

Performance of Routine Information System Management Assessment in Burkina Faso (2018)

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Summary

A Performance of Routine Information System Management (PRISM) evaluation was carried out in 2018 with PRISM tools newly revised by the United States Agency for International Development (USAID)-funded MEASURE Evaluation project. The assessment covered 64 health facilities (HFs); five hospitals; four districts; one health region; and the central level, represented by the Directorate for Sectoral Statistics (DSS).

Burkina Faso has a national health management information system (HMIS), known as ENDOS. The system is based on District Health Information Software, version 2 (DHIS2); integrates data from the entire health pyramid; and supports data entry, analysis, and interpretation. It also integrates all data quality indicators.

Given the 2018 PRISM findings, RHIS strengthening efforts should focus on supervision visits that are both regular and systematic at all levels of the health system, alongside a consensual development of reports and plans for the tracking and implementation of recommendations. Instilling a data use culture is paramount. Each level of the health system should be encouraged to produce periodic reports or feedback bulletins, and standard operating procedures (SOPs) and data entry tasks should be extended to service delivery points (SDPs).

Introduction

Burkina Faso, through many interventions, is striving to modernize and strengthen its HMIS to respond to a need for better-quality data. These initiatives have made Burkina Faso one of the first West African countries to have a countrywide electronic HMIS that integrates most of the health program areas. Guidelines on norms and procedures for the management of health data have also been developed and disseminated. These have helped the country respond to global standards of quality in data collection, analysis, and dissemination that are crucial to improving a health system's performance.

Despite these recent efforts, lack of baseline data to monitor the performance of the routine health information system (RHIS) is a major challenge. Many vertical health programs and projects operate their own information systems, discouraging contributions to a national integrated HMIS. This has led to low rates of data use at all levels of the health system, hindering RHIS performance.

In the context of the global One Health initiative, USAID has been supporting the government of Burkina Faso through MEASURE Evaluation's technical assistance to strengthen the RHIS by monitoring and evaluating data quality and use. With USAID funding, MEASURE Evaluation, alongside the Ministry of Health and its DSS, conducted Burkina Faso's first PRISM assessment to evaluate the progress and effectiveness of RHIS strengthening interventions.

Methods

Study design: A cross-sectional survey aiming to assess the performance of the RHIS and linking it to key determinants

Targets: The survey used the revised PRISM tools to target all levels of the health pyramid in the Center-South Region (HFs, district offices, and the regional health office) as well as the central level. The PRISM tools consist of six modules: the RHIS Overview Tool, the RHIS Performance Diagnostic Tool, the Electronic RHIS Functionality and Usability Assessment Tool, the Management Assessment Tool, the Facility/Office Checklist, and the Organizational and Behavioral Assessment Tool (OBAT). All the PRISM tools were used across four levels to collect quantitative and qualitative data, with certain tools only applied to certain levels based on a customized assessment in this single health region.

Sampling: The central-level DSS and Center-South regional health directorate and four district health offices were assessed. The sample at the SDP level consisted of 64 HFs, one central-level university hospital, and four district hospitals.

Data collection methods: Data collection methods were desk reviews, observations, interviews, and data abstraction from primary data collection and reporting tools and RHIS databases. Questionnaires were mostly addressed to the institutions being surveyed, except for the two questionnaires aimed at individuals: the OBAT, which assesses staff opinions, knowledge, and competencies to perform specific RHIS tasks (calculating rates, developing trend graphs, interpreting and using data), and the "usability" section of the Electronic RHIS Functionality and Usability Assessment Tool, which evaluates staff's ability to perform tasks on the RHIS data management software. To check for trends in data quality, three periods were set and four indicators selected for data accuracy checks.

Data entry and analysis: The questionnaires were configured using Microsoft Excel form definition files, transformed into XML files, and uploaded into the Open Data Kit (ODK) aggregate server. They were later downloaded into Android tablets using ODK collect. Entered data were transferred to the ODK server and later downloaded to generate CSV files for the respective modules. The CSV files were then analyzed separately with the PRISM Analysis Tool (PAT), which is based on the PRISM Analysis Guide developed by MEASURE Evaluation.

Results

Figure 1. Percentage of facilities meeting the data accuracy criteria at 80%, 90%, and 95%

