

Overview of Health Information System

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Health Information System: what is it?

- A system for generation, storage, transmission, analysis and use of health data to support decision-making
- The goal of a national health information system is to ensure the availability, quality, safety, comparability and use of health data at all levels: national, subnational and facility.
- A good health information system is robust and brings together all relevant partners and ensures that users of health information have easy access to data and information.

Key components of an NHIS

Governance for health information system

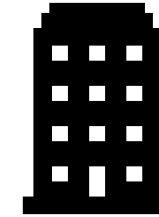
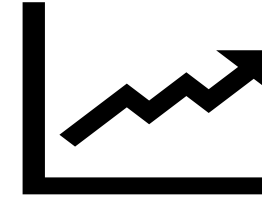
Systems for data generation, storage and transmission

Systems to support data analysis

Systems to support data use

Inextricably linked components

Key Sources of Data in the African Region



Health facilities:

- Routine health information system
- Facility assessments

Household surveys e.g.

- WHS+, DHS, MICS, AIS, MIS, STEPS

Civil registration and vital statistics systems

Modelled estimates e.g. by NSOs, WHO and other UN agencies, IHME

Admin records on :

- Human resources
- Financing
- Infrastructure
- Logistics

Disease surveillance and research

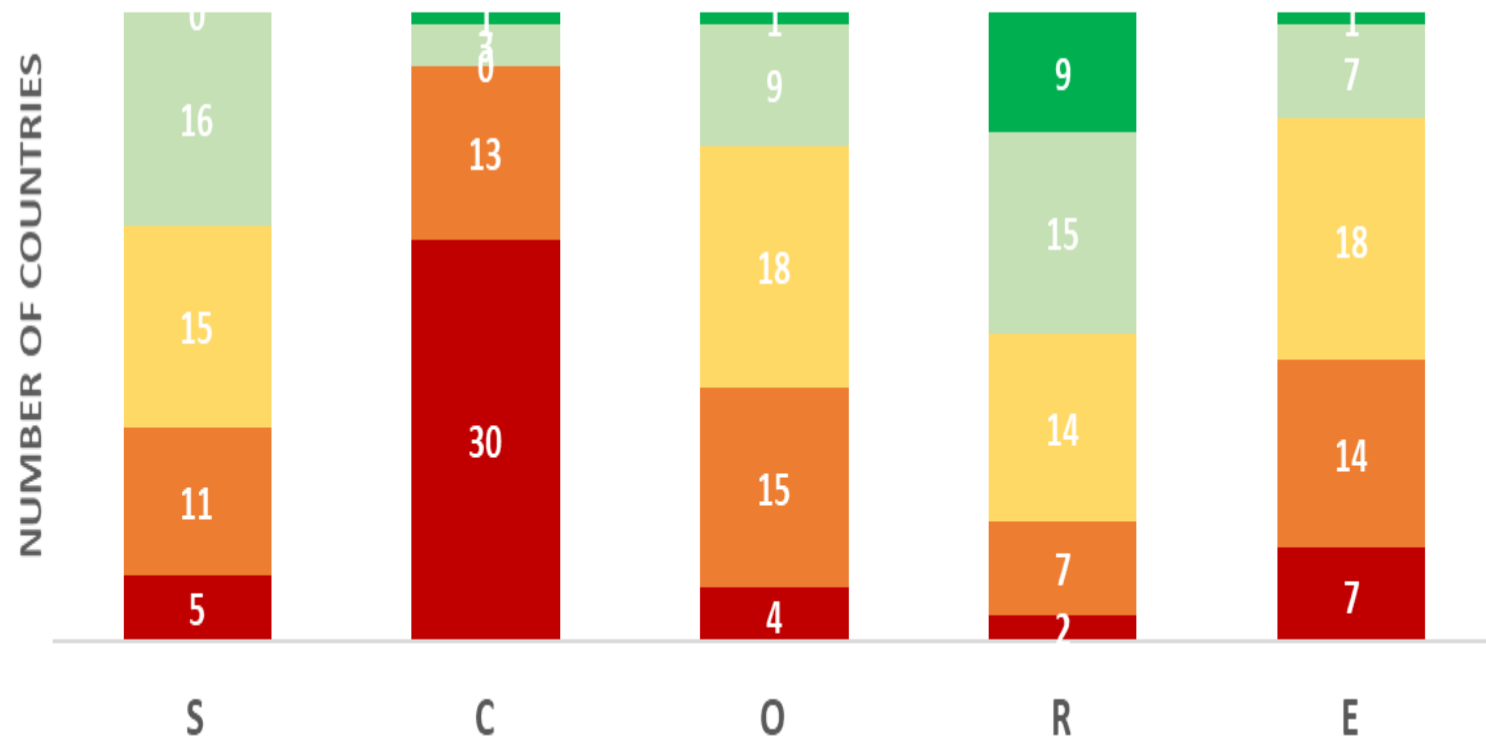
All these systems should operate within a single framework for national health information system, with the MoH playing a lead or central role

