

Assessing the Reliability of Surveillance Data Collected By District Malaria Surveillance Officers (DMSO) in Unguja, Zanzibar – 2019

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ABSTRACT

Zanzibar introduced malaria case-based surveillance in 2012. District Malaria Surveillance Officers (DMSOs) investigate malaria cases notified by health facilities. Using a web-based surveillance system, DMSOs collect index case details at the diagnosing health facility and household, perform malaria rapid diagnostics tests (mRDT) for members of index case households, treat those with a positive mRDT result antimalarial drugs, and complete case classification based on WHO guidelines. These data are transmitted to a central database for analysis and use. However, the reliability of this information is unknown. We aimed to assess the consistency of surveillance data elements and the accuracy of case classification. Between August and September 2019, Zanzibar Malaria Elimination Program staff extracted data from the central database on 60 randomly selected index cases previously investigated by 16 DMSOs in all seven districts of Unguja. The study team visited the health facilities where index cases sought treatment and their households to collect data using a structured checklist to compare data consistency and accuracy on investigations of index cases and respective household members, mRDT results, and case classification reported by DMSOs. Consistency was evaluated by comparing results reported by DMSOs to results recorded by the study team. Accuracy was defined as the percent of correctly captured data and classification of cases by DMSOs. The study team confirmed that DMSOs investigated all 60 (100%) index cases at both health facilities and household levels. Overall consistency between data reported by DMSOs and the study team was 90% (range 54–98%). The accuracy of data capture and case classification was 95% (range 71–99%), with 33 (58%) cases classified as imported and 24 (42%) as locally acquired. Reported completion of mRDT testing for household members by DMSOs was 43% (range 17–64%) compared to those eligible 47% (range 17–68%) (P=0.570). Our findings suggest data reported by DMSOs are consistent and accurate, and therefore reliable for decision-making. Barriers to low testing rates in households should be investigated.

