

The complete RHIS curriculum is available here: <https://www.measureevaluation.org/our-work/routine-health-information-systems/rhis-curriculum>

**10.1.1**

**SIX COMPONENTS OF A HEALTH INFORMATION SYSTEM**

The Health Metrics Network’s “Framework and Standards for Country Health Information Systems” describes the six components of a health information system and the standards needed for each.[[1]](#footnote-1) There is clear value in defining what constitutes a health information system and how its components interact with one another to produce better information for better decisions and better health. In addition to its six components, a health information system can be further divided into its **inputs, processes,** and **outputs.** Inputs refer to resources; processes touch on how indicators and data sources are selected and data are collected and managed. Outputs deal with the production, dissemination, and use of information. Accordingly, the six components of a health information system are as follows[[2]](#footnote-2):

There is clear value in defining what constitutes a health information system and how its components interact with one another to produce better information for better decisions and better health.

# Inputs

1. **Health information system resources.** These consist of the legislative, regulatory, and planning frameworks required to ensure a fully functioning health information system, and the resources that are prerequisites for such a system to be functional. Such resources involve personnel, financing, logistics support, information and communications technology (ICT), and coordinating mechanisms within and among the six components **(Section 2.6).**

# Processes

1. **Indicators.** A core set of indicators and related targets for the three domains of health information outlined in **Section 2.3** is the basis for a plan and strategy for a health information system. Indicators need to encompass determinants of health; health system inputs, outputs, and outcomes; and health status.
2. **Data sources** can be divided into two main categories: (1) population-based approaches (censuses, civil registration, and population surveys) and (2) institution-based data (individual records, service records, and resource records). **Section 2.4** describes a basic set of standards for each source and strategic elements in achieving these standards. A number of other data-collection approaches and sources—occasional health surveys, research, and information produced by community based organizations—do not fit neatly into either of the two main categories but can provide important information that may not be available elsewhere.
3. **Data management.** This covers all aspects of data handling: collection, storage, quality-assurance, flow, processing, compilation, and analysis **(Section 2.5).** Specific requirements for periodicity and timeliness are defined where critical—as in the case of disease surveillance.

# Outputs

1. **Information products.** Data must be transformed into information that will become the basis for evidence and knowledge to shape health action **(Section 2.6).**
2. **Dissemination and use.** The value of health information can be enhanced by making it readily accessible to decision makers (giving due attention to behavioral and organizational constraints) and by providing incentives for information use **(Section 2.7).**

For a health information system to function, policy, administrative, organizational, and financial prerequisites must be in place. Supportive legislative and regulatory environments are needed to enable confidentiality, security, ownership, sharing, retention, and destruction of data. Investment from domestic and international sources is required to strengthen ICT and provide human resources to run these systems. Expertise and leadership at national and subnational levels must also be provided to enable the monitoring of data quality and use. And infrastructure and policies must be in place to transfer information between producers and users both inside and outside the health system.

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Limited national resources and capacities may affect the capacity of countries to apply the standards that the HMN framework proposes. Where standards are not in place, they are likely to evolve over time as countries adapt, use, and learn from the HMN framework.



1. Health Metrics Network. (2008). Framework and standards for country health information systems, 2nd edition. Geneva, Switzerland: Health Metrics Network, World Health Organization. Retrieved from <http://apps.who.int/iris/bitstream/10665/43872/1/9789241595940_eng.pdf> [↑](#footnote-ref-1)
2. The references in red are to the relevant sections of the HMN framework document. [↑](#footnote-ref-2)