, clothes, food and dwelling.

But despite these great achievements certain factors favoured the spread of the disease. The industrialization of the country had caused a great influx of labourers from adjacent countries. This influx had been overdone, and a great number of these labourers lived under extremely insanitary conditions while awaiting employment. They also suffered from under-nourishment, since they had no means of living except those provided through charity and their friends.

The Government and other companies require an X-ray examination of the chest before employment; positive cases were considered unfit for any job and as a rule they returned to live with other labourers. Thus, they were undoubtedly a reservoir of infection.

Patients in Kuwait had the privilege of a thorough and complete free treatment. As a result, many tuberculous patients from other countries came to his country for this purpose. While on the waiting list they were housed by friends or relatives, and so the infection was spread. So it seemed that the problem of tuberculosis was not only the problem of Kuwait, but also it extended beyond its boundaries.

Kuwait imported a huge number of sheep and cattle from other countries; most of which had no law for tuberculin testing these animals. There was no doubt that many were tuberculous. The veterinary division examined all animals slaughtered in the Municipality's slaughter-house, but many

others were killed outside and escaped inspection. Most of the milk consumed in Kuwait was of the dried, pasteurized type, but most of the Bedouins and some of the poorer classes were still using fresh unboiled milk.

Tuberculosis control was much more difficult with the rural than with the urban population. There were three hospitals with a total of 860 beds and 10,000 persons were under domiciliary treatment. The Ministry of Health was doing all it could to control the disease through establishing out-patient clinics and so on. BCG vaccination campaigns, however, had been deferred pending the availability of experts who would carry out the necessary procedures.

Statistics for the preceding three years were as follows:

> In 1958, 47,000 persons had been examined, of whom 601 had been infected; in 1959, 61,000 persons examined, 2,440 infected; in 1960, 26,000 examined, 959 infected.

Since there were many foreigners in the country, it was to be hoped that neighbouring countries would cooperate in fighting the disease, especially in relevance to that serious influx of emigrants.

Dr. GLYNNE (United Kingdom) said that tuberculosis control had been carried on in Aden for some 15 to 20 years, during which time the authorities had learned lessons from the mistakes which had been made. The conclusions reached might be of value to other countries.

There was no cheap method of carrying out tuberculosis control. Trained staff and drugs were expensive and treatment took a long time. Auxiliary medical staff were not much use. It was necessary to employ professionally trained doctors and nurses with a sense of responsibility, who would ensure that treatment was carried out correctly. The professional staff must be free from administrative duties, since their time was valuable. Adequate clerical staff must therefore be provided.

On the question of hospitalization, the administration had twice changed its policy. Before the discovery of antibiotic drugs, bed rest had been the only treatment. When those drugs had become available, it had become the practice to give them to patients awaiting admission to hospitals. Many of them had got well and hospital treatment had

therefore been dispensed with in those cases. Recently, however, it had been found that some cases treated in that way later relapsed. It was now the policy to admit all patients to hospital for a period of 8 to 12 weeks for stabilization and sputum clearance. In hospital they were also trained in hygiene and a routine of drug taking. Fortunately, there were sufficient beds available for all patients.

The drugs used were streptomycin, PAS and INH, in various combinations. Out-patients were given PAS and INH, while in-patients and children were given streptomycin as well. It was felt, however, that in the long run it would be cheaper to give all three drugs from the beginning, since if a patient built up resistance over a long period of treatment, it became necessary to use very expensive drugs.

It had been found that a single reading of X-ray miniature films was not enough. They were now read by a radiologist and a chest physician, as a double check.

The generally recommended period of treatment was twelve months, but that was too short and sometimes led to relapses. Eighteen months should be the minimum and two years was desirable. As regards BCG vaccination, there had been a campaign to test and vaccinate school children which had been assisted by WHO. In addition, the vaccine was given to babies born in hospital and to people in contact with infectious cases who were negative reactors.

Patients receiving treatment were often poor and could not afford to stop working. It was therefore essential to give them financial aid. In Aden that was done by the local voluntary association.

Finally, his Government was carrying out extensive sensitivity tests on patients because a number of drug-resistant organisms had been found.

Dr. ETEMADIAN (Iran) stated that he shared the Tunisian representative's preference for the expression "ambulatory treatment", which was current usage in his country, but he would use the recommended term "domiciliary treatment". Hospitals and equipment were very expensive and took years to establish. In his country the construction of a sanatorium took two years, whereas a dispensary or centre could be set up in five or six months. It therefore seemed that domiciliary treatment was best adapted to the needs of the Region. In view of the importance of early case-finding, still greater efforts should be made to provide anti-tuberculosis dispensaries and centres and to carry out domiciliary treatment through them. Progress was being made in that respect in Iran, the centres being set up mostly in areas where there was a big working population. Satisfactory results were being obtained, but domiciliary treatment was only to be recommended on condition that the danger of infection of other persons could be eliminated.

