

INTERNATIONAL TRAINING WORKSHOP FOR RAPID CULTURE AND DRUG SUSCEPTIBILITY TESTING AND MOLECULAR METHOD FOR MYCOBACTERIUM TUBERCULOSIS

Background

Global TB Report 2013 mentions that Tuberculosis (TB) is a global problem that killed 1.3 million people in 2012. The mounting problem of drug resistance, including the emergence of multidrug-resistant TB (MDR-TB) and extensively drug-resistant TB (XDR-TB), and the growing number of TB patients who are also infected with HIV are combining to make the pandemic more deadly. These problems risk compromising the progress made in TB control during the past decade. The introduction of modern technologies for detection of MDRTB should be regarded as a means of improving the quality of care. It is also an opportunity to align the new technologies with the capacity of health systems to deliver care, to address the changing nature of the epidemic and to meet the needs of communities with or at risk of MDRTB.

Purpose

1. To provide essential knowledge and skills on tuberculosis diagnosis for TB control.
2. To facilitate exchange of knowledge and experiences among the participants' countries and strengthen TB control network.

Objectives

At the end of the course, participants should be able to describe:

1. Principle of TB control
2. Global epidemiology of drug-resistant TB
3. Safety practices in TB laboratory
4. Principle and role of rapid culture & rapid DST
5. How to perform culture and DST
6. How to perform rapid culture and molecular technique
7. Case finding strategies of drug-resistant TB
8. Utility and limitations of drug susceptibility testing
9. Diagnosis of drug-resistant TB
10. Rapid diagnosis of drug-resistant TB

Training course activities

This three weeks course provides training opportunities on laboratory technology related to TB for technologists who working in this area as trainers and/or leaders. Bacteriological laboratory examinations are the major topics of this course. Quality control and managerial aspects of

laboratory examinations received particular focus in the course content. Due to the nature of hands-on training and managerial skills training, participants were limited to 15 only. The course containing of:

Lectures on:

TB situation and TB Lab network, Mycobacteria (MTB & NTM), Drug Susceptibility Testing (DST), description of different testing methods, advantage, disadvantage, pitfall & factor effecting of the results, Principles of Culture, Culture: Conventional and automate liquid media using Bactec MGIT 960, Bactec MGIT 960: How to use and handle the machine and software, Basic identification tests, Culture: Setting up, shipment of specimen, Media preparation, Quality control in culture and DST, Drug susceptibility testing (DST): Procedural details of the proportion method, DST: Factor effecting of the results, TAT & reliable of result, The Molecular assay for rapid detection of MDR-TB, Quality assurance of DST, Biosafety, clean room and awareness, Precaution & safety in TB laboratory.

Hands on training :

Culture media preparation, preparation of media quality, Conventional culture performance: Specimen processing & inoculation, reading & recording & reporting, Culture: Automate liquid media performance using Bactec MGIT 960, Reading & recording & reporting, Biochemical testing.

Number of Participants

There will be a maximum of 15 participants.

Target audience

Laboratory technician who are responsible for diagnosis of drug-resistant TB, staff of National TB programme, and technical partners working in TB control in low- and middle-income countries, especially in settings where PMDT has been or is going to be implemented.

Qualification for applicants

1. Laboratory technician or other health personnel with education level equivalent to university graduate
2. At least five years of working experience in the field of malaria control
3. Age forty-five or under
4. Adequate proficiency in reading, writing and speaking of English

5. Good health, both physically and mentally

Duration: Three weeks.

Language: The course will be conducted in English.

Instructors and facilitators

The Ministry of Public Health, Department of Disease Control, Bureau of Tuberculosis.

National TB Reference Laboratory & Supranational Reference Laboratory.

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