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MINISTRY OF HEALTH-ETHIOPIA

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HEALTHIER CITIZENS FOR PROSPEROUS NATION!

# Ethiopia Field Epidemiology and Laboratory Training Program (EFELTP)



Brief for Accreditation

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Addis Ababa, Ethiopia

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## 1. Background

Ethiopian Field Epidemiology Training Program (EFELTP), which is owned by MOH-E, is a program works towards the development of skills and all capacities of workforces on surveillance, outbreak investigations, disaster managements, etc through appropriate use of data to make scientific and evidence based decisions public health actions.

Ethiopia's capacity to respond to health emergencies and detect threats was largely limited before inception of EFELTP 2009. Taking into consideration the importance of training of field epidemiologist, with competent skill and knowledge on applied epidemiology and public health, to strengthen and improving the Ethiopian public health system, Ministry of Health-Ethiopia (MOH-E), in collaboration with other national and international partners, initiated the program at Addis Ababa University in 2009. Since 2015 based on governmental demand the Ethiopian Field Epidemiology and Laboratory Training Program (EFELTP) has been expanded in to eight public universities.

The following are among the distinguishing characteristics and practices of EFELTP:

- Providing service: Both the residents as individuals and the EFELTP as a program are expected to provide service to the MOH-E and to improve the health of the population.
- Implementing competency-based training: Graduates of the program is expected to demonstrate proficiency in a defined set of competencies. In most programs at least 75% of the training period is devoted to practicing epidemiology in the fulfilled under the guidance of a mentor.
- Building health systems capacity

In collaboration with MOH-E, partners like US-CDC have been engaged and supported in the implementation the program. However, currently MOH-E is highly increasing the support aiming to become self-sustaining programs within the country's public health system.

The objectives and strategic directions were developed based on the situational analysis of the 2016-2020 strategic baselines. The targets were set based on the recent findings of SWOT analysis. Experts in the field were also consulted to develop the strategic plan.

## **1.1 Country context**

Ethiopia experiences disasters that affect households, infrastructures, and system resilience. Ethiopia continues to experience a high burden of endemic diseases as well as recurrent outbreaks of epidemic prone diseases, including cholera, Malaria, measles, and yellow fever. Moreover, the occurrence of epidemics such as measles, yellow fever and cholera has also posed a challenge to the health system. Interventional activities for Internally Displaced Population (IDP) put additional pressure on local health systems, straining healthcare workers, stocks of medicines and other essential supplies. People affected by drought and food insecurity are at higher risk of malnutrition. Additionally, like many countries in the world, the recent global COVID-19 pandemic has also tested Ethiopia's health system capacities.

## **1.2 Program overview**

The Ethiopian Field Epidemiology and Laboratory Training Program (EFELTP) is a two-year competency-based training and service program in applied epidemiology, which took place in 2009 at Addis Ababa University. It guides field epidemiology residents in the development of knowledge and skills to become public health professionals qualified to gratify leadership positions in various levels of the Ministry of Health-Ethiopia (MOH-E) and Regional Health Bureaus (RHBs)

The training comprises 25% of didactic sessions and 75% of field practices with organized mentorship and supervisory arrangements. They take public health courses like epidemiology, biostatistics, scientific communications, disaster management, leadership and management, etc where they develop the skills necessary to investigate health problems, implement intervention strategies, and generate evidence-based health information to inform and improve health policy and reduce morbidity and mortality in the country

