



The need for strong health information systems

Rationale for the HMN Framework

Sharing information about health gives a clearer picture of health and sickness across entire populations, and this knowledge can help **prevent the spread of disease** and **improve the health of individuals**.

Smarter ways of gathering, analysing and using **health information** lead to **better decisions** and better **spending**, and make it easier to track and confront threats to world health. **Informed decisions are better decisions**.

The **Health Metrics Network (HMN)** helps **individual countries** to improve the availability and use of accurate health information, to improve health **locally and globally**. To do this HMN, in cooperation with a wide range of partners, has developed a framework that provides a comprehensive approach to improving health information.

The *HMN Framework* explains why and how countries can build stronger systems to gather, manage, analyse and distribute health information.



The *Framework* describes the elements that help to make a system effective, how they can be evaluated, and the principles that empower countries to build and strengthen their systems according to an agreed standard.

It lays out principles, processes and practical tools to aid countries in planning health information systems (HIS).

Three implementation phases are identified, each of which includes measures for continuous evaluation and improvement.

1. **Leadership, coordination and assessment** serves to secure involvement and support from key country stakeholders.
2. **Priority setting and planning** engages all major participants in establishing a steering committee, developing a strategic vision that considers the resources needed to strengthen the system, and how they can be secured. HMN has designed tools and model examples to assist in assessment and planning processes.
3. **Implementation of HIS strengthening activities** starts an ongoing cycle of improving capabilities, evaluation and reprogramming.

A monitoring and evaluation framework uses specific indicators to track progress, and provides the steering committee with opportunities to correct and modify the implementation plan as necessary.

Why a single framework for country HIS?

A globally-accepted standard in HIS is a foundation for a strong health care system. Intelligently designed systems, targeting the needs and resources of individual countries, provide access to the wealth of information collected locally and globally.



HIS in action – Mexico responds to ‘flu

With the initial outbreak of the new influenza strain A(H1N1) in Mexico in 2009, health officials were able to quickly identify and respond to unusual patterns of illness.

Mexico’s disease surveillance system, linking units from all around the country with a command centre in Mexico city, alerted health officials to early signs of the problem, and triggered an investigation that identified the previously unknown virus.

The system picked up on several factors pointing to a possible new flu strain: a higher than expected number of reported flu-like symptoms, and a large number of apparently healthy adults affected.

These findings were quickly detected by the country’s well-functioning health information system, which includes individual medical record keeping, skilled personnel who are able to spot atypical trends, and a responsive reporting system.

The strength of health information systems in Mexico, and in other countries to which the virus spread, enabled quick and effective global reporting of suspected and confirmed new cases. This allowed WHO to monitor the global situation, adjust the pandemic alert levels as needed, and advise countries to put in place their pandemic preparedness plans, including heightened surveillance, early detection and treatment of cases, and infection control.

“This is a powerful example of how timely and reliable health information from countries can serve as a public good and influence decision-making and strategy at the highest levels, with global benefit,” said HMN Executive Secretary Dr. Sally Stansfield.

Reliable and timely health information can mean the difference between life and death.

HIS provide the basis for health care policy and the capacity to respond swiftly to health crises. High-quality data on a country’s health situation enables decision-makers, from governments and from donors, to identify existing and potential health issues, and address them.

Concise, relevant information gives donors and global partnerships a stronger foundation for their support of public health programs.

The **HMN Framework** brings together the essential elements of the world’s most effective systems, and offers countries guidance and assistance in developing and improving their own systems to maximize data collection and use, to secure funding to develop systems, and to encourage best practice in disseminating and using health information.

Information systems helping health care providers

The most effective HIS are practical, with clear connections between data collection and use.

Medical professionals and health workers that deal with serious health issues every day need to have essential information that can be used for day-to-day management or long-term planning.

An integrated HIS links central resources with peripheral health facilities, providing health workers with the knowledge needed to make timely, accurate decisions.

Health workers that benefit from reliable information systems are better motivated to participate in collecting data.

Poorly-planned and badly-managed systems produce unreliable and deficient information. When tackling serious health issues, health care professionals can do without the extra burden of working with multiple, poorly-coordinated information systems that cannot supply the relevant information.

Stronger, integrated HIS can provide access to relevant information about patients—like previous medical history and immunisation records—and can match their needs with information about relevant available programmes and treatments.

Health programme managers can access information to track the progress of the programmes, and use the information when making decisions. This means that resources can more easily be directed to those areas where they are needed most.

What is a health information system?

A country's **HIS** is made up of all the data and records about the population's health. The sources of data include civil and vital registration (recording births, deaths and causes of death), censuses and surveys, individual medical records, service records and financial and resource tracking information.

In many cases the information is generated by different systems, and is not accessible in forms that can easily be collated and compared. This results in inaccuracy and inefficiency.

An **integrated HIS** is designed to pull together data from a range of sources, so that all information is stored in such a way that it can be easily found by users in different locations, in a form that is suited to their needs.

An integrated HIS could, for example, use information on an immunisation programme, along with data from birth and death records, and medical records relating to specific diseases, to track the effects of immunisation in specific districts, regions, nationally and globally. It would also make it possible to target interventions for the most vulnerable and show the efficiencies of programmes.