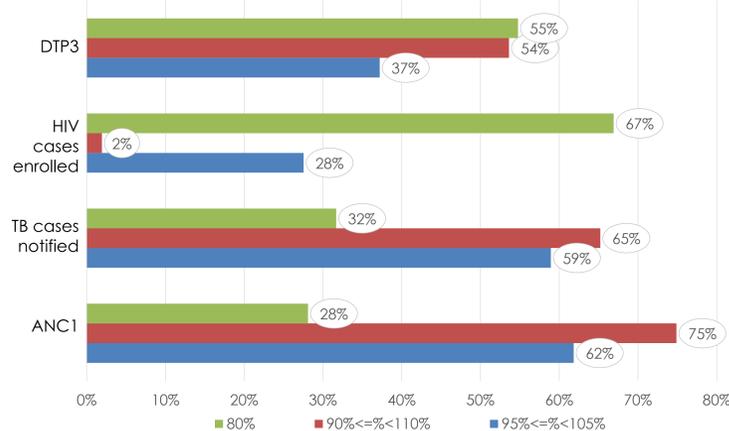


Figure 3. Data use at the district level

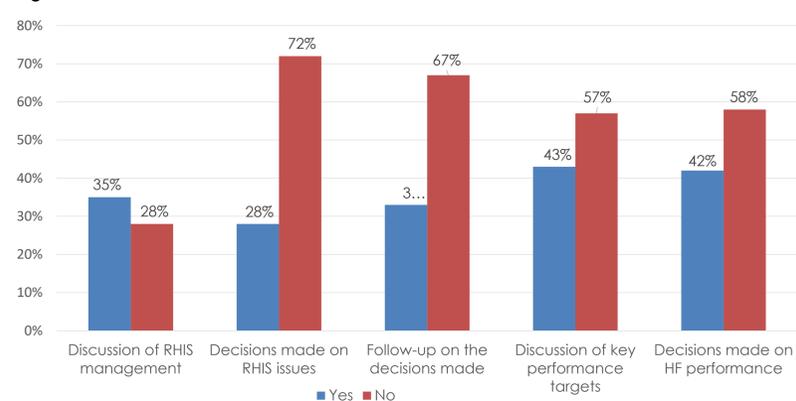


Figure 2. Data quality at the HF level

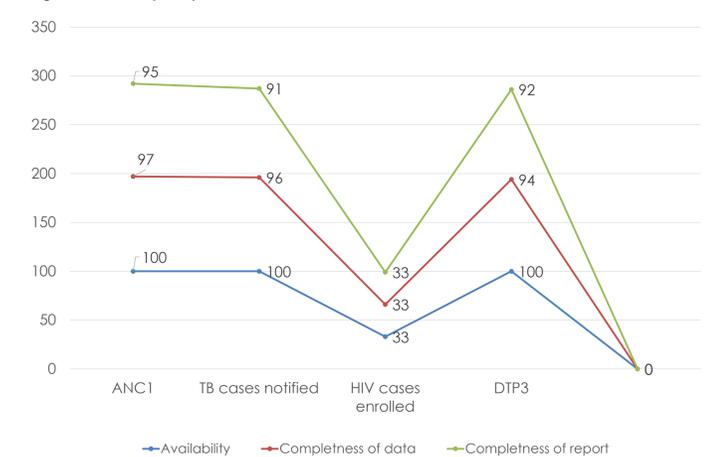
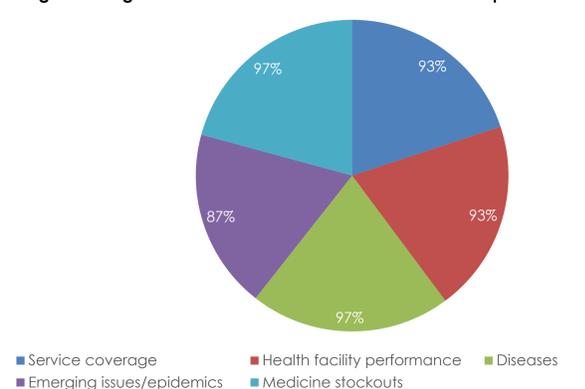


Figure 4. Targets and activities featured in the HF's annual plan



Discussion and Conclusion

DHIS2 is the only RHIS management system in Burkina Faso, but it has been deployed only to the district level. (HFs and district hospitals cannot access it; their data are entered at the district level instead.) SOPs developed at the central level were insufficiently deployed to region- and district-level actors. Only 25 percent of regional respondents were aware of the procedures manual for health information management (MPGIS); the rest had only partial knowledge. No regional directorate has a copy of the HMIS strategic plan.

DHIS2 knowledge and skills are strong at the district level, in part because 100 percent of districts have a designated person responsible for data entry and report compilation from the HFs, and 75 percent of districts have a designated person responsible for data submission to the next level. DHIS2 mastery made PRISM's data quality and usability portions easy to administer. However, Internet access is limited at the district level and compromises the sustainability of electronic data entry there. Data disaggregation by sex is lacking at the district level: only 20 percent of reports contain discussions, decisions, recommendations, or comparisons based on RHIS sex-disaggregated data. Use of RHIS data (36%), discussions of RHIS management (35%), and decision making on RHIS issues (28%) and their follow-up (33%) are low at the district level, as are discussions about key performance targets (43%) and decision making on HF performance (42%).

HFs do not have geographic coordinates, which are essential for developing HF maps. Data dissemination at the HF level is poor: only 10 percent of HFs update their website at least annually for the public to access their RHIS data, 22 percent of HFs produce reports or bulletins on RHIS data analysis, and 30 percent of HFs submit or present performance reports to the local council administration. Although HF annual plans almost all contain activities and/or targets related to improving or addressing service coverage (93%), HF performance (93%), diseases (97%), emerging issues/epidemics (87%), medicine stockouts (97%), and HR management (87%), not a single facility addresses gender disparity. Indeed, only 33 percent of HF respondents could describe what information can be obtained by disaggregating data by sex, and only 20 percent of HFs have reports with discussions or recommendations based on sex-disaggregated data. Some data sources were unavailable owing to staffing issues (67%) or storage or archiving problems (33%).

Performance objectives assigned to the different levels of the health system are key to data quality strengthening and should be strongly encouraged at the district and HF levels, as should data use, the practice of disaggregating data by sex, and data dissemination to the general public and local authorities.