WORLD HEALTH ORGANIZATION
Regional Office for the Western Pacific

FINAL REPORT ON THE
WHO/JAPAN TUBERCULOSIS COURSE
Tokyo, Japan
1969

Manila, Philippines
FINAL REPORT

ON THE

WHO/JAPAN TUBERCULOSIS COURSE

Tokyo, Japan

1969

by

Dr. T. Iwasaki
Course Director

Manila, Philippines
World Health Organization
Regional Office for the Western Pacific
TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. OBJECTIVES OF THE COURSE</td>
<td>1</td>
</tr>
<tr>
<td>2. ORGANIZATION</td>
<td>1</td>
</tr>
<tr>
<td>3. TEACHING PROGRAMME</td>
<td>2</td>
</tr>
<tr>
<td>4. CLOSING CEREMONY</td>
<td>5</td>
</tr>
<tr>
<td><strong>ANNEXES:</strong></td>
<td></td>
</tr>
<tr>
<td>1 - LIST OF PARTICIPANTS</td>
<td>7</td>
</tr>
<tr>
<td>2 - SCHEDULE OF THE TWO-WEEK POST-COURSE FIELD TRIP FOR THE PARTICIPANTS</td>
<td>8</td>
</tr>
<tr>
<td>3 - LIST OF RESOURCE PERSONNEL</td>
<td>9</td>
</tr>
<tr>
<td>4 - SCHEDULE OF COURSES</td>
<td>13</td>
</tr>
<tr>
<td>5 - SUMMARY EVALUATION</td>
<td>29</td>
</tr>
</tbody>
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1. OBJECTIVES OF THE COURSE

The general objectives of the course were to give training in the modern methods and techniques of tuberculosis control, and to prepare the participants for their future work in the effective application of control measures on a mass scale under the local, technical and socio-economic conditions in their own countries.

The specific objectives were to acquaint the participants with the following subjects:

(a) the epidemiological approach to the problem;

(b) prevention of tuberculosis;

(c) detection of infectious sources in the community;

(d) methods of reducing transmission through efficient and economical neutralization of infectious sources on a nationwide basis;

(e) planning, organization, execution and evaluation of a national tuberculosis control programme in countries with different epidemiological and socio-economic conditions.

2. ORGANIZATION

This course, which was held from 12 May to 30 September 1969, was organized by the Ministry of Health and Welfare, Japanese Government, with the assistance of the World Health Organization. It was conducted in the lecture and practice rooms of the Research Institute of Tuberculosis (RIT), Japan Anti-Tuberculosis Association (JATA), Tokyo. Dr. T. Iwasaki, Director of the Institute, was concurrently the Director of the Course.

Three participants from the Western Pacific Region, four from the South-East Asia Region and two from East Mediterranean Region were financed by the Japanese Government. Another one from the Western Pacific Region was financed by WHO (see Annex 1). Immediately following the course in Japan the participants visited neighbouring countries for two weeks with WHO support (see Annex 2).

The facilities of the library were made available to all participants. Accommodation was provided at a low charge in a dormitory on the compound of the Institute. During the nine-day field trip to the Tohoku District and seven-day field trip to the Kansai District, the participants travelled by train to the main stations and then moved from one place to another by car. Transport was provided either by the prefectural government or by the branch association of JATA.
The staff of the Ministry of Health and Welfare, the National Institute of Health, the Research Institute of Tuberculosis and other institutions of JATA constituted the main resource personnel. WHO provided four staff members and four temporary advisers who assisted in the teaching programme (see Annex 3).

Addresses were given during the opening session by Mr. K. Kitagawa, Director of the Overseas Technical Co-operation Agency; Mr. H. Watanabe of the Liaison Office, Representative of the Ministry of Health and Welfare; Dr. A. Tanaka, Representative of WHO; Dr. M. Yamaguchi, Representative of the Japan Anti-Tuberculosis Association; and Dr. T. Iwasaki, the Course Director. Dr. Ramon Hallare spoke as the representative of the participants.

### 3. TEACHING PROGRAMME

The outline of the teaching programme had been thoroughly discussed long before the commencement of the course by the staff of the Research Institute of Tuberculosis, JATA, and the WHO Regional Tuberculosis Adviser, taking into consideration the results of the evaluation of the previous course. Recommendations contained in the Eighth Report of the WHO Expert Committee on Tuberculosis were generally followed. The weekly schedule, which is attached as Annex 4, was distributed to participants a week in advance.

Teaching took place from Monday through Friday each week. Saturdays were reserved for library reference work, individual discussions or consultations with the resource personnel. Classes were from 9.00 A.M. to 12.00 noon and from 1.30 P.M. to 4.00 P.M. Each session had a fifteen-minute break. Discussions took place in the latter part of the day after the lectures and practical sessions had been finished. Reference materials, including many reprints of WHO publications on tuberculosis, were distributed before a special subject was introduced for discussion.

The subjects taken up in the course were broadly as follows:

1. **General concept on tuberculosis**

   As the participants' general concept on tuberculosis varied considerably, a series of lectures on pathogenesis, patho-clinical manifestations of the disease, etc., was given at the beginning of the course. The references cited were always related to the prevention, case-finding and treatment of the disease.

2. **Diagnosis and case-finding**

   The WHO Expert Committee on Tuberculosis in its Eighth Report recommends that, from the epidemiological point of view, a "case" of pulmonary...
tuberculosis means a person suffering from bacteriologically confirmed disease. Based on this view, case-finding by direct microscopy was thoroughly discussed. Direct microscopy and fluorescent microscopic examination of sputum and culture of tubercle bacilli in a central laboratory were taught by means of lectures and demonstrations. Topics on the classification and identification of mycobacteria, etc., were also discussed. Other methods of diagnosis and case-finding using X-ray was also considered. The differential diagnosis on radiogram and the comparative studies made between pathological specimens of various types of pulmonary tuberculosis and other diseases on chest X-ray films were demonstrated. The results of the co-operative study recently sponsored by the International Union Against Tuberculosis on the accuracy of radiophotographic diagnosis of pulmonary tuberculosis were presented in detail. Diagnosis and case-finding by the above-mentioned two methods in national tuberculosis control programmes were also compared from the financial and practical standpoints.

