SYMPOSIUM ON TUBERCULOSIS
In the last decade there has been a radical reappraisal of the whole field of tuberculosis, ranging over epidemiology, prevention, case-finding, and therapy. This has been of particular relevance to the developing countries where the shortage of resources makes it mandatory to be highly selective in choosing the directions in which efforts should be channelled. This symposium reviews many aspects of modern developments. Dr Thomson, in considering the epidemiology of tuberculosis, discusses the limitations of mortality and incidence statistics and the problems of mass X-ray screening and respiratory tuberculosis prevalence surveys. He describes the value of the tuberculin test as a simple epidemiological tool which, as a result of studies by the International Tuberculosis Surveillance Centre in The Hague, has recently achieved prominence.

The current approach to tuberculosis control is based on BCG vaccination and simple case-finding measures followed by ambulatory domiciliary chemotherapy. These form the basis of the organization of programmes in developing countries which would have been impracticable if they had been tied to the traditional practices of the technically advanced countries. WHO has played an important role in the standardization of BCG vaccines and in instituting international quality control, and Dr Hitze, in his report on BCG vaccination, lays emphasis on the fact that current techniques of preparation make vaccines with good protective value readily available. This, with the use of direct vaccination, sometimes combined with other vaccinations, particularly against smallpox, have been important developments. Dr Hitze also discusses alternative vaccination policies, whether these should include vaccination at birth, vaccination at school entry or on leaving school, as well as revaccination policies. Dr Allan reviews the development of the BCG campaign in Hong Kong, demonstrating the very high coverage which can be achieved in newborn babies and the decline in the serious manifestations of the disease in infancy which coincided with the expansion of the programme. Even though the chemotherapy programme expanded at the same time, it would be stretching credulity not to believe that BCG vaccination has made a contribution to the decline of infantile tuberculosis in Hong Kong and, in all probability, an important one.

The demonstration that ambulatory domiciliary treatment with a good regimen of chemotherapy is as effective as hospital or sanatorium treatment was decisive in the reorientation of control programmes. Although this was demonstrated conclusively in a much-quoted study in the Chemotherapy Centre, Madras, there have been a number of other studies, both of treatment at home compared with treatment in a sanatorium and of rest in bed in hospital compared with ambulation from the start, not one of which has demonstrated any benefit from either hospital treatment or rest in bed. It has been abundantly demonstrated that rest, a nutritious diet, good accommodation with special nursing care, a pleasant climate and fresh air make no contribution to the cure of a patient on an effective regimen of chemotherapy. The evidence for the effectiveness of ambulatory outpatient chemotherapy is now massive and conclusive. These findings are important because they show that the two factors most relevant in achieving a cure are the selection of a good regimen of chemotherapy and ensuring that the patient receives it for an adequate period of time. If this is achieved for the individual patient a cure is, for all practical purposes, certain and if it can be achieved for the whole programme then a very high level of success is assured.

Striking confirmation of the effectiveness of ambulatory chemotherapy has now been obtained for the
treatment of tuberculosis of the spine. Mr Lloyd Griffiths refers to a series of controlled clinical trials in which a variety of treatments were investigated, ranging from a radical operation including a bone graft with long-term chemotherapy at one extreme to ambulatory out-patient chemotherapy alone at the other. In terms of arresting the tuberculous disease, ambulatory out-patient treatment with PAS plus isoniazid for 18 months proved highly effective and there was only a little increase in deformity. It is obviously the method of choice for most developing countries and indeed in most circumstances unless sophisticated orthopaedic skills and facilities are readily available. The study, important as it is to orthopaedic surgery, is perhaps even more important as confirmation of the striking potency of anti-tuberculosis chemotherapy.

The anxiety that treating patients with advanced sputum-positive disease at home would inevitably expose their contacts to the risk of infection has also been demonstrated in controlled clinical trials to be unwarranted. The explanation is simple. When patients are put on an effective regimen of treatment under good supervision the number of bacilli they excrete is reduced within a matter of days, and with it the patients' infectivity. Further, most of them become culture negative within a month or two of starting treatment. The risk to contacts during this early period of therapy is very small compared with the risk they have already run by exposure to their undiagnosed infectious index case.

This underlines the importance of case-finding so that smear-positive cases, who constitute the real risk of spreading the disease to their contacts, are diagnosed as early as possible. Professor Mitchison's paper on bacteriology lays emphasis on the importance of a reliable service on an adequate scale for the diagnosis of smear-positive cases and its expansion, as appropriate, to a culture service and last, to sensitivity testing. He discusses not only the techniques but also the important question of how to develop in a logical order an appropriate service, the best methods to use, and the selection of suitable equipment. His passage on laboratory safety is particularly worthy of note.

Dr Kent describes in detail the organization of outpatient treatment programmes. He emphasizes the importance of attention to detail, both in the management of the patient and in the organization of the programme, including the important questions of what documents should be kept and what actions should be taken if patients default. In setting up such a programme, attention to detail will ultimately have a major influence both on the co-operation of patients and on the level of success it achieves. He concentrates on self-administered chemotherapy because he regards this as the method most suitable for wide-scale application in developing countries. Nevertheless, the value of fully supervised intermittent regimens (which he also describes) should not be overlooked. They are being increasingly widely used, especially in areas where the geographical situation is suitable because the patients are concentrated, for example in Hong Kong, as is brought out in Dr Allan's report. Self-administered and supervised intermittent regimens should not be regarded as rival systems but rather as alternative approaches, both of which are likely to have a place in any individual country's programme.

Alongside the appreciation of the importance to tuberculosis control of case-finding, diagnosis, and treatment, all aimed at the infectious cases in the community, has been the realization that isoniazid chemoprophylaxis may actually be counter-productive. Dr Hitze emphasizes that it absorbs valuable resources required for the cure of the infectious cases and for this and other reasons it is no longer regarded as a useful component of a control programme.

The WHO has just published the Ninth Report of the WHO Expert Committee on Tuberculosis (TRS. No. 552). This sets out the modern views on tuberculosis and its control. It differs in particular from the earlier Expert Committee reports in that it emphasizes the importance of establishing a national programme, and the way this should be developed in an orderly and logical manner is described in detail. It should be widely read, not only by individual physicians but also by epidemiologists, by medical educationalists concerned with teaching nurses and medical students, and by public health administrators and planners, to all of whom it offers a valuable guidance.

It is brief, up to date, and authoritative and is certain to become an important work of reference for years to come. If it cannot be obtained through the local WHO representative it can be purchased from: World Health Organization, Distribution and Sales Service, Avenue Appia, 1211 Geneva 27, Switzerland, price Swiss Francs 5.