Ethiopian Field Epidemiology and Laboratory Training Program (EFELTP) train health workers in the principles and practices of field epidemiology while they providing service to public health system. The EFELTP model is based on the premise that improving the epidemiologic skills of MOH staff aims to improve the capacity of the MOH to prevent, detect, and respond to public health priority issues, and in turn can contribute in strengthening of the public health emergency management and response. Recognizing that effective disease surveillance, outbreak investigation and response, and scientific use of public health data require epidemiologic proficiency at all levels of a public health system. Hence, EFELTP promotes a three-tiered model of trainings: namely, Frontline [3-months program primarily intended for district surveillance officers], Intermediate [9-months training primarily focus on

for MOH staff that performs epidemiologic functions at the sub-national and national level and Advanced [2-years graduate-level program to train field epidemiologists]. All three tiers implement a mentored training-and-service model to address the principles and practices of public health surveillance, outbreak investigation and response, communication, and use of data for evidence-based decision-making. Currently, the Advanced and the Frontline trainings are underway in Ethiopia. EFELTP have engaged in preliminary works and preparations to commence the Intermediate training in the country.

### **1.3 Administrative structure**

The EFELTP's Country Director and National Program Coordinator are placed at the MOH-E, Human Resource Development Directorate. The US-CDC provides financial support and technical support (through Resident Advisor).

The administration ladder consists of an Advisory Council (AC) and Technical Working Group (TWG). Advisory Council (AC) chaired and Co-chaired by State Minister of MoH-E (Operation wing) and Country Director of EFELTP, respectively. The secretary of AC is a director of EPHI-PHEM. Additionally, based on the contribution and support of the program, the AC includes one representative from Minister of Agriculture (MoA), Ministry of Science and Higher Education (MoSH), hosting universities, partners (CDC Ethiopia, WHO and FAO). The AC provides consultations and directions with regard to overall activities and communication with other stakeholders.

There is also a Technical Working Group (TWG) which supports administrative and technical matters of the program and makes the necessary follow up. The AC consists of a representative from national program coordinators (MOH-E), technical program director (EPHI), academic coordinators, AFENET-Addis Ababa, resident advisors, CDC-Ethiopia, and residents.