(3) Prevention of tuberculosis

In this part, the role of tuberculin testing and the importance of BCG vaccination were discussed. The techniques used were practised in the field. The other preventive method, chemoprophylaxis, which is difficult to apply in developing countries as a tuberculosis control programme, was briefly introduced. The preparation and standardization of tuberculin, techniques of tuberculin testing and the role of tuberculin testing in a tuberculosis control programme were considered. During the practice of testing and reading an opportunity was taken to compare and adjust the individual reading of the test with those of the standard reader of the WHO Regional Tuberculosis Advisory Team. The production and standardization of BCG vaccine; the protective efficacy of BCG vaccination; techniques of BCG vaccination, including vaccination without preliminary testing and that given simultaneously with other vaccination; the side-effects of vaccination and the role of BCG vaccination in a tuberculosis control programme in developing countries were thoroughly discussed.

(4) Treatment

The treatment of pulmonary tuberculosis was introduced by setting a policy on chemotherapy from the epidemiological and financial points of view. The characteristics of various anti-tuberculosis drugs, such as their biological background, therapeutic effectiveness, toxicity and cost, were considered in detail. The results of the controlled clinical investigations were presented. Institutional and domiciliary treatment of pulmonary tuberculosis was compared from the clinical, epidemiological and financial standpoints. A discussion took place on the rate of relapse after chemotherapy. Self-administration or supervised-administration of drugs and the defaulting rate were also considered. Problems of chemotherapy were reviewed based on the natural evolution of the tubercle bacillus in human lesions and the evolution of the bacillary population under chemotherapy. Information was also provided on the failure of primary chemotherapy, drug resistance and drug resistance surveys.
(5) Tuberculosis control

In view of the importance of a fundamental understanding of statistics and epidemiology, sufficient time was alloted to these two items. Lectures were given on basic principles in statistics, such as, morbidity, mortality and case registration, etc. Statistics relating to tuberculin testing, BCG vaccination, case-finding and treatment in the tuberculosis control programme were specifically discussed. Practice was obtained, using raw samples and data, on the use of calculating machines and slide rules. Epidemiology, methodology and epistemology in connection with tuberculosis were considered. Following the introduction, epidemiological analysis based on the data available in Japan was practised.

Planning of a national tuberculosis control programme in developing countries was discussed from the standpoint of socio-economic factors and its implementation on a nationwide scale, with an integrated public health approach based on accurate epidemiological data. Operational analysis in tuberculosis control programmes was also reviewed.

In an open forum, each participant presented an outline of the national tuberculosis control programme in his own country and discussed it with the resource personnel and the lecturer. The need for determining priorities in the selection of methods for the planning and operation of a national tuberculosis control programme was particularly emphasized by the WHO lecturers.

(6) Field visits and demonstrations

The primary schools in Hanno and Kodaira cities were selected for the demonstration and practice of WHO-recommended techniques of tuberculin testing.

Nine days were spent on visits to Akita, Aomori and Miyagi prefectures in Tohoku District. The geographical and socio-economic conditions, epidemiological situation and the tuberculosis control programmes of these prefectures were studied. The activities of the Tuberculosis Prevention Women's Association as a voluntary organization in Akita prefecture were very impressive. Seven days were also spent in Kyoto and Osaka prefectures in Kansai District. Seven health centres, national tuberculosis sanatoria, and some dispensaries of the JATA prefecture branches were visited.

In addition, the following institutes, clinics and factories were visited:

(a) National Institute of Health (Tuberculosis Department)
(b) Ministry of Health and Welfare (Division of Statistics)
(c) Shibuya Health Centre
(d) Tokyo Metropolitan Children's Hospital
(e) Japan Anti-Tuberculosis Association (JATA)
(f) Daichi Dispensary of JATA
(g) Meiji Seika Co., Ltd. (Antibiotic Drugs)
(h) Cannon Company, Ltd. (Mirror Camera of X-ray Apparatus)
(i) Shimazu Company, Ltd. (X-ray Apparatus)
4. CLOSING CEREMONY

The closing ceremony took place at 1400 hours on 30 September 1969 at the Research Institute of Tuberculosis, JATA, Tokyo. Statements were made by Mr. M. Shibusawa, Executive Director, Overseas Technical Cooperation Agency, Mr. M. Tsunashima, Liaison Officer, Representative of the Ministry of Health and Welfare, Dr. M. Yamaguchi, Chairman, Board of Directors, Japan Anti-Tuberculosis Association, and Dr. T. Iwasaki, the Course Director. Dr. Ramon Hallare responded on behalf of the participants.
LIST OF PARTICIPANTS

