Types of Data

Health information systems use data from different levels of the health-care system, including:

- **Individual level data**: About the patient's profile, health-care needs and treatment.

- **Health facility level data**: From facility level records and from administrative sources, such as health products stocks, consumption and supply, to determine resource needs, support health products procurement and supply chain management, and develop community outreach.

- **Population level data**: For public health decision-making to generate information not only about those who use the services but also, crucially, about those who do not use them; eg: from household surveys.

- **Public health surveillance**: Information from facilities and communities with a main focus on defining problems and providing a timely basis for action.

Data Sources

The main data sources of a comprehensive national health information system that are essential for measurement and accountability for results are:

- **Household surveys and census**: National health surveys to identify strategic priorities (e.g., Demographic and Health Survey, Multi-Indicator Cluster Survey). Quality censuses should be carried out on a regular 10-year cycles.

- **Civil registration & vital statistics**: Registration of births, deaths and other vital events occurrence and production of fertility and mortality statistics to understand burden of disease on the population.

- **Health facility and community information system**: Statistics from public and private health facilities and community health systems.

- **Disease surveillance**: Core surveillance using standardized case definitions, with active participation of communities and health workers.

- **Health systems data**: Databases on health facilities and services national health accounts, supply chain and logistics and health workforce registry to track health workforce statistics.

- **Non-health sector sources**: Sources of data from statistics offices and ministries overseeing water and sanitation, education, agriculture etc.

Considerations for the selection of health programme indicators

Indicators are signposts of change along the path to development. They describe the way to track intended results and are critical for monitoring and evaluation. Good performance indicators are a critical part of the results framework.

In particular, indicators can help to:

- Inform decision making for ongoing programmes;

- Measure progress and achievements, as understood by the different stakeholders;

- Clarify consistency between activities, outputs, outcomes and impacts;

- Ensure legitimacy and accountability to all stakeholders by demonstrating progress;

- Assess activities and staff performance.

Health indicators should be valid, reliable, specific, sensitive and feasible/affordable to measure. They must also be relevant and useful for decision-making. The main challenge is to identify a small set of indicators. Individual programme areas often have a defined minimum list of indicators, often at the instigation of external partners and donors. When combined, these indicators can create a huge burden in terms of data collection. A rational selection of a set of core health indicators is therefore essential.

Data on age and gender and non-discriminatory accessibility and quality of services can be particularly critical in HIV prevention and care, since the population groups most vulnerable to infection continue to face legal and cultural barriers in accessing health care. In many countries it can be challenging collecting data on most-at-risk populations due to the profound stigma and discrimination directed towards them. It may be important to carry out qualitative behavioural studies and operations research to complement data collection, analysis and synthesis.

Considerations for the use and sourcing of data

Health planners and decision-makers require different kinds of information, including on:

- Health determinants (socioeconomic, environmental, behavioural and genetic factors) and the contextual environments within which the health system operates);

- Inputs to the health system and related processes (health infrastructure, facilities and equipment, human and financial resources);

- The performance or outputs of the health system (availability, accessibility, quality of health information and services, responsiveness of the system to user needs);

- Health outcomes (mortality, morbidity, disease outbreaks, health status, disability and well-being);

- Health inequalities (sex, socioeconomic status, ethnic group and geographical location).

Data entered into a health information system need to be organized for multiple uses, as different users have different needs. Clinicians use the information from the health information system to manage patients' care and coordinate integrated services. Hospital administrators use information to monitor patient safety and quality of care. Policymakers track the incidence and prevalence of health conditions, and quantity of service consumption, to decide on the best use of financial resources.