ECSA-HC

LABORATORY-BASED DISEASE SURVEILLANCE TRAINING

Introduction

Communities across eastern Africa face a huge burden of infectious disease, and in the last decade have become increasingly subject to sudden and widespread disease outbreaks. Approaches to controlling the impact of infectious diseases on the health of the population include improved surveillance of selected priority diseases and early and effective responses to potential disease outbreaks. Fundamental to these strategies is the correct identification of causative agents of disease through accurate laboratory testing, both at peripheral and reference levels. Laboratory services play a critical role at peripheral levels of health care delivery, where many diseases with the potential to cause outbreaks may be rapidly diagnosed using basic laboratory tests. Laboratory services are also responsible for referral of specimens to reference centres for further investigation, using national and regional networks.

Integrated Disease Surveillance and Response (IDSR) is a strategy of the World Health Organization Regional Office for Africa (WHO AFRO) adopted by member states in 1998, that aims to improve disease surveillance, including the use of laboratory data, for control of priority infectious diseases that are the leading cause of death, disability, and illness in the African region. IDSR is a comprehensive strategy for capturing regular data on priority diseases by rationalising the use of resources in an integrated system. The district level is the focus for integrating disease surveillance functions as the first level in the health system with full-time staff dedicated to all aspects of public health, such as diagnostic services, mobilising community action, and advocating for support from national and other stakeholders. Implementation of the IDSR strategy includes effective support by the laboratory services at district level with staff competent in essential techniques for disease recognition, and use of specimen referral systems for accurate disease confirmation.

This course was initially developed by AMREF in collaboration with the Ministry of Heath in Kenya, and subsequently expanded in collaboration with the Ministries of health of the East Africa Community, with support from the East African Public Health Laboratory Networking project funded by the World Bank, the East Central and Southern Africa Health Community (ECSA-HC) and the East African Community (EAC) Secretariat.

The course was established to build capacity of laboratory staff in the implementation of laboratory-based surveillance and public health actions, based on the evidence from laboratory data. The course provides skills and competence of laboratory personnel to collect, analyse, and use laboratory surveillance data for early detection and response to disease outbreaks and other events of public health importance.

Goal

The goal of the course is to improve the quality of diagnostic services at district level through continuing education of laboratory staff in essential diagnostic procedures in support of the IDSR strategy, with the overall goal of supporting effective disease surveillance and control in Africa.

Objectives

To equip laboratory staff with knowledge, skills and attitudes to enable them to:

- Understand the IDSR strategy and create awareness of the contribution of IDSR to the requirements of the International Health Regulations (IHR).
- Understand the role of the laboratory in surveillance of ISDR priority diseases
- Understand the role of the laboratory in responding to disease outbreaks and confirming the cause of outbreaks.
- Perform essential laboratory tests to support the identification of causative agents of disease outbreaks.
- Utilise SOPs for specimen collection, processing, storage and transport to reference laboratories.
- Incorporate safety practices in all laboratory procedures.
- Manage laboratory data effectively
- Provide support supervision to laboratory staff in peripheral health facilities.
- Effectively communicate and interact with clinical, public health and other health care workers and participate in effective team work.
- Mobilise and manage human, financial and other resources
- Participate in community information and education activities.

Course content

		Topic
Module 1: Laboratory Surveillance	1.	Introduction to IDSR/IHR (2005) and progress in Implementation in East Africa
	2.	Identifying cases
	3.	Laboratory methods in the field for priority diseases
	4.	Recording and reporting of laboratory results
	5.	Data management and analysis
	6.	Principles of outbreak management
	7.	Communication and feedback
Module 2: Laboratory methods	8.	An introduction to collecting transporting and processing water and food samples
	9.	Systematic approach to specimen management
	10.	Collecting, transporting and processing of nasopharyngeal and throat swabs for URTI diagnosis
	11.	Introduction to specimen culture for selected priority diseases
	12.	Collecting, transporting and processing of cerebrospinal fluid
	13.	Collecting, transporting and processing blood culture specimens
	14.	Collecting, transporting and processing stool samples
	15.	Collecting, transporting and processing urogenital samples
	16.	Collecting, transporting and processing sputum Samples
	17.	Collecting, transporting and processing samples for malaria diagnosis
	18.	Collecting, transporting and processing samples for HIV diagnosis
	19.	Collecting transporting and processing food samples
	20.	Collecting transporting and processing water samples
	21.	Way forward and plan of action

Entry requirements

Participants should be laboratory technologists with at least 3 years working experience and either in charge of a district hospital laboratory or working in any of these sections of the district laboratory: bacteriology, parasitology or virology. Participants must be in a position to train and supervise staff in their own and other facilities.

Course Duration and Dates

The course will be conducted in **on request by institutions** and will be offered in two modules:

1. Module 1: Laboratory based disease surveillance
2. Module 2: Laboratory methods in detection of priority diseases

Fees Year 2016

USD 1,800

- **USD 1000** covers tuition, books, course materials, stationery, photocopies, pupil's pass and outpatient health care services at the AMREF Staff Clinic
- **USD 800** covers accommodation, local travel, meals and incidental costs.

Fees do not cover travel expenses from the participant's working station to Nairobi and management of pre-existing medical conditions.