<table>
<thead>
<tr>
<th>Name</th>
<th>Country of origin</th>
<th>Current position</th>
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<tbody>
<tr>
<td>Dr. Sham Lal</td>
<td>Afghanistan</td>
<td>Chaman Tuberculosis Centre Kabul</td>
</tr>
<tr>
<td>Dr. D.P. Verma</td>
<td>India</td>
<td>Superintendent Tuberculosis Hospital Bhopal</td>
</tr>
<tr>
<td>Dr. Han Sie Batuna</td>
<td>Indonesia</td>
<td>Tuberculosis Control Service North Celebes Menado</td>
</tr>
<tr>
<td>Dr. Sunarso Kartohatmodjo</td>
<td>Indonesia</td>
<td>Provincial Health Office South Kalimantan</td>
</tr>
<tr>
<td>Dr. Behram Pezeshki</td>
<td>Iran</td>
<td>Bou Ali Chest Hospital Terannow Ave. Tehran</td>
</tr>
<tr>
<td>Dr. Chan Wai Hong</td>
<td>Malaysia</td>
<td>General Hospital Ipoh</td>
</tr>
<tr>
<td>Dr. Ramon Hallare</td>
<td>Philippines</td>
<td>Senior Clinic Physician Tuberculosis Control Service Regional Health Office IV Naga City</td>
</tr>
<tr>
<td>Dr. Seung Yol Choi</td>
<td>Republic of Korea</td>
<td>Tuberculosis Control Supervisory Medical Officer Cholla-Pukdo</td>
</tr>
<tr>
<td>Dr. Paerot Phuangton</td>
<td>Thailand</td>
<td>Sakolnakorn Chest Clinic Sakolnakorn</td>
</tr>
<tr>
<td>Dr. Wang E-Loong*</td>
<td>Hong Kong</td>
<td>Medical Officer in charge of Kowloon Chest Clinic Kowloon</td>
</tr>
</tbody>
</table>

* Under a full WHO fellowship grant
### SCHEDULE OF THE TWO-WEEK POST-COURSE FIELD TRIP FOR THE PARTICIPANTS

<table>
<thead>
<tr>
<th>Participants</th>
<th>Countries visited</th>
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<tbody>
<tr>
<td>Dr. Sham Lal (Afghanistan)</td>
<td>Korea and Hong Kong</td>
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<tr>
<td>Dr. D.P. Verma (India)</td>
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<tr>
<td>Dr. Han Sie Batuna (Indonesia)</td>
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<tr>
<td>Dr. Sunarsso Kartohatmodjo (Indonesia)</td>
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<tr>
<td>Dr. R. Takai (RIT, Japan)*</td>
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<tr>
<td>Dr. A. Takase (RIT, Japan)*</td>
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<tr>
<td>Dr. Remon Hallare (Philippines)</td>
<td>Korea and China (Taiwan)</td>
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<tr>
<td>Dr. Pairote Fuangtong (Thailand)</td>
<td>Korea, Hong Kong and China (Taiwan) (visit to Korea on his own expense)</td>
</tr>
<tr>
<td>Dr. Chan Wai Hong (Malaysia)</td>
<td>China (Taiwan) and Hong Kong</td>
</tr>
<tr>
<td>Dr. Seung Yol Choi (Republic of Korea)</td>
<td></td>
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<tr>
<td>Dr. Behram Pezeshki (Iran)</td>
<td>China (Taiwan) and Bangalore, India</td>
</tr>
</tbody>
</table>

Dr. Wang E-Loong returned home immediately after the course on account of ill health.

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* Temporary Instructor of WHO
LIST OF RESOURCE PERSONNEL

Dr. M. Aoki
Chief, Clinical Research Section
Research Institute of Tuberculosis
Japan Anti-Tuberculosis Association
Tokyo, Japan

Dr. Y. Azuma
Chief, Library
Research Institute of Tuberculosis
Japan Anti-Tuberculosis Association
Tokyo, Japan
(formerly WHO Tuberculosis Adviser for Thailand)

Dr. G. Canetti*
Chef de Service a l'Institut Pasteur
Paris, France

Dr. Wallace Fox*
Director
Medical Research Council
Tuberculosis and Chest Diseases Research Unit
London

Dr. K. Fukushima
Director
Tokyo Metropolitan Children's Hospital
Tokyo, Japan

Dr. K. Furuichi
Medical Affairs Section
Insurance Bureau
Ministry of Health and Welfare
Tokyo, Japan

Dr. H. Hajikano
Pathological Section
Research Institute of Tuberculosis
Japan Anti-Tuberculosis Association
Tokyo, Japan

Dr. J.J. Huang*
Bacteriologist
WHO Regional Tuberculosis Advisory Team, WPRO

Dr. S. Imamura
Chief, Education Department
Research Institute of Tuberculosis
Japan Anti-Tuberculosis Association
Tokyo, Japan

Dr. K. Iwai
Chief, Pathological Section
Research Institute of Tuberculosis
Japan Anti-Tuberculosis Association
Tokyo, Japan

Dr. T. Iwasaki
Director
Research Institute of Tuberculosis
Japan Anti-Tuberculosis Association
Tokyo, Japan

*WHO staff member/WHO temporary adviser
<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
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<tbody>
<tr>
<td>Dr. C. Kino</td>
<td>Chief, Clinical Department</td>
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<tr>
<td></td>
<td>Attached Sanatorium</td>
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<tr>
<td></td>
<td>Research Institute of Tuberculosis</td>
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<td></td>
<td>Japan Anti-Tuberculosis Association</td>
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<td></td>
<td>Tokyo, Japan</td>
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<tr>
<td>Dr. G. Kuchiki</td>
<td>Vice-Director</td>
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<td></td>
<td>Japan ECG Laboratory</td>
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<td></td>
<td>Tokyo</td>
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<tr>
<td>Dr. S. Kudo</td>
<td>Chief, Clinical Laboratory Section</td>
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<td>Attached Sanatorium</td>
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<tr>
<td>Dr. Y. Maeda</td>
<td>Statistics Bureau</td>
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<td></td>
<td>Ministry of Health and Welfare</td>
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<td>Tokyo</td>
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<tr>
<td>Dr. P. Mercenier*</td>
<td>Chef de Travaux</td>
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<td></td>
<td>Institute of Tropical Medicine</td>
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<tr>
<td></td>
<td>Antwerp, Belgium</td>
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<tr>
<td>Dr. K. Misono</td>
<td>Director</td>
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<td></td>
<td>National Institute of Radiological Science</td>
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<td></td>
<td>Chiba</td>
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<tr>
<td>Dr. T. Murai</td>
<td>Statistics Bureau</td>
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<td>Ministry of Health and Welfare</td>
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<tr>
<td>Dr. T. Murohashi</td>
<td>Chief, Tuberculosis Department</td>
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<td></td>
<td>National Institute of Health</td>
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<tr>
<td>Dr. M. Obata</td>
<td>Statistics Bureau</td>
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<tr>
<td>Dr. Y. Obayashi</td>
<td>Consultant</td>
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<tr>
<td>Dr. T. Ohsato</td>
<td>Chief, Medical Section</td>
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<td>Attached Sanatorium</td>
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<td>Japan Anti-Tuberculosis Association</td>
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<td>Tokyo</td>
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*WHO staff member/WHO temporary adviser*
Dr. N. Onodera  
Tuberculosis Prevention Section  
Public Health Bureau  
Ministry of Health and Welfare  
Tokyo