Dr. KHATRI (Libya) said that a tuberculosis survey was being carried out in his country with the help of WHO. The results obtained so far indicated that the disease had high endemicity. 5.8% of the population surveyed had pulmonary shadows. 2.7% of a 10% random sample of the population had been found to excrete tubercle bacilli. There were at least 25,000 open cases in the country, of which only a fraction could be treated in hospitals and dispensaries. The total number of beds available was 500. Thus the problem was very serious, and top priority was given to it. Countries in the process of development, like Libya, could not afford to provide hospital beds, staff and equipment for all cases. It had therefore been decided to organise domiciliary treatment over the whole country.

The disadvantages of domiciliary treatment were:

1) Isolation of the patient in the house is not always possible.
2) Possibility of spread of disease is greater.
3) Patient may suffer from mental unrest, imagining that he is likely to spread infection to others and that he is causing a lot of trouble to other inmates.

The advantages of domiciliary treatment are:

1) It is comparatively cheaper.
2) There is better opportunity of detecting early cases amongst the contacts.
3) Health education of the people living with the patient can be included in the programme.
4) Selection of cases suitable for admission in the hospital can be made.

Infectious cases could be converted into non-infectious cases, even if the cure is not complete.

Medical officers should be provided with adequate transport so that they could visit patients at home. The transport facilities could also be used to take patients to hospital. Medical officers should be assisted by a nurse or health visitor who would help in training the patients to cooperate w ith the Medical Officer. Domiciliary treatment should be linked with treatment at tuberculosis clinics and social workers can play an important and useful part in the scheme of domiciliary treatment.

Dr. ZAKI (Sudan) said that his country had undertaken two tuberculosis control projects with the assistance of WHO staff. The first, begun in 1954, had been a pilot project to survey the extent of the disease. The second had been a mass BCG vaccination campaign in which 715,000 persons had been examined out of a total population of 2.1/2 million. Four tuberculosis centres had been set up and more were planned. A specialized centre had been set up in 1957 and would complete its task in the current year. It had examined about 40,000 people and given domiciliary treatment to 900. It had trained technicians in X-ray examination and laboratory analysis and held seminars for nursing students. It had trained other auxiliary staff and carried out field experiments, the results of which were not yet known.

It was the Government's policy to give priority to domiciliary treatment. The main problem was the lack of technicians, since salaries were not high enough to interest suitable personnel. It was easier to

give domiciliary treatment in the towns than in the country, because in the latter the standard of living was low, distances were great and patients often suffered from other diseases, which prevented them from attending the centres. Another difficulty was the lack of trained nurses. An ideal solution would be to provide enough beds in hospital, but in practice that was not feasible. Attention was therefore concentrated on domiciliary treatment and BCG vaccination.

Finally, he pointed out that the role of animals as carriers of the disease should not be overlooked.

Dr. BONA DE SANTOS agreed with the representative of the Sudan that the difficulty of attracting trained staff arose to a considerable extent because salaries were not high enough and opportunities for promotion were meager. It might be advisable for Governments to review salary policies for public health staff, particularly where there was a risk of infection and where work is mostly in rural areas.

Dr. EL GHARBI (League of Red Cross Societies) appealed to the Sub-Committee to discuss the fundamental questions at issue. Was domiciliary treatment preferable to hospital treatment? What was the value of the various drugs used and what combinations of them should be adopted? What results, for instance, could be achieved by using INH on its own? It was known that the drug was curative, but could it be used to sterilize carriers and prevent infection? What were the basic policies of Governments and WHO? Should not treatment be free for everyone?

Dr. BONA DE SANTOS agreed that the questions posed by Dr. El-Gharbi were fundamental and pertinent to the issues being discussed. WHO technical policies and recommendations had been given along broad lines in various documents as well as reports of the Expert Committee on Tuberculosis and the Study Group on Chemotherapy and Chemoprophylaxis. However, the feasibility of tuberculosis control programmes differed according to the resources available, and one had to distinguish between what was an ideal programme and what was less than ideal but which had to serve as the most satisfactory compromise under given circumstances.

