Using PRISM to strengthen and evaluate health information systems

MEASURE Evaluation Fact sheet
PRISM: Performance of routine information system management

At MEASURE Evaluation, we know that improved analysis and use of data lead to better health program decision making and, ultimately, improved health outcomes. This fact sheet introduces one of the innovative toolsets created for monitoring & evaluating public health interventions.

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Overview: The PRISM framework identifies strengths and weaknesses in RHIS performance and bridges the gaps, leading to improved health system performance.

Routine health information systems (RHIS) attempt to produce timely and quality information about what is happening in health sector organizations. Ideally, this information is then used to guide day-to-day operations, track performance, learn from past results, and improve accountability.

However, the systems designed to track health data often fall short of this ideal—data quality may be low, processes for using data other than sending reports may not exist, or managers and staff may have limited understanding of the importance of the information and few incentives to give attention to the management of information system processes.

Traditional assessments only partly address how to improve RHIS, because they look narrowly at technical issues such as data collection forms, methods or information technology.

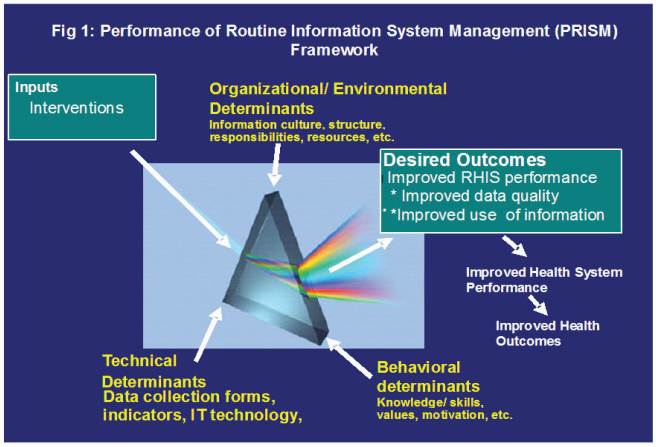
Performance of Routine Information System Management (PRISM), a conceptual framework developed by MEASURE Evaluation and John Snow, Inc., acknowledges the broader context in which RHIS operate. It emphasizes strengthening RHIS performance through better data quality and improved information use.

PRISM broadens the analysis of RHIS performance to include three key categories of determinants that affect performance:

- Behavioral determinants—the knowledge, skills, attitudes, values, and motivation of the people who collect and use data;
- Technical determinants—data collection forms, processes, systems, and methods; and

- Organizational determinants—information culture, structure, resources, and roles and responsibilities of key contributors at each level of the health system.

The PRISM conceptual framework and tools identify strengths and weaknesses of RHIS performance, and associated factors. The tools can be use to design a new system, to evaluate an existing system or to evaluate the impact of interventions on RHIS. The assessment findings also aid in designing and prioritizing interventions to improve RHIS performance. Improved use of infor-mation for evidence-based decision making in turn improves the performance of health systems and leads to better health care.



PRISM Tools: The PRISM toolset includes the following data collection tools and instructions on how and when to use them:

- **Performance Diagnostic Tool:** The primary toolset component, the performance diagnostic tool determines the overall level of RHIS performance, i.e. the level of data quality and use of information. It captures the technical determinants of RHIS performance, such as level of complexity of data collection forms and user-friendliness of information technology.
- **Overview and Facility/Office Checklist:** This tool examines technical determinants, such as the structure and design of existing information systems in the health sector, information flows, and interaction between different information systems. It allows users to understand the availability and status of RHIS resources necessary for RHIS implementation at the facility and district levels.
- **Organizational and Behavioral Assessment Tool (OBAT):** This tool identifies behavioral and organizational factors affecting RHIS performance. Behavioral determinants include level of data demand, motivation, confidence, task competence, and problem-solving skills. Organizational factors include level of promotion of a culture of information, merit criteria, and use of RHIS information for performance appraisal.
- **Management Assessment Tool:** This tool is designed to take rapid stock of the RHIS management practices and aid in developing recommendations for better management.

Health information systems produce data at regular intervals, and the PRISM diagnostic tool should be used routinely, i.e. at least quarterly, to observe improvements in data quality and increases in the use of information. However, other PRISM tools should be used in conjunction with the diagnostic tool when the RHIS performance becomes stagnant or shows a downward trend.

How to Use the PRISM Tools: The PRISM tools can be used by any organizational unit of the health system to assess RHIS performance, including host-country decision makers, designated RHIS program managers, and RHIS specialists. Data quality checklists can asses the data quality of a single health facility; they can also be used by ministries of health or intermediate health departments. Data can be collected from all the facilities of a district or a sample of the facilities. One sampling method, lot quality assurance sampling, uses small sample sizes to assess whether or not a prescribed target is achieved. For most districts, using 19 health facilities is recommended, but in some cases as few as 12 may be sufficient. District RHIS performance is measured by aggregating data from health facilities. The diagnostic tool, MAT, and facility checklist are applied through record observation, while the OBAT is a self-administered tool completed by a sample of individuals at different levels of an organization, from facility staff to senior management.

Recent Experience: MEASURE Evaluation has used the OBAT to assess the health information systems in Mexico, Paraguay, and Honduras. The toolset has been applied in Pakistan to reform health information systems and in Uganda to conduct a situation analysis of health management information systems. We also provided training in the use of the toolset in South Africa and Mexico.

PRISM is part of the Health Matrix Network Information system framework. It is included in a course on information systems at the Johns Hopkins University Bloomberg School of Public Health.

Download the Tools: The PRISM framework and tools are available for free download from the MEASURE Evaluation Web site, www.cpc.unc.edu/measure.

For more Information

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