Dr. T. Sawada  
Director  
Japan ECG Laboratory  
Tokyo

Dr. T. Shimao  
Vice-Director  
Research Institute of Tuberculosis  
Japan Anti-Tuberculosis Association  
Tokyo

Dr. K. Shiozawa  
Chief, Mass Survey Section  
Attached Sanatorium  
Research Institute of Tuberculosis  
Japan Anti-Tuberculosis Association  
Tokyo

Dr. M. Suda  
Statistics Bureau  
Ministry of Health and Welfare  
Tokyo

Dr. T. Takai  
Chief, Epidemiological Section  
Research Institute of Tuberculosis  
Japan Anti-Tuberculosis Association  
Tokyo

Dr. A. Takase  
Chief, Physicians Training Section  
Research Institute of Tuberculosis  
Japan Anti-Tuberculosis Association  
Tokyo

Dr. H. Takemura  
Planning Section  
Public Health Bureau  
Ministry of Health and Welfare  
Tokyo

Dr. A. Tanaka*  
Medical Officer (Statistics)  
Regional Tuberculosis Advisory Team  
WHO Regional Office for the Western Pacific  
Manila

Dr. J.C. Tao*  
Regional Tuberculosis Adviser  
WHO Regional Office for the Western Pacific  
Manila

Dr. I. Toida  
Chief, Biochemical Section  
Research Institute of Tuberculosis  
Japan Anti-Tuberculosis Association  
Tokyo

*WHO staff member
Annex 3
continued

Dr. K. Toman*  Director
International Training Course in Epidemiology
and Control of Tuberculosis
Prague, Czechoslovakia

Dr. M. Toyohara  Chief, Radioisotope Research Section
Research Institute of Tuberculosis
Japan Anti-Tuberculosis Association
Tokyo

Dr. F. Ueda  Statistics Bureau
Ministry of Health and Welfare
Tokyo

Miss E. Wilhelmsson*  Public Health Nurse,
Regional Tuberculosis Advisory Team
WHO Regional Office for the Western Pacific
Manila

Dr. M. Yamaguchi  Chairman
Board of Directors
Japan Anti-Tuberculosis Association
Tokyo

*WHO staff member/WHO temporary adviser
SCHEDULE OF COURSES

WHO/Japan Training Course in Tuberculosis, 1969, Tokyo

19 May (Monday)
A.M.
Moving from Tokyo International Center
to the Research Institute of Tuberculosis
at Kiyose-machi

P.M. (2.00) Opening ceremony

20 May (Tuesday)
A.M. (Lecture) Mortality statistics, Morbidity statistics
Case registration
Design of survey and experiment
1. Objectives
2. Methods
3. Examiner
4. Examinees (sampling and allocation)
5. Record forms

(Practical work) Operation of calculating machine,
illustration of figure
Dr. A. Tanaka
Statistician, Regional Tuberculosis
Advisory Team
WHO Regional Office for the Western Pacific

21 May (Wednesday)
A.M. (Lecture) Statistics relating to tuberculin testing and
BCG vaccination
1. Frequency distribution (normal distribution)
2. Mode, Median, Mean
3. Sum of squares, variance, standard deviation
4. Confidence limits (t-distribution)
5. Histogram

P.M. (Practical work) Dr. A. Tanaka

22 May (Thursday)
A.M. Registration at Kiyose Town Hall

P.M. Free (30th Anniversary of the Establishment of JATA)
Annex 4
continued

23 May (Friday)
A.M. (Lecture)  General concept of tuberculosis (I)
P.M. (Lecture)  General concept of tuberculosis (continued)
               Dr. T. Iwasaki
               Director of the Course

26 May (Monday)
A.M. (Lecture)  Statistics relating to tuberculin testing
                and BCG vaccination (continued)
                6. Significance test of difference of two
                   means (t-distribution)
                7. Significance test of difference of two
                   variance (F-distribution)

P.M. (Practical work)  Dr. A. Tanaka

27 May (Tuesday)
A.M. (Lecture)  Statistics relating to tuberculin testing
                and BCG vaccination (continued)
                3. Correlation

P.M. (Practical work)  Dr. A. Tanaka

28th May (Wednesday)
A.M. (Lecture)  General concept of tuberculosis (II)
P.M. (Lecture)  General concept of tuberculosis (continued)
               Dr. T. Iwasaki

29 May (Thursday)
A.M.  Reading of tuberculin testing at the 11th Primary
       School of Kodaira City
P.M.  Group A: Independent reading of tuberculin tests
      Group B: Assistant of Group A
     Dr. R. Takai and Dr. A. Takase

30 May (Friday)
A.M. (Lecture)  Statistics relating to case-finding and treatment
                1. Significance test of difference of two
                   percentages (normal distribution)
                   " (continued)

P.M. (Practical work)  Dr. A. Tanaka
2 June (Monday)

A.M. (Lecture) Statistics relating to case-finding and treatment (cont'd)

2. Significance test of difference of two percentages (X-test)

P.M. (Practical work) Dr. A. Tanaka

3 June (Tuesday)

Visit to the Division of Statistics, Ministry of Health and Welfare

A.M. (Lecture) Patients survey Dr. M. Obata
National health survey Dr. Y. Maeda

P.M. (Lecture) International classification of causes of death, diseases and injuries Dr. F. Ueda
Vital statistics Dr. T. Muraï

4 June (Wednesday)

Visit to the same Division as mentioned above.

