

Health Information System Performance Monitoring Tool

A source of evidence to help national authorities prioritize HIS-strengthening interventions

The USAID-funded MEASURE Evaluation has developed the Health Information System Performance Monitoring Tool (HISPMT) (forthcoming later in 2017). This tool is part of a series of products that help health information system (HIS) managers assess and measure HIS performance.¹ These products contribute to the growing global menu of tools, guidance, and standards available to HIS managers.

The HISPMT guides HIS managers through a systematic review of the main HIS data sources and provides an objective appraisal of the alignment of each data source with relevant national and international standards. Conducting this kind of review across data sources is important, because countries need data from sources both within and outside the health sector to monitor their health systems, and they also need objective evidence as a basis for prioritizing HIS strengthening investments. The HISPMT can be administered periodically to compare results and monitor the strengthening of the HIS over time.

Background

Good-quality data are necessary for all stakeholders in the health system. National authorities who are responsible for strengthening a health system require good-quality and timely data to direct their interventions and gauge the effectiveness of those interventions. Financial stewards who allocate scarce resources across the health sector need data to account for the efficiency of investments. Program managers who coordinate patient-centered, integrated care rely on data to track services and health outcomes for clients.

The purpose of an HIS is to collect and compile data from the health sector and other sectors, ensure their quality, analyze them, and transform them into information products for various uses and users.² Health authorities and other stakeholders can use a well-functioning HIS to determine the effectiveness of the health system. In particular, they

¹ MEASURE Evaluation. Available at <https://www.measureevaluation.org/resources>

² Health Metrics Network & World Health Organization. (2008). *Framework and standards for country health information systems*. Geneva, Switzerland: World Health Organization. Retrieved from http://apps.who.int/iris/bitstream/10665/43872/1/9789241595940_eng.pdf



can use the HIS for regular updates on any inequities in the distribution of health resources, including infrastructure, health workers, equipment, and commodities; the quantity and type of health services consumed by clients; and disparities in risk factors and health outcomes among target population groups.

As countries continue to develop, they undergo an epidemiological transition. This transition entails a shift in disease burden and leading causes of death, mainly from maternal, newborn, and communicable diseases to chronic conditions.³ To monitor this shift, and to identify new healthcare priorities, decision makers need not only reliable, timely information but also the breadth of data that permits the detection of emerging diseases and conditions outside the traditional health priorities.

³ McKeown, R. (2009). The epidemiological transition: Changing patterns of mortality and population dynamics. *American Journal of Lifestyle Medicine*, 3(1 Suppl), 19S–26S. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2805833/>

Many countries, however, do not have a sufficiently well-functioning HIS to generate the quality and range of data to produce needed information. Many also do not possess basic evidence on the functioning of their HIS data sources and therefore fail to make strategic improvements to strengthen the HIS.

Purpose

The HISPMT is designed to produce objective measures of HIS performance across the main HIS data sources and provide summary evidence to decision makers that they can use to monitor the performance of the national HIS and prioritize HIS-strengthening investments.

Access to and Application of the HISPMT

How to Access It

The HISPMT (forthcoming later in 2017) can be downloaded from the MEASURE Evaluation website. The tool consists of a suite of automated Microsoft Excel worksheets. The HISPMT User's Manual and the HIS Reference Guide (also forthcoming later in 2017), which provides background information specific to each of the HIS data sources, are also available for download.

Where to Apply It

The HISPMT is grounded in data source standards that are relevant to any country. However, MEASURE Evaluation is actively introducing the tool to counterparts in low- and middle-income countries because those countries have a national HIS that needs strengthening. Development partners are also investing in those areas.

When to Apply It

The HISPMT is most useful if it is applied prior to annual and mid-term reviews of the progress and performance of the national health strategy⁴ or the HIS strategy.

Who Should Apply It

A designated HIS manager at the central level, or an independent HIS stakeholder, should be responsible for administering the HISPMT.

How to Apply It

The HISPMT consists of a series of modules, one for each of the main HIS data sources (see Table 1). Each module contains a short questionnaire that consists of 15–20 questions. To complete each module, the HIS manager or stakeholder will likely need to solicit information from data source specialists inside and outside the health sector. Responses recorded in these modules are the basis for measuring the performance of each data source in terms of its readiness to generate good-quality data aligned with the relevant standards.

