



CHISU Results in Action

Improving malaria data quality in Burkina Faso using district-level data validation and involving head nurses

Background

Burkina Faso has been using the District Health Information System 2 (DHIS2) platform since 2013 to manage routine data—including malaria data—from the national health information system. The country's DHIS2 is called “ENDOS-BF” and is nationally deployed. When DHIS2 was initially deployed, data managers in each of Burkina Faso's 70 health districts were responsible for entering monthly reports. Since then, the country has been rolling out ENDOS-BF at the health facility level, with the support of CHISU and other technical and financial partners. CHISU supported Burkina Faso's Ministry of Health and Public Hygiene (MHPH) in its FY 21 and FY 22 plans to deploy ENDOS-BF in all 256 public primary health facilities in the seven health districts of the Centre Ouest region. With this approach, according to the statistical directory of the MHPH, timely data entry rose from 66 percent in 2020 to 90 percent in 2021 then to 97 percent in 2022 for the Centre Ouest region.

Challenge

Although the availability and promptness of reports in the ENDOS-BF database is an achievement, the other dimensions of malaria data quality remain a challenge. In fact, internal inconsistencies, atypical values that may be outliers, and missing values in certain fields persist. The data quality review (DQR) supervisions completed in the seven health districts of the Centre Ouest region for the period January to August 2022 revealed 184 missing values, 74 atypical outliers, and 33 inconsistent values, among other findings. These findings are due in part to a lack of scrutiny of report quality, insufficient knowledge about how to fill in report items, lack of validation rules, implementation and noncompliance with certain malaria data management guidelines (such as the case definition or use of rapid diagnostic tests [RDTs]). The joint session offers an opportunity to correct these shortcomings in a single session.

Steps Taken

The Permanent Secretariat for the Elimination of Malaria (PS/Malaria) proposed one solution to address this data quality issue through conducting malaria data validation sessions in the health districts with the participation of the chief nurses. This approach allowed examination of report content and data entry quality for the given period, but also provided an opportunity for initial training and refresher courses on data collection and guidelines for malaria control in Burkina Faso. CHISU, with the support of USAID through the U.S. President's Malaria Initiative (PMI), assisted the PS/Malaria to conduct malaria data validation sessions for the first quarter of 2023 in the health districts of Ténado and Réo in the Centre Ouest Region.

The process began by defining a methodological approach with a list of 27 tracking indicators—10 of which related to malaria. This approach was defined during a workshop that brought together the PS/Malaria team and USAID's implementing partners: the Integrated Health Services Project (IHS), the MOMENTUM Integrated Health Resilience Project (MIHR), and CHISU. This was followed by a workshop in each of the two health districts of Ténado and Réo, with support from PS/Malaria, the Regional Department of Health and Public Hygiene for Centre Ouest Region, and technical and financial backing from CHISU. The validation session was conducted under the leadership of the district management team to promote ownership. It involved data from the first three months of 2023 and covered four stages: 1) peer review of the reports; 2) correction of the errors identified in the reports and in ENDOS-BF; 3) the presentation followed by correction of the quality results from the analysis with the World Health Organization (WHO) Data Quality Tool and the validation rules in ENDOS-BF; and finally 4) defining next steps to address other errors that could not be corrected during the session.

During the session, participants identified and corrected missing values: 359 in Réo and 31 in Ténado. Most of these values were “zeros” that had been left blank, and the chief nurses deemed it unnecessary to enter them, even though the ENDOS-BF configuration requires zeros to be entered. For the two districts combined, 119 outliers were identified and corrected, including five health facilities with outliers for the indicator “Number of confirmed cases of severe malaria” and 14 health



Participants with Minister PS/Malaria at the Ténado health district

facilities with outliers for the indicator “Number of confirmed cases of mild malaria treated with artemisinin-based combination therapy (ACTs).” Other shortcomings in terms of internal data consistency were observed and corrected. For example, the number of suspected malaria cases was equal to (or very close to) the total number of consultations in the under-five age group in some health facilities; the number of RDTs conducted did not align with stock quantities; and the distribution of long-lasting impregnated mosquito nets (LLINs) to children under one year of age was not systematized in some health facilities.

Results + Next Steps

The impact of this joint approach to data review and validation is vast and varied, and includes the following achievements.

Immediate correction of errors: The validation session improved data quality in general by correcting errors in malaria data, maternal and child health data, vaccination data, and more.

Greater commitment from teams: The chief nurses were more committed to examining monthly activity report data as a team before entering it into ENDOS-BF and sending the copy to the district for archiving. In addition, participants who had not previously learned the rules governing the use of malaria RDTs learned best practices in this area.

Greater confidence in data: With this validation session, malaria indicators (incidence, distribution of LLINs to target groups, availability of inputs, lethality, etc.) better reflect the reality on the ground and are used for decision making by the district management team.

Better understanding of the monthly report templates and guidelines:

The participants appreciated the validation session and saw it as an opportunity to better understand information in the report as well as certain malaria control guidelines. Traoré Diali Adjaratou, Head Nurse of the CSPS in Réo’s Sector 4, affirmed that after this data validation, each health worker committed to respecting the guidelines for carrying out RDTs in the department—and to looking over the work of their colleagues to verify the data they transmit. Touré Lamine, Head of the Center for Health Information and Epidemiological Surveillance in Réo, believes that “this is a very good initiative that should be continued.”

This activity is part of a joint plan with other USAID implementing partners in which the IHS project is expected to replicate the same approach in the other five health districts of the Centre Ouest region and take the strategy into account in future work plans.



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