A.M. (Lecture) Communicable diseases and food poisoning statistics
Survey of medical institutions
Survey of physicians, dentists and pharmacists
Dr. M. Obata

P.M. (Lecture and demonstration) Electric computer Dr. M. Suda

5 June (Thursday)

A.M. Reading of tuberculin tests at the First Primary School of Hanno City

P.M. Group B: Independent reading of tuberculin tests
Group A: Assistant of Group B
Dr. Y. Obayashi
Dr. K. Shiozawa
Dr. S. Imamura

6 June (Friday)

A.M. Assay of tuberculin testing

P.M. Assay of tuberculin testing (continued)

Dr. A. Tanaka
Annex 4
continued

9 June (Monday)
A.M. Basic concept of tubercle bacilli
Dr. S. Kudoh
P.M. Tuberculin and tuberculin testing (I)
Preparation and assay of tuberculin in Japan
Purified tuberculin and stability of tuberculin
Dr. T. Sawada
Director, Japan BCG Laboratory

10 June (Tuesday)
A.M. Staining and microscopical technique
P.M. Lecture, practice and demonstration
Dr. T. Murohashi
Chief, Dept. of Tuberculosis
National Institute of Health

11 June (Wednesday)
A.M. Collection, transportation, storage of specimens
and cultivation procedures
Dr. S. Kudoh
P.M. Comparison of independent reading of tuberculin
testing
Dr. R. Takai

12 June (Thursday)
A.M. Culture media for tubercle bacilli, resistant test
P.M. Lecture and demonstration
Dr. T. Ohsato

13 June (Friday)
A.M. Principle of identification of mycobacteria
P.M. Lecture and demonstration
Dr. M. Toyohara

16 June (Monday)
A.M. BCG (I): Immunity in tuberculosis, history of BCG
and BCG vaccine
Dr. Y. Ohbayashi
P.M. Individual reading of radiophotograms (I)
Dr. A. Takase
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Activity</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>17 June (T)</td>
<td>A.M.</td>
<td>General concept of tuberculosis(III)</td>
<td>Dr. T. Iwasaki</td>
</tr>
<tr>
<td></td>
<td>P.M.</td>
<td>Tuberculin and tuberculin testing (II)</td>
<td>Dr. T. Sawada</td>
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<tr>
<td>18 June (W)</td>
<td>A.M.</td>
<td>BCG (II): Factors responsible for the viability of dried BCG vaccine protective value and safety of BCG vaccine</td>
<td>Dr. Y. Obayashi</td>
</tr>
<tr>
<td></td>
<td>P.M.</td>
<td>Tuberculin and tuberculin testing (III) Used site and low grade sensitivity of tuberculin reaction Simultaneous BCG vaccination and smallpox vaccination</td>
<td>Dr. T. Sawada</td>
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<tr>
<td>19 June (T)</td>
<td>A.M.</td>
<td>Public health activity and health care in Japan</td>
<td>Dr. H. Takemura and Dr. K. Furuichi</td>
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<td></td>
<td>P.M.</td>
<td>Individual reading of radiophotograms (II)</td>
<td>Dr. A. Takase</td>
</tr>
<tr>
<td>20 June (F)</td>
<td>A.M.</td>
<td>Visit to the Central Office of the Japan Anti-Tuberculosis Association</td>
<td>Dr. M. Yamaguchi Chairman, Board of Directors</td>
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<td></td>
<td>P.M.</td>
<td>Visit to the Daiichi Dispensary of Japan Anti-Tuberculosis Association</td>
<td>Dr. G. Hondo Director, Daiichi Dispensary</td>
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<tr>
<td>23 June (M)</td>
<td>A.M.</td>
<td>Dual reading of radiophotograms</td>
<td>Dr. A. Takase</td>
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<td></td>
<td>P.M.</td>
<td>Comparison of X-ray findings and resected specimens concerning reading radiograms</td>
<td>Dr. K. Iwai</td>
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24 June (Tuesday)
A.M. General concept of tuberculosis
      Dr. T. Iwasaki
P.M. Comparison of X-ray findings and resected
      specimens concerning reading radiograms
      Dr. H. Hajikano

25 June (Wednesday)
A.M. General concept of tuberculosis (continued)
      Dr. T. Iwasaki
P.M. Library study

26 June (Thursday)
A.M. (Lecture) Visiting the National Institute of Health
A.M. (Lecture) Investigation of acid-fast of mycobacteria
      Dr. T. Murohashi
P.M. Observation of activity in the Tuberculosis
      Department of the National Institute of Health

27 June (Friday)
A.M. General concept of tuberculosis (continued)
      Dr. T. Iwasaki
P.M. Classification of X-ray findings
      Dr. C. Kino

