

# Routine Health Information Systems

Over the past decades, knowledge and understanding have grown regarding the role that health information systems play in improving global health. Even so, using data to make evidence-informed decisions is still weak in most low- and middle-income countries. This is particularly true for data produced by routine health information systems (RHIS).

## What Are Routine Health Information Systems?

These systems generate data collected at public and private health facilities and institutions, as well as at community-level healthcare posts and clinics, at regular intervals of a year at least. The data give a picture of health status, health services, and health resources. Most of the data are gathered by healthcare providers as they go about their work, by supervisors, and through routine health facility surveys. The sources of those data are generally individual health records, records of services delivered, and resource health records. Table 1 illustrates these types of RHIS data sources and subsystems.

**Table 1. Types of RHIS data sources and subsystems**

Individual record systems (facility and community-based)	Service record systems	Resource record systems
Paper-based records of patient care	Facility-based health management information systems (HMIS)	Financial management information systems
Electronic medical records (EMR)	Public, private, and parastatal HMIS	Human resource information systems
	Laboratory and imaging information systems	Logistics management information systems
	Disease surveillance information systems	Infrastructure and equipment management information systems
	Routine supervisory information systems	Routine supervisory information systems

Although the data generated are accessible in real time in many cases, often they are not used for action. The main contributors to poor use of routine information at all levels are ill-defined information needs, poor data quality, centralization of health information systems, and fragmentation of information systems due to disease-focused national health programs. Fragmentation often is donor-driven and not country-owned, which means that decision makers at all levels within a country are unable to operate from a harmonious set of data needed for the delivery of holistic healthcare.

## MEASURE Evaluation’s Work

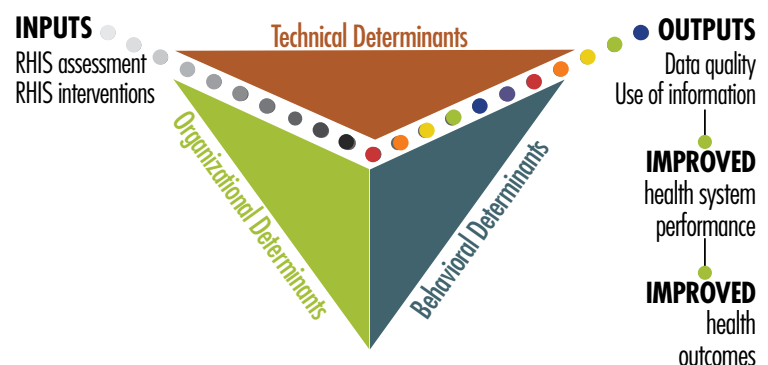
MEASURE Evaluation, funded by the U.S. Agency for International Development (USAID), has provided technical and financial assistance for RHIS strengthening for more than 15 years. We have contributed to best practices at the global level, and to the strengthening of RHIS data collection, quality, analysis, and use at the country level. One of the project’s mandates is to strengthen the collection, analysis, and use of these data to achieve high-quality health service delivery.

When routine data are lacking, or are not used, the results are poor quality of the services delivered; weak infection prevention and control responses; lack of skilled health workers available where they are needed; and weak supply chains for drugs and equipment. All of these factors contribute to poor health outcomes for people.

Our main strategic approaches for strengthening RHIS focus on developing and reinforcing a country’s long-term planning for an integrated HIS, including all data sources, health metrics, and tools. We are also helping to create district-managed and denominator-based RHIS at subnational levels.

To operationalize that strategy, MEASURE Evaluation developed the Performance of Routine Information System Management (PRISM) framework (see Figure 1) and tools in 2008, which has become the widely accepted measure of RHIS performance. The PRISM framework defines RHIS performance as the production of quality data that are used on a continuous basis for action at all levels of the health system. RHIS performance is not only influenced by technical factors, such as the development of electronic data management applications (DHIS 2, for example), but also by organizational factors (incentives for use of information, for example) and behavioral factors (human resource capacity, for example).

