INFORMATION SYSTEMS FOR HEALTH – IS4H
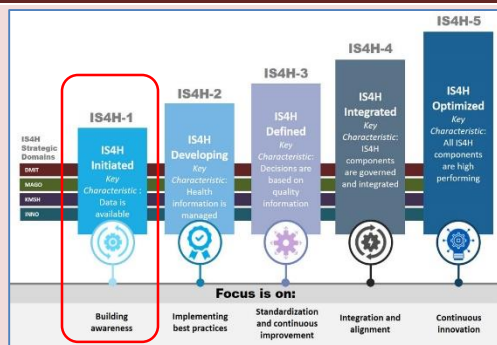
Pan American Health Organization

World Health Organization REGIONAL OFFICE FOR THE Americas

Department of Evidence and Intelligence for action in Health

The IS4H-Maturity Model is a reference framework guiding Information Systems for Health to keep walking along the path of change marked by the information and knowledge revolution and shows how countries and organizations grow in capabilities to operate, interact and benefit from them. The IS4H-MM is organized according to the 4 strategic goals of the IS4H conceptual Framework and the 4 Strategic Areas of the Plan of Action for the Americas.

Data Management and Information Technologies

Maturity Level 1 Characteristics	IS4H Framework components
• Data is not collected, and some data is available from external estimations (international organizations)	Data Sources
• Indicators are not generally produced by the national health authorities. • Indicators rely heavily on estimates from international organizations.	Information Products
• There are few, if any, formal data standards enforced.	Standards for Quality and Interoperability
• There a few if any best practices for data management implemented. • Data management is largely ad hoc. • There are no formal mechanisms for decisions about data quality and standards.	Data Governance
• Basic tools and technology (hardware, software, internet connectivity) are not widely available.	IT Infrastructure

Management and Governance

Maturity Level 1 Characteristics	IS4H Framework components
• Accountability and decision-making for IS4H is distributed across different units within national health authorities, and investments and activities are typically not coordinated.	Leadership and Coordination
• There is no current National Health System Strategic Plan, and IS4H components are not reflected in operational plans.	Strategic and Operational Plans
• Some IS4H functions are formally defined and performed, but there are significant gaps.	Organizational Structures and Functions
• There is little awareness of the human resource requirements to support IS4H.	Human Resources
• IS4H activities/resources are not formally identified in program/unit budgets. • While it is sometimes possible to secure one-time financial resources for IS4H investments, required investments are difficult to sustain.	Financial Resources
• Identified key stakeholders are from the public health sector exclusively.	Multisectoral Collaboration
• There is general awareness that there are gaps in legislation, policy and compliance mechanisms that create barriers to the effective use of IS4H, but specific gaps and needs have not been formally documented.	Legislation Policy and Compliance
• There is some awareness of data and reporting obligations under national and international agreements, but little capacity to meet obligations.	National and International Agreements

Knowledge Management and Sharing

Maturity Level 1 Characteristics	IS4H Framework components
• Knowledge sharing in the organization is ad hoc and Organizational knowledge resides with key individuals rather that on repeatable processes documented in unit descriptions, job descriptions, policies and SOPs.	Knowledge Processes
• Knowledge management is felt as a need, but there is little knowledge and expertise in this matter. • Although some basic knowledge management technologies and tools are available (physical library of internal resources, shared drives), they are not consistently or organized. • Accessing organizational knowledge is time-consuming and difficult.	Knowledge Architecture
• There are routine public health communications on national priority issues (e.g., healthy lifestyle, vector control, etc.). • Data and information typically flow only from source to the central level.	Strategic Communications
• Communication with civil society and the public is typically "one-way" (e.g., through websites and advertising).	Social Participation
• No formal relationships have been established between health authorities and the academic/scientific community.	Academia/Scientific Community
• Networks for knowledge sharing are typically ad hoc and informal.	Networks

Innovation

Maturity Level 1 Characteristics	IS4H Framework components
• Leadership and staff are not familiar with IS4H concepts.	Key Concepts
• Standard statistical analysis is routinely applied to available health data to generate reports on health status and outcomes. • Most health analysis is focused on the generation of indicators, although other types of health analysis are done on an ad hoc basis are required for special presentations and projects. • Information is used to support decision-making in limited circumstances, but evidence-informed decision making is integrated into the policy and management culture.	Health Analysis for Decision-making
• Basic tools are routinely used for health analysis (e.g., spreadsheets, MS Access, etc.).	Tools
• Health care delivery and services are largely manual processes. • Assessing digital technologies in health incl health information systems at national/subnational level to identify areas of improvement.	Digital Health
• E-government is not on the national agenda.	eGovernment
• The concepts of Open Government are new to leadership.	Open Government
• Manual and electronic health information systems are vulnerable to failure in the event of a natural disaster or other catastrophic event. • Limited data available to support disaster response .	Preparedness and Resilience