Integration of Malaria Case-based Surveillance (Coconut) and District Health Information Software (DHIS2) In Zanzibar to Improve Data use in Decision Making

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Surveillance is a core intervention in supporting malaria elimination through optimal monitoring and response of malaria interventions. DHIS2 data flow model improves access to information and timeliness from the point of data entry. It further allows greater functionality for reporting and analyzing aggregate reports. The Ministry of Health (MoH) began using DHIS 2 in 2006. It was reporting malaria indicators on a monthly basis at the district level. However, the Zanzibar Malaria Elimination Program (ZAMEP) needed weekly data to monitor malaria cases and trends. In 2008, a health facility-based Malaria Epidemic Early Detection System (MEEDS) was established. Case-Based Surveillance (Coconut) was further established in 2012 to track notified cases up to the household level. Coconut and DHIS2 allow interoperability and integration of malaria data. We supported ZAMEP to streamline the various malaria systems and data sources through data integration. Data elements from Coconut were integrated into DHIS2 by using an application programming interface (API). We incorporated four data elements: malaria cases- by type of detection, age; by gender, and case classification. The combined data is synchronized daily. To enhance the data feedback loop to improve data uptake, use, and quality, we built a dashboard using DHIS2 modules to visualize the data. DHIS2 dashboard is simple to use and provides quick updates on the performance of programmatic indicators through tables, charts, and maps, aggregated by administrative divisions (Shehia/ward, district, and region). Integration goes in line with the World Health Organization's (WHO) recommendation of utilizing a single system primarily owned by the MoH (DHIS 2 in our case) and centralizing data collation and management for informed decision making.