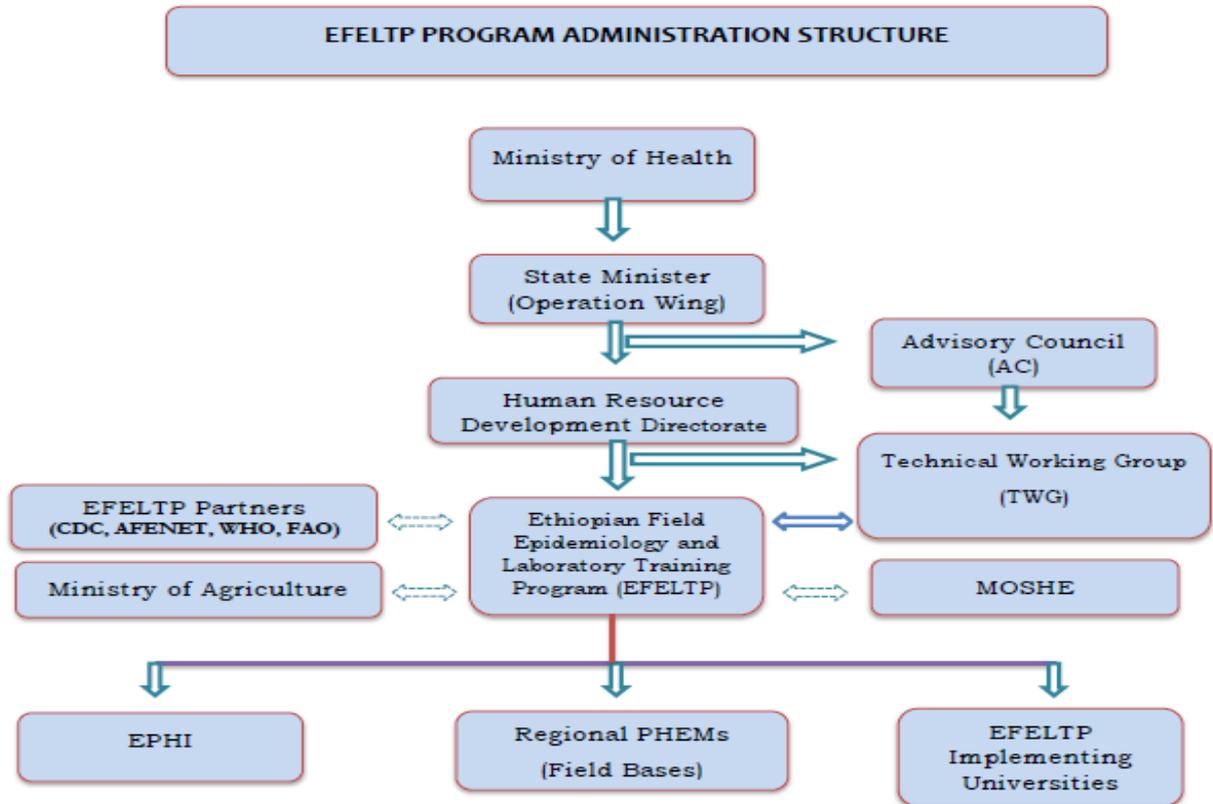


Figure 1: Administrative structure of EFELTP

## 2. Achievement of EFELTP

### A. Health Work Force Development

Ethiopia adopted the Field Epidemiology Training Program to help improve leadership within Public Health Emergency Management and began in 2009 in Addis Ababa University with thirteen residents were recruited from 8 regions in the country. Until the expansion of the program in 2015, the number of graduates was only 77. Because of the ministry of health high demand on the workforce due to emerging and reemerging public health emergency, it requires to open additional Universities and the number of graduates to date reached 580

During the attachment period residents investigated 767 outbreaks and 1050 surveillance activities and presented their abstract for Ethiopia public Health Association conference, World public health congress, Ethiopia Medical Association Conference, International Conference on AIDS and Sexual Transmittable Diseases, AFENET (3rd and 4th) and TEPHINET(6th and 7th) conferences, International Congress on Infectious Diseases and , CDC Epidemiology Intelligence Service conference that provided 78 scientific poster and oral presentations at international conferences, In Ethiopia it was prepared three annual conference and hosted the 4th AFENET conference.

Field epidemiology graduates and residents have supported the national and international pandemic for Ebola and COVID-19 outbreak preparedness and response activities in Western Africa countries.

During the current Covid-19 pandemic, EFELTP graduates and residents are playing critical roles in the country's COVID-19 surveillance and response efforts. They are supporting enhanced surveillance within facilities and the community, which includes house to house surveys, mortality surveillance, and hospital-based pneumonia surveillance. Residents are leading data analysis and visualization, drafting protocols and guidelines, and building sub-national capacity through virtual trainings. More than 100 residents and 40 graduates have been working on active case search, contact tracing, point of entry screening, and laboratory testing at the national and regional level.

## **B. Multi-Sectoral Collaboration**

Multi-sectoral engagement is an opportunity exists for significantly enhancing multi-sectorial collaboration, information exchange, and cross-disciplinary exchanges between the ministries overseeing the health and health security of humans, animals, and food. The planned establishment of a National Public Health Security Council is noteworthy as a mechanism for collaboration among the relevant ministries at the Federal level; mechanism should also be established or enhanced to promote systematic policy and technical collaboration between the human and animal health sectors, and other relevant sectors, at all levels of government.

## **C. Ministry of Health, Ethiopia**

The program is governed by Ministry Health of Ethiopia under the Human Resource Development directorate leading by the EFELTP program director. The MoH is accountable to recruiting program coordinators, Resident Advisors and other supporting staff. To sustain the program MoH allocate budget for the program and coordinating and organizing National and International conference, mentoring and supervision as well as monitoring and evaluation for the program quality. The MoH coordinates on the establishment of The Advisory Council (AC) composed of different partners and stakeholders chaired by MoH Ethiopia and I advises the decision making regarding the operation of the EFETP process, also it provides consultations and directions with regard to overall activities and communication with other authorities. EFETP advisory council strengthen capacity to respond to public health emergencies such as outbreaks, epidemics, natural disasters, and emerging infectious diseases and strengthen public health and veterinary surveillance systems as well as the linkage between public health and veterinary epidemiology.

