

MEASURE Evaluation–Tanzania’s Technical Assistance for Malaria Surveillance in Mainland Tanzania and Zanzibar: Progress 2016–2018

Background

The United States Agency for International Development (USAID) funds the MEASURE Evaluation–Tanzania (MEval-TZ) project, which counts among its work the provision of technical assistance for malaria surveillance in both Mainland Tanzania and Zanzibar. Malaria is considered a major public health problem in both Mainland and Zanzibar. According to the United States President’s Malaria Initiative (PMI), all residents are at risk. Malaria prevalence is lower in Zanzibar (<1 percent); on the mainland, more than 26 percent of all outpatient clinic visits are attributable to malaria, resulting in an estimated 7.7 million confirmed cases annually.

In Mainland Tanzania, the malaria surveillance is part of the Ministry of Health, Community Development, Gender, Elderly and Children’s (MoHCDGEC) weekly electronic Integrated Disease Surveillance and Response (e-IDSR), a system linked to the District Health Information Software, version 2 (DHIS 2) platform. The e-IDSR system uses mobile phone technology that is commonly used in mobile money transfer (unstructured supplementary service data). At health facilities, registered users can submit weekly reports that can be viewed in DHIS 2 and accessed by officials at district, regional, and national levels. Since July 2016, this work has been supported in eight malaria-prone regions (Kagera, Dar es Salaam, Mara, Mwanza, Geita, Manyara, Dodoma, and Singida) in more than 2,000 health facilities, with funding from PMI.

In Zanzibar, the project provides technical support to the Zanzibar Malaria Elimination Programme (ZAMEP) in three core sectors: (1) malaria surveillance; (2) malaria outbreak investigation and response; and (3) capacity building.

The malaria surveillance work includes support to the Malaria Early Epidemic Warning System, support for passive surveillance activities through the Malaria Early Epidemic Detection System (MEEDS), and active surveillance through malaria case notification (MCN).

The MEEDS system is based on the weekly mobile reporting of malaria data by health facilities. The frequent reporting enables surveillance, monitoring, and evaluation (SME) teams to detect outbreaks within two weeks of onset and helps them decide what actions are needed when a sudden increase in malaria transmission is identified.

The MCN system uses the national malaria case register (MCR) to record more detailed information about confirmed malaria cases. These cases are followed up individually by district malaria surveillance officers. Data from MCR are reported via the short message service (SMS) mobile system and integrated into a surveillance application, accessed via tablets.



MEASURE Evaluation–Tanzania has worked to improve the availability and use of malaria data in Tanzania. In this photo, a mother and her children in Buhigwe District, Tanzania, use a mosquito net to prevent malaria. Photo courtesy of PhotoShare.

Achievements

Malaria Case Reporting and Data Analysis

MEval-TZ provides technical assistance to the National Malaria Control Programme (NMCP) and ZAMEP for analysis of malaria surveillance data, including a monthly update on reported malaria cases to stakeholders (PMI, USAID, NMCP, and ZAMEP). In Mainland, the average reporting rate across the regions implementing e-IDSR improved from 30 percent in August 2016 to 75 percent in July 2018. NMCP's national target is 90 percent while the World Health Organization has a target of 80 percent.

In Zanzibar, the average malaria case reporting rate through MEEDS also improved. Unguja (Zanzibar Island) moved from a 69 percent reporting rate in July 2017 to 86 percent a year later. Pemba Island went from 58 percent in July 2017 to 93 percent in July 2018. Training in data analysis and data use, strengthened supportive supervision, and feedback meetings with district malaria surveillance officers contributed to these improvements.

Malaria Surveillance Guidelines and Tools

MEval-TZ supported ZAMEP to print and distribute MEEDS and MCN booklets to more than 200 health facilities. The MEEDS booklets contain tools used to collect weekly summaries of malaria cases reported at health facilities and MCN booklets provide tools for recording individual malaria cases reported from health facilities. Similar support was provided in Mainland for the printing and distribution of e-IDSR booklets to more than 2,000 health facilities in eight regions. The e-IDSR booklets list priority diseases for immediate and weekly reporting from health facilities to the district, regional, and national levels.

MEval-TZ provided further technical assistance to ZAMEP for the development of malaria case investigation guidelines, case investigation forms, and creation of their respective databases. The databases were created using a free and open-source software that can develop a data collection tool, collect data using a mobile device, aggregate the collected data, and transmit data to the server. The database also allows transformation of data into different formats for analysis.

Strengthening Data Use

As part of its strategies for improving malaria data availability and use, MEval-TZ supported NMCP to prepare the first malaria bulletin in June 2017, providing current data to stakeholders. Subsequently, the project has provided technical assistance to NMCP in the use of malaria dashboards at the district council and health facility levels to enhance the use of malaria surveillance data in planning and implementing effective malaria control interventions.

Because data quality is inextricably linked to data use, MEval-TZ provided technical assistance to NMCP to develop tools, standard operating procedures, and an operations manual for a malaria data quality audit used at the district, regional, and national levels to improve data quality and use.

MEval-TZ, in collaboration with ZAMEP, conducted bimonthly feedback meetings with district malaria surveillance officers to review surveillance data and share field experiences. These meetings have been effective in improving both the level of reporting and quality of malaria surveillance data.