In addition to completing the modules, the designated HIS manager or stakeholder enters in the HISPMT the list of core health indicators that the country has prioritized to monitor its health system. The tool enables the manager or stakeholder to map these indicators—or, more specifically, the data elements needed to compute the indicators—to each of the data sources. This provides the basis for approximating the demand for data from each of the data sources.

The HIS manager or stakeholder should be able to complete the modules and indicator mapping within a few days, assuming the data source specialists are available to provide the information needed. Once the modules are completed, the HISPMT automatically presents the results.

What It Delivers

The HISPMT automatically evaluates the results from the completed modules and the indicator mapping. The summary score for each data source and the relative demand on each data source are plotted on a scatter plot. Presenting the results on the scatter plot allows decision makers and other interested parties to see at a glance how well data sources are performing and the demand for data from each.

⁴ International Health Partnership+ & World Health Organization. (2011). *Monitoring, evaluation and review of national health strategies. A country-led platform for information and accountability*. Geneva, Switzerland: World Health Organization. Retrieved from http://www.internationalhealthpartnership.net/fileadmin/uploads/ihp/Documents/Tools/M_E_Framework/M%26E.framework.2011.pdf

Table 1. HISPMT data sources

	Data source	Type of data generated	Unit of analysis	Disaggregation	Standards
Institution-based data sources	1 Individual records	Patient morbidity Patient service interventions	Patient or client	Sociodemographic characteristics	ICD-10, GBD, ICPC-2, ICHI, ISHMT
	2 Community/service records	Community (not clinical) intervention	Community	Geography, other	ICHA-HC6
	3 Health infrastructure information system	Infrastructure and amenities Equipment	Facility	Geography, type of facility, type of management, other	MFL
	4 Human resources information system	Health occupations	Health worker	Sociodemographic characteristics	ISCO-08, HWR
	5 Logistics management information system	Essential medicines and commodities	Medicine or commodity	Geography, type of facility	NEML, ATC
	6 Financial management information system	Budget estimates Revenue and expenditures	Budget item	(National level)	Not applicable
	7 Health facility assessments	Health resource inventories	Facility	Geography, type of facility	SPA, SARA
Population-based data sources	8 Population census	Population estimates and projections	Person	Sociodemographic characteristics	United Nations Statistics Division Principles and Recommendations for a Population and Housing census
	9 Population-based surveys	Risk factors Knowledge, attitude, and practice Coverage of services	Person Household	Sociodemographic characteristics; socioeconomic stratifiers	DHS, MICS, SILC, HIS
	10 Civil registration vital statistics system	Births Deaths Stillbirths Cause of death	Person	Sociodemographic characteristics	United Nations Statistics Division Principles and Recommendations for a Vital Statistics System ICD-10
Mixed data sources	11 Public health surveillance	Reportable conditions Potential public health threats	Disease or event	Geography, other	IHR
	12 Health accounts	Health financier Health provider Healthcare services or resources consumed	Health expenditure	(National level)	SHA ICHA

ICD-10 - International Classification of Diseases, 10th revision

GBD - Global Burden of Disease (classification of morbidity and mortality groups)

ICPC-2 - International Classification for Primary Care, 2nd revision

ISHMT- International Shortlist for Hospital Morbidity Tabulation (classification of morbidity and mortality groups)

ICHA-HC6 - Classification of Health Care Functions, Preventive Care

MFL- Master Facility List (minimal data elements in signature and service domains)

ISCO-08 - International Standard Classification of Occupations, 2008 revision

HWR - Health Workforce Registry (minimal data elements)

NEML- National Essential Medicines List

SPA - Service Provision Assessment (tools and methodology)

SARA - Service Availability and Readiness Assessment (tools and methodology)

SILC - Statistics on Income and Living Conditions (tools and methodology)

HIS - Health Interview Survey (tools and methodology)

DHS, MICS - Demographic and Health Survey, Multiple Indicator Cluster Survey (tools and methodology)

IHR - International Health Regulations

SHA ICHA - System of Health Accounts, International Classification for Health Accounts