## **D. Regional Health Bureau**

The regional health bureau (RHB) is one of the stakeholders for the program to be recruiting the candidate from different working places who have experience to be joined university and to be practicing and conducting their competency at field bases. RHB and Zonal Health Department accommodate office for residents at field bases to be accomplished their output during residency period, in addition to this assigned field supervisor and mentor to support mentorship and supervision activities at the field bases. HRB also follow up the budget allocated by the program for the region. After the graduation the RHB is assigned Field Epidemiologist at appropriate working place. RHB provides financial administration and resources to the training program

Public Health Emergency Management:-The Ethiopia Public Health Emergency Management (PHEM) in charge for the whole field attachment areas in the Field sites. It is committed

towards improving the human resource, disease surveillance and outbreak response capacity in the country particularly as related to health emergency and it coordinate the residents at any field base (residents in the all field attachment areas) to undertake any surveillance activities in case of national and international epidemic and pandemic emergency situation.

PHEM provides EFELTP residents access to national surveillance and other data and authorizes their investigating and responding to public health emergencies and facilitates assignment of EFELTP residents to units responsible for surveillance, it also ensures EFELTP residents participating in surveillance, epidemic investigation and disaster management output and analyzing data a weekly morbidity and mortality report to provide decision makers and strengthen laboratory participation in surveillance and field investigation. PHEM has been struggle the EFELTP residents making all efforts to retain and employ them upon graduation, the last but not the lease of PHEM prioritize research activities on priority public health problems and Improve communications and networking based on field base training with regional health Bureaus.

#### **E. Universities**

Universities are the main stakeholder that provides the base of operations for the EFEP, recruiting residents, prepare office space and training rooms for academic teaching and learning process. The Universities assigned Academic coordinator to oversee the teaching process and are responsible to evaluate the academic and practical output at the field bases, the staff of Universities assist with the academic and technical supervision of residents. The university assures the qualification of teaching staff, provides faculty, and organizes the assignment for the residents' thesis research, also oversee research activities for the students and provide expertise in abstract and manuscript writing. Finally provide awards of the degree upon successful completion of the program,

#### **F. CDC Ethiopia: -**

CDC is the one of the member who facilitated the establishment of the Ethiopia Field Epidemiology and Laboratory Training Program (EFELTP) in 2009 and strengthened the capacity of public health emergency management for field epidemiologists to detect, respond, and control disease outbreaks at the source before high morbidity and mortality. It also assist The EFLETP's two levels of training, advanced and frontline, helps Ethiopia build critical global public health capabilities to efficiently and effectively respond to ongoing and emerging global health pandemics like COVID-19.

EFLETP graduates play a key role in preparedness and response efforts by leading the national public health emergency operation center(PHEOC) as members of the incident management

structure for COVID-19 and contributed for the establishment of National emergency operation center EOC to respond public health emergency. CDC is also the primary funding partners of the program on the financial. In addition CDC supporting grants for the new track for residents (HIV, PMI and NCD) and give technical support for teaching and learning process.

### **G. Africa Field Epidemiology Network (AFENET)**

AFENET provides technical assistance to EFELTP through teaching, and links to other similar program across Africa, providing a platform for exchange of expertise and networking. AFENET is the primary partner responsible for the administrative and logistical implementation of the program.

### **H. WHO-Ethiopia**

WHO-Ethiopia provides technical and financial support to the program in areas of outbreak investigations and responses, and participates in the planning and implementation of outbreak investigations and responses that address the interest of the country.