She agreed that the Sub-Committee should decide what were the best methods of treatment to be adopted for their own circumstances. Ideally, every infectious case should be kept in hospital or isolated from his healthy contacts until he was no longer infectious. Treatment should then be continued at home until the disease was completely arrested or cured. One would go a step further and, in addition to treatment, social assistance should be given the family, and the patient rehabilitated to take up normal work and earn a living. That was the ideal - but the reality fell far short of this. In practice, some countries not only had no specialized services for tuberculosis control, but had no basic general health services. If the number of hospital beds was insufficient simple domiciliary treatment was the best alternative.

Any possibility of reducing the spread of tuberculosis must be taken, however far it fell short of the ideal. For instance, it was known that for all forms of tuberculosis, INH was somewhat less effective when used alone than in combination with other drugs, but since it was cheaper and easy to administer, public health administrators must decide whether to treat a large number of people with say 70% success rather than treat an insignificant number more expensively with 80% - 90% success. WHO could not obviously lay down a rigid policy, but could only recommend the best within the limited resources of those countries it assists.

Dr. ZAKI (Sudan) asked when mass BCG vaccination should be undertaken and at what point it should be incorporated in general tuberculosis control work.

Dr. GLYNNE (United Kingdom) expressed his misgivings at the prospect of INH being used alone. True, the tubercle bacillus was killed at first, but it soon acquired resistance. If drug resistant organisms became widespread, financial difficulties might be insuperable. It might be better policy to restrict the size of projects to the means available rather than try to make the means cover the largest possible number of people.

Dr. BONA DE SANTOS said that there were many unknowns about the development of resistance to INH when used alone. No report had been so far received about any epidemics of tuberculosis caused by INH-resistant bacilli although it was known that INH was used alone rather extensively. Any drug would cause resistance in time. A combination of INH with other drugs did nothing more than postpone the development of resistance for some months. However, the level of resistance did not seem to affect to a significant extent the ultimate effect of the drug. There were many unknowns concerning this matter which was why research was being recommended. If the use of INH alone could bring about a 60% - 70% reversion of sputum positive cases in the treated area in a period of six to twelve months, its use could be considered on ethical grounds where a more ideal treatment programme was not feasible. It was impossible to say more until longer experience was available.

Dr. FARAH (Tunisia) said that the results of resistance experiments which were done in vitro could not be transposed in vivo. It had been shown that a mere change in the culture medium caused resistance to disappear.

The CHAIRMAN reminded the Sub-Committee of the need to view the subject in its context of the financial possibilities of the Region and Government plans. Domiciliary treatment of which there was none in a number of countries, seemed to be one of the ways in which economically

less favoured countries could try to deal with their tuberculosis problem. He would therefore favour its recommendation. To accept another concept would be likely to raise difficulties.

Dr. BONA DE SANTOS replying to the representative of the Sudan, said that mass BCG vaccination was indicated when tuberculosis was fairly prevalent and when facilities for other tuberculosis control methods were meager or not available, even though its utility was generally limited to young, tuberculin-negative persons. When the mass campaign was over, individual BCG vaccination should be continued on an integrated basis, by tuberculosis centres, institutions and local health centres. However, there was no single answer to the question posed by the Sudanese representative. Many campaigns may have to be repeated at periodic intervals. Everything depended on local conditions and the development of the health infrastructure. Taking the Philippines, as one instance, limited mass vaccination campaigns had been necessary even after BCG vaccination work had been integrated in the normal health services. In the Sudan, the mass vaccination campaigns had just finished and the Government had wisely provided for tuberculosis work (including vaccination) to be taken over by permanent out-patient departments at local hospitals. Integration would be completed when the provincial tuberculosis centres were set up. That was a wise and well-adapted plan.

The CHAIRMAN invited the Sub-Committee to consider the following draft resolution:

TUBERCULOSIS CONTROL WITH PARTICUIAR REFERENCE TO DOMICILIARY TREATMENT

The Sub-Committee,

Having held technical discussions on the problem of tuberculosis control with particular reference to domiciliary treatment,

Recognizing that tuberculosis remains one of the principal medical and social community problems in this Region;

Recognizing further that two basic weapons are available for the economical and effective control of tuberculosis, namely BCG vaccine and antimicrobial drugs;

Fully aware that maximum effectiveness of diagnostic, preventive, and treatment facilities can only be achieved by their proper use within an organized system of public health services aimed at the community instead of the individual,

1. URGES Member States to review and assess their present policies and practice of tuberculosis control with the aim of reorganizing and intensifying government and voluntary efforts towards the elimination of tuberculosis as a public health problem;