28 June (Saturday)
A.M. Interpretation of radiograms (I)
      Dr. A. Takase

30 June (Monday)
A.M. Interpretation of radiograms (II)
P.M. Interpretation of radiograms (III)
      Dr. A. Takase

1 July (Tuesday)
A.M. Interpretation of radiophotograms (I)
P.M. Interpretation of radiophotograms (II)
      Dr. A. Takase
2 July (Wednesday)
A.M. Role of radiophotography in tuberculosis control programme
P.M. The technical problems of radiophotography
   Dr. K. Misono
   Director, National Institute of Radiological Science

3 July (Thursday)
A.M. Quality of the film
P.M. Reading of radiophotograms: Shadows and pulmonary lesions
   Dr. K. Misono

4 July (Friday)
A.M. Reading of radiograms of non-tuberculosis pulmonary diseases
   Dr. K. Misono
P.M. Interpretation of radiophotograms (III)
   Dr. A. Takase

7 July (Monday)
A.M. Reading of radiograms
   Dr. S. Imamura
P.M. Tuberculosis control programme in Japan
   Dr. N. Onodera
   Tuberculosis Prevention Section
   Public Health Bureau
   Ministry of Health and Welfare

8 July (Tuesday)
A.M. Epidemiology of tuberculosis in Japan
   Dr. T. Shimao
P.M. Epidemiology of atypical mycobacteria
   Dr. M. Aoki

9 July (Wednesday)
A.M. Voluntary activity in tuberculosis control programme
   Dr. M. Yamaguchi
P.M. Visit to the BCG Laboratory
   Dr. G. Kuchiki
Annex 4 continued

10 July (Thursday)
A.M. Clinical aspect of atypical mycobacteria
      Dr. M. Aoki
P.M. Reading of radiograms
      Dr. A. Takase

11 July (Friday)
Free (Preparations for the trip to Tohoku District)

12 July (Saturday)
Trip to Tohoku District
A.M. (9.00) Leave Ueno by the special express "Hibari 2-go"
P.M. (12.58) Arrive at Sendai
        Visit Miyagi Prefectural Branch, JATA
        Stay in Matsushima

14 July (Monday)
A.M. Visit to the Nishitaga Sanatorium
P.M. Visit to the Research Institute of Tuberculosis,
      Leprosy and Cancer, Tohoku University
      Stay in Sendai

15 July (Tuesday)
A.M. (7.40) Leave Sendai by express "Rikuchu-Kurikoma 1-go"
P.M. (14.01) Arrive at Aomori
      Visit Aomori Prefectural Government
      Stay in Aomori

16 July (Wednesday)
A.M. Visit to the Towada Health Centre
P.M. Sightseeing of Towada Lake
      Stay in Towada

17 July (Thursday)
A.M. Leave Towada Lake
P.M. Arrive at Akita
      Stay in Akita
18 July (Friday)
A.M. Visit to the Akita Prefectural Government
Information and Discussion about tuberculosis control programmes in Akita Prefecture and activity of Anti-Tuberculosis Women's Association, etc.
P.M. Leave Akita for Tazawa Lake
     Stay in Tazawako

19 July (Saturday)
Field visit to Tazawako-machi

20 July (Sunday)
Leave Akita by the special express "Tsubasa 2-go" for Ueno

21 July (Monday)
Free day

22 July (Tuesday)
A.M. Reading of radiograms Dr. A. Takase
P.M. Preparation of the report on the Tohoku District trip

23 July (Wednesday)
A.M. Reading of radiograms (cont'd) Dr. A. Takase
P.M. (1) Reading of radiograms of non-tuberculous pulmonary diseases
     (2) Protection of X-ray hazard and managing of X-ray apparatus Dr. K. Misono

24 July (Thursday)
A.M. The natural evolution of the tubercle bacillus in human lung lesions Dr. G. Canetti
P.M. ECG, post-vaccination allergy, local lesion after vaccination Dr. G. Kuchiki
     Vice-Director Japan EGG Laboratory

25 July (Friday)
P.M. Technique of ECG vaccination, role of ECG vaccination in tuberculosis control programmes Dr. G. Kuchiki
26 July (Saturday)
A.M. Bacillary populations in resected lung specimens
      Dr. G. Canetti

28 July (Monday)
A.M. Primary resistance
      Dr. G. Canetti
P.M. Tuberculosis control programme - Its operational analysis (I)
      Dr. Y. Azuma

29 July (Tuesday)
A.M. Chemotherapy in developing countries: the main effects
      Dr. G. Canetti
P.M. The tuberculosis problem and its reduction
      Dr. K. Toman

30 July (Wednesday)
A.M. The bacteriological diagnosis of tuberculosis
      The bacteriological follow-up of patients under chemotherapy. Priorities in developing countries
      Dr. G. Canetti
P.M. Tuberculosis control - Its operational analysis (II)
      Dr. Y. Azuma

31 July (Thursday)
A.M. Infectiousness of tuberculosis
      Dr. K. Toman
P.M. Urine test of anti-tuberculosis drugs
      Dr. I. Toida

1 August (Friday)
A.M. Sensitivity and specificity of diagnostic tests
      Dr. K. Toman
P.M. Tuberculosis control programme - Its operational analysis(III)
      Dr. Y. Azuma
4 August (Monday)
A.M.  The efficacy of BCG vaccination under varying epidemiological situation
  
  P.M.  BCG policies
        Dr. K. Toman

5 August (Tuesday)
A.M.  Priorities in tuberculosis control
       Dr. K. Toman

P.M.  Clinical significance of bacteriological finding in pulmonary tuberculosis
       Dr. T. Ohosato

6 August (Wednesday)
A.M.  Generalities on tuberculosis control in various countries
       Historical aspects
       Dr. P. Mercenier

P.M.  Reading of radiograms
       Dr. A. Takase

7 August (Thursday)
A.M.  Case-finding policies
       Dr. K. Toman

P.M.  Economic aspects of patient care
       Economic value of human life
       Dr. P. Mercenier