## **3. Vision, Mission, Goal and objective of the Training Program**

### **3.1. Vision of the program:**

Create a world class public, health system in Ethiopia

### **3.2. Mission of the program:**

To produce competent and high calibered field epidemiologists that strengthens public health surveillance, emergency preparedness and response system

### **3.3 Goal of the program:**

Producing competent field epidemiology professionals for the health delivery system in the country

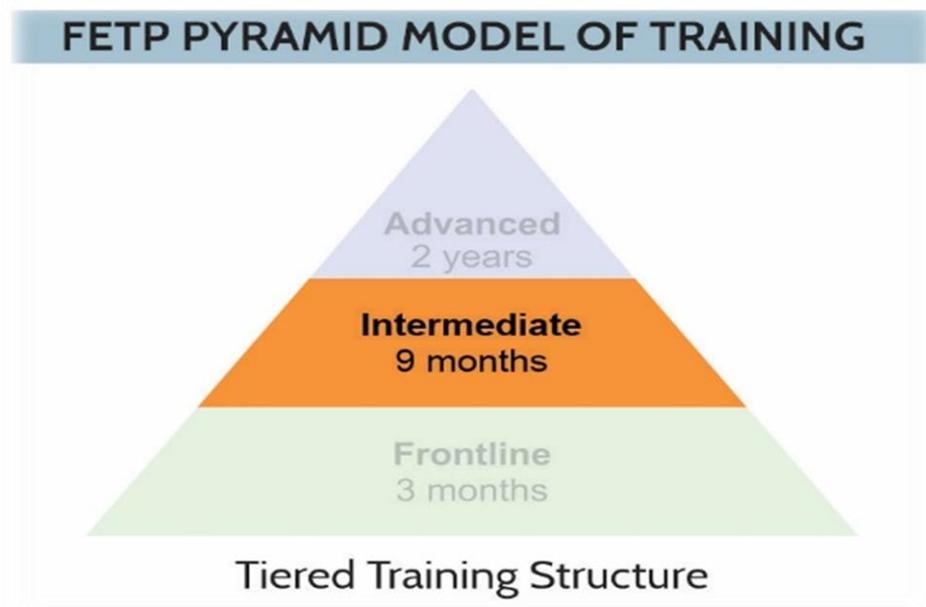
### **3.4. Objectives of the program:**

1. To strengthen public health capacity by developing qualified and competent public and animal health professionals with advanced skills in applied epidemiology
2. To strengthen national public health surveillance systems
3. To strengthen national and regional capacity to respond to public health emergencies such as outbreaks, disasters, and other unusual public health events including chemical or biological treat

4. To strengthen laboratory participation in surveillance and field investigations
5. To strengthen the linkage between public health and veterinary epidemiology
6. To improve communications and networking of public health practitioners and researchers throughout the country and globally
7. To contribute to research activities on priority public health problems

### Three-tiered model of FETP

Ethiopian Field Epidemiology and Laboratory Training Program (EFELTP) train health workers in the principles and practices of field epidemiology while they providing service to public health system. The EFELTP model is based on the premise that improving the epidemiologic skills of MOH staff aims to improve the capacity of the MOH to prevent, detect, and respond to public health priority issues, and in turn can contribute in strengthening of the public health emergency management and response. Recognizing that effective disease surveillance, outbreak investigation and response, and scientific use of public health data require epidemiologic proficiency at all levels of a public health system. Hence, EFELTP promotes a three-tiered model of trainings: namely, Frontline [3-months program primarily intended for district surveillance officers], Intermediate [9-months training primarily focus on for MOH staff that performs epidemiologic functions at the sub-national and national level and Advanced [2-years graduate-level program to train field epidemiologists]. All three tiers implement a mentored training-and-service model to address the principles and practices of public health surveillance, outbreak investigation and response, communication, and use of data for evidence-based decision-making. Currently, the Advanced and the Frontline trainings are underway in Ethiopia. EFELTP have engaged in preliminary works and preparations to commence the Intermediate training in October 2021.



The EFELTP has also sub-specialization Field epidemiology tracks like PMI ,HIV and NCD track which currently the program exercises