2. RECOMMENDS the gradual integration of tuberculosis services within the general public health services, especially at the village level;

3. RECOMMENDS that:

(1) BCG vaccine and antimicrobial drugs be utilized to the extent compatible with their known mode of action in the prophylaxis and therapy of tuberculosis;

(2) Emphasis be placed in tuberculosis control programmes on domiciliary chemotherapy for the treatment of the disease, and that programmes be made simpler, more effective and economical by constant review and evaluation of administrative and technical procedures;

(3) The problem of social assistance and rehabilitation to the tuberculous be studied carefully by health, welfare, and civic groups with a view to instituting a feasible and effective programme as a supplement to the government's programme of case finding, prevention, and treatment;

(4) Efforts be exerted to develop methods for more accurate measurement of the tuberculosis problem and the satisfactory reporting and registration of tuberculous cases;

(5) Whenever possible, research be undertaken in public health and social methodology as applied to tuberculosis in pilot area projects;

4. STRESSES that where hospitalization is necessary, tuberculosis beds established in general hospitals are preferable to separate sanatoria or tuberculosis hospitals;

5. REQUESTS the Regional Director to assist Governments on request in their efforts to reorganize and intensify their tuberculosis control programme.

Dr. FARAH (Tunisia) pointed out that the French text of the fourth operative paragraph could be read to mean that tuberculous patients should be treated alongside other patients in the general services. The paragraph should therefore be amended so that it was clear that it meant that the tuberculosis service, as a separate unit, should be attached to the general hospital.

Dr. DIBA (Iran) said that the aim was not only to integrate tuberculosis services in general medical work but also to obtain a larger number of beds. That should also be made clear.

Dr. FARAH (Tunisia) explained that "service" covered both beds and staff and equipment.

Dr. BONA DE SANTOS shared Dr. Farah's view.

Dr. ZAKI (Sudan) said that the Sub-Committee's meaning would be more clearly expressed by "tuberculosis services attached to general hospitals...".

Mr. ATEEQI (Kuwait) doubted the feasibility of combining the treatment of tuberculous patients with that of others. Though the proposed integration might encourage the tuberculous person to come forward for treatment, it might have the reverse effect on the non-tuberculous. Moreover, the psychological state of the hospitalized tuberculous patient was such that he required very careful handling which would be easier in a separate establishment. While the proposed integration would undoubtedly save expense, that was not the only consideration and his Government considered separate establishments in the interests of all. The Sub-Committee should not make so important a recommendation without further study. He therefore proposed its deletion.

Dr. GLYNNE (United Kingdom) said that the difficulty to which the representative of Kuwait had referred, had not been encountered in his experience. The attachment of tuberculosis services to general hospitals enabled them to share the general hospital administrative services and, to some extent their staff, thereby reducing initial and running costs.

Dr. FARAH (Tunisia) supported the representative of the Sudan, explaining that the tuberculosis services should be attached to general hospitals but in separate premises.

Dr. FAURE (France) shared that view. That was the solution adopted in Djibouti and the people had raised no objection.

Mr. ATEEQI (Kuwait) said that tuberculosis was treated in isolation units in his country. Whether or not the units were "attached" to hospitals, patients received the same quality of attention. If the tuberculosis services were not under the same roof they were separate, not attached. As, in any case, the paragraph in question merely expressed preference, little would be lost by deleting it. He proposed that if the paragraph were retained one should add "where no sanatoria exist in the country".

Dr. ZAKI (Sudan) shared the views of the United Kingdom representative. It was essential that the social stigma of tuberculosis should be removed and the attachment of tuberculosis services to general hospitals was a useful way of removing it and at the same time encouraging tuberculous persons to come forward for treatment.

Dr. BONA DE SANTOS pointed out that the paragraph in question did not imply that there should be no separate sanatoria or tuberculosis services. It only stressed, for reasons of economy, that hospital accommodation for the treatment of tuberculosis could be made available at a minimum of expense. As the suggestion was a valuable one, it would be useful to retain it in a form agreeable to the representative of Kuwait and other representatives.

Dr. FARAH (Tunisia) noting that there was much to be said on both sides and that they were diametrically opposed, supported the representative of Kuwait in advocating the deletion of the paragraph.

Decision: 1. Operative paragraph 4 was then deleted.

2. The resolution was adopted as amended.

The CHAIRMAN thanked Dr. Bona de Santos for her valuable report and introductory remarks and members of the Sub-Committee for an interesting discussion. He then declared the technical discussions at an end.

The meeting rose at 1.30 p.m.