This knowledge is highly valuable in managing and planning how funds are best used.

The **HMN Framework** offers guidance on how effective systems can be developed at a country level, so that individual countries can use their resources most effectively, and at the same time help to coordinate health improvement at a global level.

Better HIS make sense for decision makers

Effective HIS offer government and health department officials a clearer understanding of the effects of their policies on the health of their people.

Managers responsible for public health programmes need reliable and timely information to identify the most pressing needs and the most effective ways to respond. Often this information is not available when and where it is needed, if it exists at all. This means that vital decisions can't be taken in an informed way.

To secure resources, to improve accountability and enable evidence-based decision making, managers need the reliable, relevant information that a strong integrated HIS offers.

The most serious global health problems are in poorer countries, and good health information is vital in tackling these problems.

In addition to the demands of country health issues, many international health programmes – like the Global Alliance for Vaccines and Immunization (GAVI), the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund), and others – require reporting on progress towards specific targets.

Business partners and aid donors who participate in health programmes can track their progress, and use the information to inform decisions about where to invest.

To ensure that resources are used effectively, better data help managers and decision-makers to plan and coordinate health interventions at a global level.

The HMN Framework assists countries developing the systems they need to properly monitor progress towards the UN Millennium Development Goals.

Evidence-based decision making at all levels...

Sierra Leone's revitalized District Health Information System (DHIS), based on the *HMN Framework*, is a computerized system designed to produce information on key indicators of public health performance, including the delivery of key services and the availability of drugs.

This information is then used by decision makers and leaders in chiefdoms, district offices and at the national level.

Sierra Leone's DHIS was developed by the country's Ministry of Health and Sanitation in collaboration with HMN and software developers at the University of Oslo, Norway.

The district health information system is designed to support an accountability structure by developing district health reports and facility health reports.... It will also contribute to improving better health outcomes and efficiency in the use of existing resources for service delivery.

Dr. Soccoh Alex Kabia
Minister of Health and Sanitation, Sierra Leone

By March 2009, 12 months after its launch, the DHIS had been extended to all 13 district health offices, throughout the nation of 5 million people.

The roll-out of the DHIS is a major milestone in the development of a functioning HIS in Sierra Leone and it will contribute tremendously to evidence-based decision making at both district and national levels.

Dr. Magnus Gborie
Ministry of Health and Sanitation, Sierra Leone

Strengthening country HIS

The *HMN Framework* is designed to be put in place according to principles of empowerment, leadership and ownership.

The *Framework* calls for broad-based consensus-building and an incremental approach to HIS development.

External partners and donors play a role in initiating action, but the countries themselves must sustain the necessary long-term investments.

The priority-setting process should be inclusive and transparent.

By building systems according to these agreed principles, countries will be able to harmonize, align and manage their own efforts and those of partners in a way that can be easily monitored and administrated.

It is important that implementation takes into account what can be realistically achieved with the available resources and capabilities.

The three-phase implementation process ensures that the system builds and maintains local support, by involving all local participants, and responding to local requirements and capacity.

Once the three-phase process is instigated, it sets in place a cycle of improvement, whereby the benefits of the HIS system are increasingly felt.

Medical practitioners and health workers gain improved access to information and easier maintenance of records. Decision-makers benefit from knowledge upon which to base their decisions.

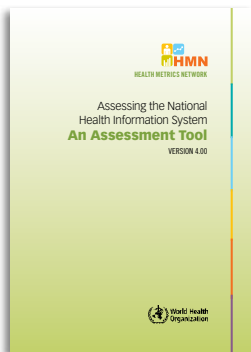
Senior decision-makers – like government ministers and managers – need to understand that health information makes a vital difference.

As these benefits become apparent to the system's users, they are increasingly willing to continue to play their parts in further strengthening the improved HIS.



Further information:

Health Metrics Network
World Health Organization
Avenue Appia 20, CH-1211 Geneva 27, Switzerland
Tel.: + 41 22 791 5494 Fax: + 41 22 791 1584
healthmetrics@who.int
www.healthmetricsnetwork.org



The *HMN Framework* describes the six basic components of a health information system, and standards required for each of these to achieve HIS goals. A four-page guide to these components — *Components of a Strong Health Information System* — is available from the HMN.



Working together...

The first step towards building a strong HIS is the country HIS assessment. This process brings together all stakeholders – like ministries, statistical agencies, public health institutions, and donors – and develops a thorough understanding of the need for HIS improvement and how it can be achieved.

By 2009 more than seventy HMN partner countries have established stakeholder working groups and applied their collective knowledge and experience to assess their national HIS components and indicators, and to finalise the assessment reports which form the basis for their HIS improvement plan.

Country ownership is the key to the success of the process. Stakeholder meetings are typically convened by the country's Ministry of Health.

Establishing a stakeholder working group to facilitate the assessment process is critical for success in coordinating efforts to strengthen HIS.

Dr. Sally Stansfield, HMN Executive Secretary.

A well-managed, country-owned HIS assessment provides a solid base for securing additional funding for HIS strengthening, such as from national government budgets, national development partners, donors, the Global Fund and GAVI.