**Figure 1. PRISM Framework**



In addition to the PRISM framework and tools, MEASURE Evaluation offers key strategic approaches, services, and expertise to developing countries to strengthen their RHIS.

**We know how to leverage RHIS design and implementation to serve country needs.** Our PRISM tools were the first to measure RHIS performance and have been revised to better address RHIS management and use of information and communication technologies (ICT) that have evolved since.

**We offer guidance on appropriate use of ICT in strengthening RHIS.** We provide strategic support to advance the understanding of how ICT can facilitate the use of information for decision making—for example, through better data visualization, the creation of electronic dashboards, and RHIS data architecture that fosters the interoperability of multiple subsystems.

### Capacity-Building for Strengthened RHIS

During the outbreak of Ebola virus in West Africa, health systems, disease surveillance alerts, and data use failed on a grand scale. Following that event, and the tragic loss of thousands of lives, the Measurement and Accountability for Health Summit (2015) was held in Washington, DC. There, USAID, the World Health Organization (WHO), and the World Bank called for action “to improve health facility and community information systems, including disease and risk surveillance, and financial and health workforce accounts, empowering decision makers at all levels with real-time access to information.”

The Health Data Collaborative (HDC) was then formed by several donor organizations to focus on broad HIS improvement to monitor progress toward global Sustainable Development Goals (SDGs). RHIS, as the main source for real-time data, is one of HDC’s principal targets for improvement. HDC concerns itself with architectural design and comprehensive capacity building of RHIS in low-resource countries. MEASURE Evaluation co-chairs HDC’s RHIS working group and is a member of other RHIS-related working groups, including the community-based information system group.

**We help scale up RHIS capacity through preservice training, in-service training, distance learning, and direct coaching and mentoring.**

We institutionalize mechanisms for ongoing data quality review and to promote a sustained culture of data use.

**We help develop regional networks for RHIS advocacy and knowledge sharing.** We have done this in Asia and Africa to stimulate South-to-South exchanges about best practices and lessons learned in strengthening RHIS.

The following examples highlight our expertise in action:

*We participate in multiple-stakeholder RHIS initiatives.*

- In addition to participating in the Health Data Collaborative, MEASURE Evaluation and the World Health Organization/Geneva have developed a joint action plan for RHIS assessment and strengthening that includes developing standards and harmonizing tools.
- MEASURE Evaluation has been a key player in multisectoral initiatives to increase RHIS resilience in West Africa: for example, the capacity to withstand shocks such as those presented by the Ebola epidemic.

*We apply tools at national and subnational levels.*

- Based on rapidly growing needs for community involvement in health service delivery, MEASURE Evaluation is developing standards and tools specifically for community-based information systems.
- MEASURE Evaluation is helping countries improve information use for management at the district level and below, including management of health facilities, client management, and design of mechanisms for integration of services and continuity of care for patients.

*We consistently update and refine our capacity building.*

- In collaboration with WHO/Geneva and the global RHIS community, MEASURE Evaluation is helping to standardize RHIS training curricula to include results of PRISM assessments and to focus on improving RHIS performance.

*Our advocacy and knowledge management is ongoing.*

- MEASURE Evaluation supports the Routine Health Information Network (RHINO)—a global nongovernmental organization advocating strong RHIS in low- and middle-income countries—by helping to publish its newsletter and to convene its meetings. RHINO connects RHIS professionals for sharing and collaboration through its website ([www.rhinonet.org](http://www.rhinonet.org)) and informs global audiences of the state of the art in RHIS through the newsletter, online forums, and other resources.

### MEASURE Evaluation’s Services

To access the project’s capabilities statements, visit: <http://www.measureevaluation.org/about/services/capacity-statements>. To access MEASURE Evaluation resources, country governments should contact their local USAID mission. The mission, in turn, can contact the USAID AOR for MEASURE Evaluation, Lisa Maniscalco ([lmaniscalco@usaid.gov](mailto:lmaniscalco@usaid.gov)). For more information, e-mail [measure@unc.edu](mailto:measure@unc.edu) or go to our website: [www.measureevaluation.org](http://www.measureevaluation.org).