8 August (Friday)  One day trip to Nikko

11 August (Monday)
A.M.  Health services as a socio-economical investment
       Social development consonance of tuberculosis control
       Dr. P. Mercenier

P.M.  Tuberculosis in childhood (I)
       Dr. K. Fukushima
       Director
       Tokyo Metropolitan Children's Hospital
Annex 4 continued

12 August (Tuesday)
A.M. The tuberculosis problem and its reduction
Dr. P. Mercenier
P.M. The process of optimization in problem reduction
Dr. P. Mercenier

13 August (Wednesday)
A.M. The role of laboratory diagnosis in tuberculosis control
Dr. J. J. Huang
P.M. Preparation for the report on Dr. G. Canetti’s lecture

14 August (Thursday)
A.M. Specificity - sensitivity
Dr. P. Mercenier
P.M. The design of single tuberculosis laboratory unit
Dr. J. J. Huang

15 August (Friday)
A.M. Epidemiology of tuberculosis including general epidemiology
Dr. T. Shimao
P.M. Epidemiology - generalities and tuberculosis epidemiology
Dr. P. Mercenier

18 August (Monday)
A.M. Epidemiology of tuberculosis
Dr. P. Mercenier
P.M. Tuberculosis in childhood (II)
Dr. K. Fukushima

19 August (Tuesday)
A.M. Epidemiology of tuberculosis including general epidemiology (II)
Dr. T. Shimao
P.M. General health services: Structure - Functions at different levels
Dr. P. Mercenier
20 August (Wednesday)

A.M. Characters of general health service and of alternative approaches: specialized permanent service and mass campaign. Potential of each organizational approach for BCG vaccination

Dr. P. Mercenier

P.M. Group discussion of tuberculosis control programme

Dr. J. C. Tao

21 August (Thursday)

A.M. Priorities in case-finding - treatment
Suitability of different organizational approaches to respond to these priorities

Dr. P. Mercenier

P.M. Epidemiology of tuberculosis including general epidemiology (III)

Dr. T. Shimao

22 August (Friday)

A.M. Factors to consider for the distribution of the executive functions of a tuberculosis service

Dr. P. Mercenier

P.M. Preparations of report

25 August (Monday)

A.M. Integration of the tuberculosis service in the administrative structure of general health services

Dr. P. Mercenier

P.M. Planning of BCG vaccination programme

Miss E. Wilhelmsson

26 August (Tuesday)

A.M. Seminar: Structure of general health services in Afghanistan, India and Indonesia

Seminar: The levels where integration may find resistance

Dr. P. Mercenier

P.M. Training of techniques, process of data

Miss E. Wilhelmsson
Appendix 4 continued

27 August (Wednesday)
A.M. Seminar: Structure of general health services in Iran, the Philippines
     Seminar: Approaches to make integration accepted
     Dr. P. Mercenier
P.M. Demonstration of standard BCG kit
     Miss E. Wilhelmsson

28 August (Thursday)
A.M. The national tuberculosis programme (NTF)
     Operational research approach
     Study of the paper "WHO Technical Guide No. 5"
     on data collection for the NTF
     Dr. P. Mercenier
P.M. Visiting Cannon Co., Ltd. (Mirror Camera Factory)

29 August (Friday)
A.M. An operational model for case-finding, treatment
     Dr. P. Mercenier
P.M. Preparation for the trip to Kansai District

30 August (Saturday) Leave Tokyo by Super Express Hikari No. 17 for Kyoto

1 September (Monday)
A.M. Visit to the Tuberculosis Research Institute, Kyoto University
P.M. Visit to the Shimazu Seisakusho
     Stay in Kyoto

2 September (Tuesday)
A.M. Visit to the Kyoto Branch of JATA
     Stay in Osaka

3 September (Wednesday)
A.M. Visit to the Osaka Branch of JATA
P.M. Visit to the Tanabe Pharmaceutical Company, Ltd.
     Stay in Osaka
4 September (Thursday)
A.M. Visit to the Osaka Adult Disease Centre
P.M. Leave Osaka for Uziyamada
Stay in Shima

5 September (Friday)
P.M. Leave Uziyamada for Tokyo via Nagoya

8 September (Monday)
A.M. Data collection - Technical Guide No. 5 (Second part)
Concept of assessment
Dr. P. Mercenier

9 September (Tuesday)
A.M. *Lecture by Dr. Wallace Fox
*Contents of lectures by Dr. Wallace Fox
  1. Economic background
  2. Home and sanatorium treatment
  3. Principle of chemotherapy
  4. Method of following progress of therapy
  5. Bacteriology
  6. Isoniazid alone
  7. Isoniazid plus thiacetazone
  8. Intermittent chemotherapy
  9. Drug resistance and surveys
  10. Organization and supervision of chemotherapy
  11. Failure regimens

Dr. P. Mercenier
P.M. Operational model for case-finding, treatment (2d part)
Forecasting

10 September (Wednesday)
A.M. *Lecture by Dr. Wallace Fox
P.M. Records and Reports - Technical Guide No. 5
Assessment
Dr. P. Mercenier

11 September (Thursday)
A.M. & P.M. *Lecture by Dr. W. Fox
12 September (Friday)
A.M. Lecture by Dr. Wallace Fox
P.M. Lecture by Dr. Wallace Fox

13 September (Saturday)
A.M. Limitation of radiograms
     Dr. A. Takase

15 September (Monday) (National holiday)

16 September (Tuesday)
A.M. Lecture by Dr. Wallace Fox
P.M. Visit to the Medical Instruments Factory (microscopes, etc.)

17 September (Wednesday)
A.M. Lecture by Dr. Wallace Fox
P.M. Limitation of radiograms
     Dr. A. Takase

18 September (Thursday)
A.M. Preparation for leave by travel agent
P.M. Group discussion about tuberculosis control programme
     of each country
     Dr. T. Shimao

