

Building Epidemiological Capacity for Health Security in Liberia

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EDITORIAL

KEYWORDS: Liberia. FETP, Public Health Capacity

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RECEIVED

16/11/2020

ACCEPTED

08/12/2020

PUBLISHED

11/01/2021

LINK

www.afenet-journal.net/content/article/series/4/1/1/full/

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CITATION

Muhammad Shakir Balogun et al. Building Epidemiological Capacity for Health Security in Liberia. J Interv Epidemiol Public Health. 2021 January; Suppl 1: 1

DOI:

<https://doi.org/10.37432/jieph.sup.2021.4.1.01.1>

Editorial

Liberia was the worst affected country in the 2014 Ebola Virus Disease (EVD) outbreak in West Africa. The outbreak exposed the systemic weaknesses in the healthcare system in the country.[1] One of the urgent gaps that needed to be quickly addressed was building a competent national epidemiologic workforce. The country needed a corps of well-trained healthcare workers who could promptly detect disease threats and respond in a timely manner. Therefore, in 2015, the US CDC in collaboration with Emory University and the African Field Epidemiology Network, established the Frontline Field Epidemiology Training Program (FETP) to build sub-national level capacity for surveillance and response by training healthcare workers in the counties and districts.[2] The graduates of the frontline FETP programme became the major targets of the intermediate programme when it was established in 2018. Liberia now has two of the three tiers of the FETP pyramid.

Field Epidemiology Training Programs (FETPs) are competency-based applied epidemiology programs in which residents learn by doing. They have become a global brand recognized by the World Health Organization as an essential strategy for workforce development which is one of the technical areas in the requirements of the International Health Regulations as assessed through the Joint External Evaluations [3].

The first paper in this supplement is a report of the implementation of this critical capacity building and health systems strengthening effort. Through this program, healthcare workers were trained in all the counties and districts of the country to conduct surveillance, analyze surveillance data, evaluate surveillance systems, conduct outbreak investigations, produce technical reports and other scientific communications. In the remaining papers, the trainees and graduates of the program share their experiences from the field and inferences made from the analysis of surveillance data.

Two papers describe the investigation of small clusters of monkeypox outbreaks, a re-emerging zoonotic disease. They highlight a perennial problem of surveillance and response in sub-Saharan Africa - poor laboratory capacity which manifested as delayed diagnostic confirmation of the suspected

cases. This points up the oft-repeated need for investment in laboratory infrastructure and expertise in the region.

A response to Lassa fever in a non-endemic area and a county which share a border with another country re-emphasizes the need for heightened surveillance at all levels of the health system including border points. Another paper demonstrates poor knowledge, attitudes and practices of Lassa fever by adults in both endemic and non-endemic counties.

The field investigation of an outbreak of gastroenteritis is a grim reminder of the continued risk posed by poor hygiene and environmental sanitation that lead to the contamination of the sources of drinking water. This is an utterly preventable cause of illness and death in many communities in the region.

The paper on schistosomiasis, a neglected tropical disease earmarked for elimination, [4] demonstrates the value of conducting a planned epidemiologic study to answer an important public health question. The study provides information on which further investigations or public health action can be based. The other vector-borne parasitic disease investigated in this supplement is malaria. The secondary analysis of malaria data provides information for decision-making and planning in the Liberia malaria control programme including some evidence for a modification in the statistical analysis of national malaria data in Liberia.

There are two papers focusing on maternal health. The analysis of maternal death data, provides some insight into the direct and indirect causes of pregnant women's lives lost due to pregnancy related complications and how this preventable public health event is still a burden in a low-income country like Liberia. The other explores the factors that determine the choice of place of delivery in the country as well as the associated outcomes. It also reminds us of the importance of antenatal clinic attendance in improving pregnancy outcome.

The ten papers in this supplement reflect how far Liberia has fulfilled the requirements of the International Health Regulations especially in the domain of workforce development, surveillance, and emergency response. By leveraging on its frontline and intermediate Field Epidemiology Training

Programmes, it is better equipped to protect the health of its people and contribute to global health security.

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