

Strengthening the Existing Public Health Surveillance System



The humanitarian situation in Ethiopia continues to be strained as a result of ongoing conflict and climate change. According to the Humanitarian Needs Overview update in May 2020, the number of people in need has increased from 8.4 million to 10.6 million from the start of the year. This has been triggered by droughts, flooding, a locust infestation and conflict.

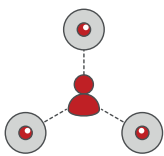


During the ongoing humanitarian emergencies, the outbreak of infectious diseases and severe malnutrition has exacerbated the situation. To understand the situation of disease outbreak and monitor response efforts, timely epidemiological information is crucial for public health responders. This vital information is used across different layers of decision making in order to respond effectively to the growing public health needs across the country.

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Since May 2017, iMMAP has been supporting the humanitarian community in Ethiopia with information management (IM), mapping, and analysis services to assist decision makers in planning and implementing emergency response activities.



iMMAP supports the National Public Health Institute (EPHI) technical unit for public health emergencies (PHEM) since 2019. The project aims to strengthen the public health surveillance system by automating the data collection, mapping, analysis, and presentation of epidemiological information. In order to achieve this, iMMAP has developed a mobile monitoring platform to collect, manage, and analyze surveillance data. To enhance the sustainability of the project, iMMAP provides training and capacity strengthening on various aspects of the system.

Years of presence in Ethiopia: **Since 2017**

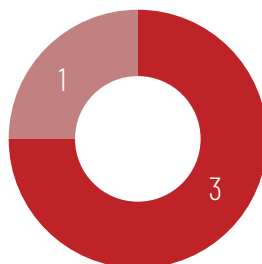
Donor: **Centers for Disease Control and Prevention (CDC)**

Current project: **Strengthening the Existing Public Health Surveillance**

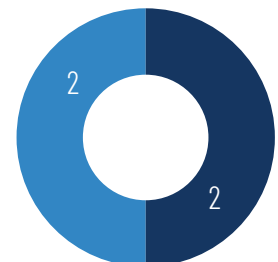
Project budget: **USD 185,000**

4
Number
of personnel

Women
Men



National
International



Progress



iMMAP achieved several milestones within the project period. In coordination with stakeholders, iMMAP completed the recruitment of staff, which includes a project lead, system analyst and software engineers. Additionally, the team completed

the development of the mobile monitoring platform, integrated the platform with ODK forms as well as testing solutions. All supporting elements such as tablets, SIM cards and laptops were purchased to facilitate testing and training of users. Lastly, the PHEM and IT officers were trained on the utilization, administration, and maintenance of the system.

Capacity Building



The iMMAP team concluded a four-day training of trainers (ToT) program targeting five participants that included PHEM officers and IT experts from EPHI.

The team trained participants on

the ODK data collection platform, data visualization using Microsoft Power BI, and a custom-developed open source web application to support surveillance data validation.

A second round of online training was conducted targeting participants responsible for data collection, review and approval process using ODK and web application. A total of 88 trainees attended the two-day training, out of which 67 were from Oromia and 21 from Somali region.

iMMAP has designed a training handbook tailored to the needs of the PHEM team, targeting data collectors and system administrators. This handbook will be used to initiate the subsequent training at different levels.

Support to COVID-19 Response



Upon the request of EPHI, iMMAP has been supporting the PHEM team on building a dashboard for COVID-19 reporting and which includes custom XLS upload capability for epidemiological data analysis and reporting.

The system has the ability to upload data reported across all regions. This dashboard will also be integrated with an advanced visualization system using Power BI technology and its versatile nature allows the monitoring of epidemic-prone diseases, as used for the monitoring of COVID-19 pandemic.



Outcomes

- Improved collection of timely epidemiological data through the installation of ODK mobile data collection forms on EPHI server infrastructure complemented with mobile tablet devices for the surveillance and automation of the process.
- Enhanced data validation and verification by authorized users through the web application that includes access protocols to various user roles.
- Simplified and dynamic presentation of information using Power BI for interactive visualization and analysis to support decision making and effective utilization of the information collected.
- PHEM team also benefited from the knowledge shared by the iMMAP personnel deployed to EPHI through the formal training sessions and interactions throughout the project.