Status of the Health Information System in the African Region



SCORE RESULTS - AFRICA (2018)

■ Nascent capacity
 ■ Limited capacity
 ■ Moderate capacity
■ Well-developed capacity
 ■ Sustainable capacity



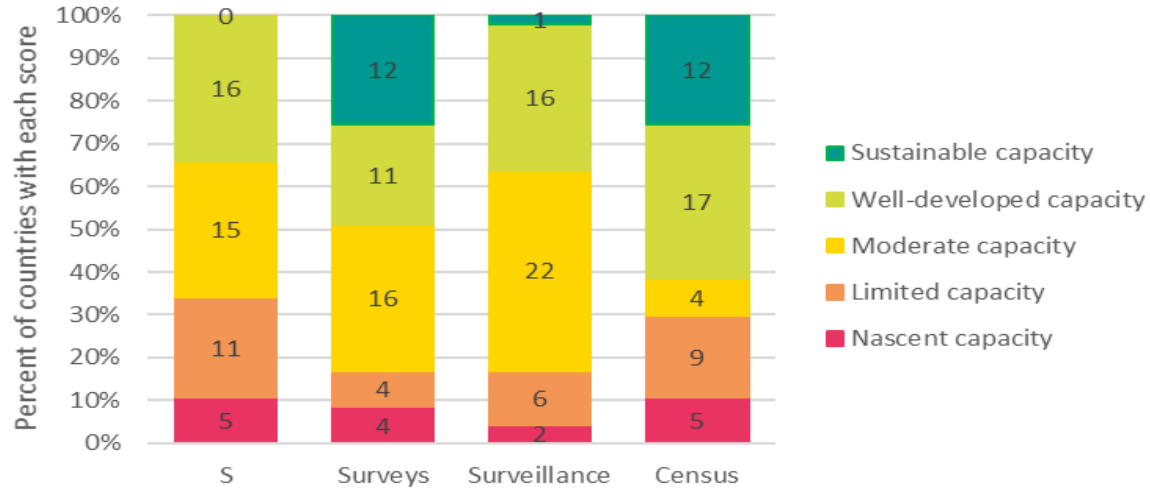
- Capacity of the NHIS in the African Region to generate good quality, disaggregated and comparable data in a timely manner and use it to support decision-making is currently insufficient.
- Routine health information systems are beset with data quality problems – low completeness and high inconsistencies
- Capacity to count births and deaths (CRVS) is the weakest, with up to 30 of the 47 countries having almost no capacity at all.
- Household surveys and facility assessments are infrequently done
- Capacity to analyze and use data for decision making is insufficient

SCORE Results for Africa (2018)