19 September (Friday)
A.M. Group discussion about tuberculosis control programme
     of each country (continued)
     Dr. T. Shimao
P.M. Lecture by Dr. Wallace Fox

22 September (Monday)
A.M. Limitation of radiograms
     Dr. A. Takase

26 September (Friday) Visit to Meiji Con. Lot. (Antibiotic Manufacturing Company)

30 September (Tuesday) P.M. - Closing ceremony
SUMMARY EVALUATION OF THE QUESTIONNAIRES COMPLETED
BY PARTICIPANTS OF THE WHO/JAPAN TUBERCULOSIS COURSE
1969

The following is a summary of the answers to the questionnaires which
have been completed by participants in the Fourth WHO/Japan Tuberculosis
Course at the end of the course.

The comments have been regrouped in order to summarize the opinion
of the participants in regard to:

(a) usefulness of the course, and
(b) organization of the course.

The results of individual interviews which Dr. P. Mercenier, WHO
Consultant, conducted with the participants are also included under the
corresponding heading when applicable.

(a) Usefulness of the course

Question 1: Did you find the course interesting?

Comments: All participants answered affirmative, two of them
with special emphasis.

Question 2: Did you derive benefit from it?

Comments: The answer is generally affirmative. One participant
indicated some reservation as to the extent of benefit
derived, without stating why. Five of the participants
interviewed by Dr. Mercenier acknowledged benefit from
the course, three of them spontaneously mentioning
that they benefited most from the discussions on
epidemiology and public health.

Question 3: Among the lectures did you find the discussions -

(i) equally useful?
(ii) more useful?
(iii) less useful?

Comments: Five of the ten participants found the discussions
equally useful, three regarded them as more useful
and two as less useful.

Question 4: Did you find the field trips made in Japan useful?

Comments: Only one participant cast doubt on the usefulness of
these trips. The others found them useful, two considered
them very useful. One of the participants, whose reply
was affirmative, saw the main value of these field trips
in the occasion for "mental relaxation".
Annex 5 continued

Question 7: Which of the lectures, discussions or field trips did you find most useful?

Comments: Three of the participants found all subjects and all ways of presenting the subjects useful, although one of them complained that there were too many lectures. Two participants mentioned the names of lecturers from whom they had benefited most, while six quoted different subjects which they found most useful. The "Tuberculosis Control Programme" was mentioned twice, epidemiology three times, statistics twice, radiology three times, ECG twice, bacteriology and chemotherapy one each. One participant stated that he profited mostly from the discussions, while another was especially interested in the field visit to Tohoku where a voluntary association was involved in tuberculosis control activities.

Questions 5 & 6: As a result of this course, do you have in mind a change or a plan to be implemented upon your return in connection with your work? and if the answer to the foregoing is affirmative, specify the changes to be made and your plan.

Comments: Three participants indicated that they had no plans for introducing changes in their work after returning. All three came from the South-East Asia Region. Two of them mentioned that in their country, a national tuberculosis programme was in existence but that they intended to introduce improvements in certain aspects of the programme. Six participants said that they would suggest to their governments certain changes in tuberculosis activities while one participant stated that he did not know what to do. (His reason was that: "In our country we are working according to the policy of WHO, and in this course many things were revised.") The changes or improvements in their countries concern the following subjects:

- Planning and evaluation: 3
- Direct ECG vaccination or better coverage of ECG: 3
- Training and supervision: 2
- Case-finding by microscopy: 1
- Ambulatory treatment: 2
- Recording system: 1
(b) Organization of the course

Question 8: In your opinion was the duration of the course (a) too long?, (b) too short?, (c) just right?

Comments: Four participants felt that the course was too long, six were of the opinion that the duration was just right, none thought that it was too short. One participant mentioned that the schedule could have been more strict, another that actual practice was too limited (re Question 10 also).

In the individual interview with Dr. Mercenier, six participants found the course too long, often considering that the time was not fully used.

Question 9: Did you find any language difficulties in (a) understanding lectures?, (b) expressing yourself in the discussions?

Comments: Eight participants had no difficulties in either respect, one had some difficulty in expressing himself in discussions, and two found some difficulties in understanding the Japanese lecturers.

Question 10: If you were to organize such a training course which particular items in the curriculum would you (a) shorten or omit?, (b) extend?, (c) which additional items would you include?

Comments: Two participants did not reply to this question. None of the other participants was in favour of omitting any subjects. Three participants suggested that certain items might be shortened; one "theoretical lectures", one "discussions" and one the lectures of a particular WHO lecturer. Eight participants (all who replied) supported the view that practical field work in most of the subjects should be extended and intensified.

As additional items which should be included in such a course, two participants mentioned "non-tuberculosis chest diseases", one suggested "clinical work" without specifying.

During the individual interviews conducted by Dr. Mercenier eight participants complained of the excess of lectures and the lack of practical work, three of them specifying the lack of practical work in epidemiology and public health.
Question 11: Any other remarks on training course?

Comments: Four of the ten participants did not reply to this question. In the comments of four participants there were again strong recommendations to extend and intensify the practical exercises. One participant stated that the lectures and the practice should be organized in a more systematic way, another one suggested that a more active participation of the trainees in the course was required. The inclusion of some more lectures on chest diseases and the introduction of an examination to evaluate the impact of the course were two other suggestions.

In the individual interviews with Dr. Mercenier, four participants said that they felt confused by "different wave length" between the Japanese and WHO lecturers, two complained of the uncritical appraisal of tuberculosis activities.