World Health Organization

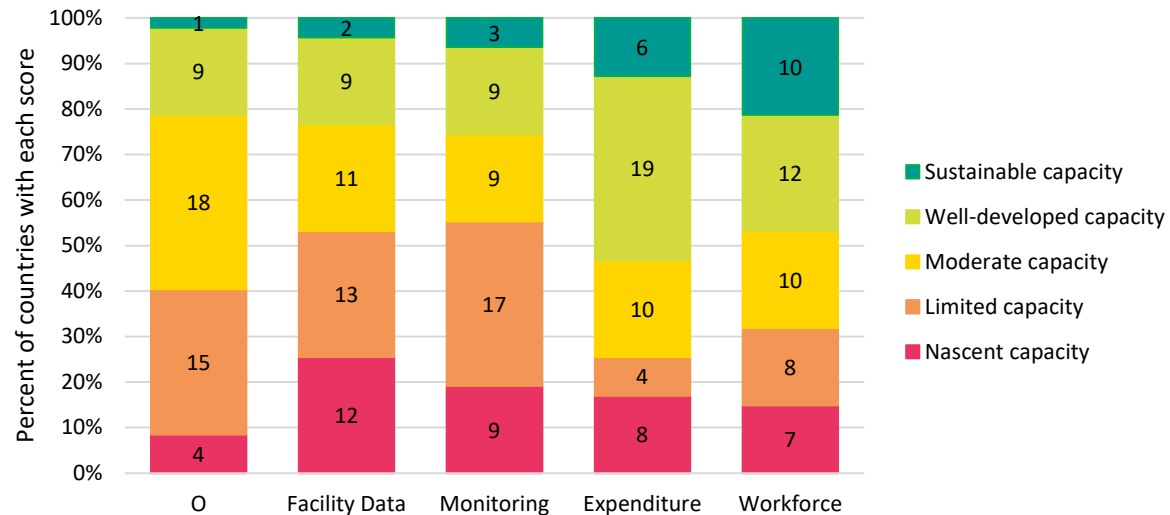
Overall distribution of S (and key elements)



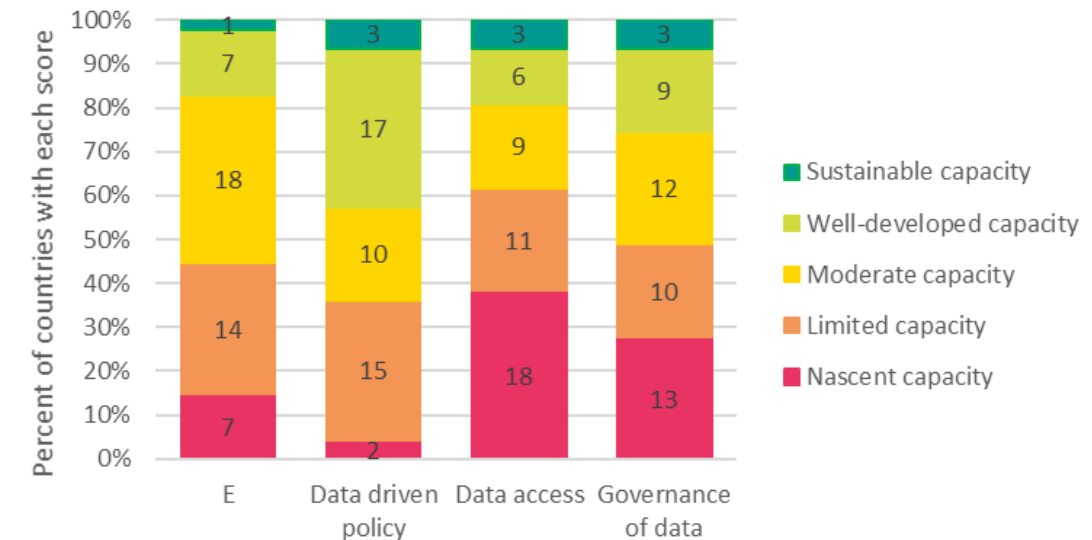
Overall distribution of R (and key elements)



Overall distribution of O (and key elements)



Overall distribution of E (and key elements)



Low availability of data for HIS indicators



Percent of AFRO Countries with At Least One Data Point since 2013 (N=47): (WHO SCORE 2018)



- Some data are more available for some indicators than others
- Somewhat high availability of RMNH and health system data
- Poor availability of NCD and cause-specific mortality data
 - **WHY?**

Key drivers of the Underperformance of the National Health Information System in African Region



- Gaps in the HIS leadership and governance – perhaps the biggest challenge:
 - Insufficient appreciation of the importance of data and evidence in decision-making – political will is therefore limited
 - Limited leadership/central role of the MoH in some data systems such as CRVS
 - HIS strategic plans, policy, and legal documents: either lacking, outdated, or insufficiently elaborated to capture all the data needs of the country
 - Limited investments in HIS
- Fragmentation and insufficient coordination of national HIS:
 - Due to perceived inability of the NHIS to meet the data needs – sometimes donor driven
 - Results in duplication, limited data access, high cost of data collection, fragmentation of resources, and increased burden of reporting
- Limited capacity of HIS workforce to generate and analyse health data and produce reports:
 - Numbers, knowledge and skills, deployment; limited involvement of local institutions

Key drivers of the Underperformance of the Health Information System in African Region



- Prioritization of only some sources of data – e.g., CRVS, household surveys, facility assessment, administration data (on human resources, health financing, health infrastructure and medicines) are not sufficiently prioritized
- Limited use of data standards such as the WHO Family of International Classification – makes data integration, comparability and data quality improvement efforts difficult.
- Paper-based systems for collection and reporting of data
 - Cumbersome and prone to errors and delays in data collection and reporting
- Limited data and information use
 - Policies that restrict access to health data
 - Limited implement of open-access platforms such as health observatories
 - Little effort put to improve the availability and quality of data

What changes should happen at country level

The goal for HIS improvement in countries

- ❑ A fully functional national, district, and facility health information system in each country, with capacity to:
 - Timely generate good quality, disaggregated and comparable data from all key sources and for all the key indicators, including along the life course
 - Safely store and transmit data
 - Analyse data and generate key information routinely and timely
 - Support and ensure utilization of data/information in decision-making

1. A strong HIS governance , with leadership and ownership responsibilities of MoH



- One government led coordination mechanism with full participation of all stakeholders
- One common investment framework, one monitoring and accountability framework
- One overarching, properly elaborated and up-to-date HIS strategic, policy and M&E framework

- A detailed description and full implementation of a national data architecture framework showing how data are managed; from collection through to transformation, distribution, and consumption
- An M&E framework with a harmonised set of indicators for health measurement
- One fully harmonised or integrated data system built around one central repository such as DHIS 2

- Favourable data sharing policies and enhanced data access
- Enhanced HIS health workforce, with ability to generate, analyse, interpret and communication health data/information
- A more institutionalized capacity for data generation, storage, analysis and use

- Regular reviews of HIS status and continuous improvement
- Alignment with international goals and standards for enhanced quality and comparability of data – WHO-FIC, indicators etc
- Inclusion of HIS in the curriculum for training all health workers

2. Robust systems for data generation, storage and transmission – taking advantage of innovations in information technology



- ❑ Implementation of digital solutions for data collection, transmission, storage, analysis and communication:
 - Use of electronic medical / health records systems to enhance the speed, accuracy and efficiency of data collection and reporting, and reduce the burden of reporting on health workers
 - Optimize dhis2 as a central data repository, and deploy its data entry screen in health facilities
 - Ensure integration or interoperability of electronic systems for seamless and near real-time exchange of data
 - Enhance events-based and case-based reporting – to facilitate disaggregated data analysis
 - Focus on innovations that facilitate tracking of patients with chronic illnesses and during health emergencies

- ❑ Improved availability and quality of data from all key sources through strict adherence to the frequencies and schedules defined in the data architecture framework – routine HIS, civil registration and vital statistics systems, household surveys, facility assessments, disease and mortality surveillance, administrative systems etc.

- ❑ Implementation of international data standards such as the reference classifications in the WHO family of international classifications- to enhance the accuracy of data reporting, data comparability and integration.

3. Strong systems and capacity for data analysis, interpretation and information and knowledge generation



- ❑ An HIS workforce that has functional knowledge and skills to analyse data at national, subnational and facility level; supported by:
 - A pool of technical experts at national level
 - National public health or academic institutions

- ❑ Availability and quality of tools and processes for data analysis, including a step-by-step guide for data analysis and coordination of data analysis activities

- ❑ Adherence to schedules for data analysis for development of key reports such as annual statistical bulletins, annual performance assessment reports, and mid-term review reports – as defined in the data architecture framework

- ❑ Inclusion of the common approaches to analysis of health data in the curriculum for training of health workers

4. An elaborate system/mechanism and capacity for communication of health data and information that facilitate their use in decision-making



- An elaborate communication plan; covering both formal & informal, & internal & external communication; with clear products, contents, channels & schedules of communication
- A workforce with knowledge & skills to generate and communicate health information & knowledge products e.g., policy briefs, analytical reports, best practices
- Availability and use of tools and processes for development of information and knowledge products
- Implementation of open-access communication mechanisms such as a national health observatories, policy dialogue events, EVIPNet, and dashboards
- Availability and functionality of systems for Regular monitoring of use of health data and information in key decisions, including by managers and clinicians

THANK YOU