Pan American
Health
Organization

World Health
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REGIONAL OFFICE FOR THE Americas

IS4H
TOOLKIT
KNOWLEDGE
CAPSULES

DATA GOVERNANCE IN PUBLIC HEALTH

DEPARTMENT OF EVIDENCE AND INTELLIGENCE FOR
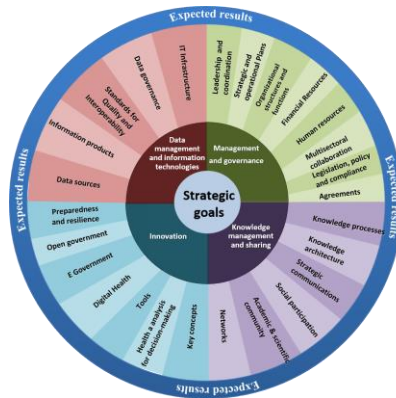ACTION IN HEALTH
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Information Systems for Health Toolkit

Knowledge Capsules
Understanding Data Governance in Public Health

IS4H-KCDG

Acknowledgments

Version 1.0 – May 2019

Department of Evidence and Intelligence for Action in Health
Pan-American Health Organization - World Health Organization

What is data governance and why is it important?

- Many countries are working to strengthen their capacity to use health information to inform policy, strategy, and operational and clinical decision-making.

- Despite the proliferation of data, many health organizations struggle to generate information that provides practical insights. Data governance is a management discipline that gives organizations control over their data and improves their capability to use data to generate quality information that can inform decision-making.

- Data governance prioritizes investments, establishes policy, protects data and information assets, and determines accountabilities and processes for managing data and information.

Data governance is a set of practices for making decisions about data and for managing data throughout its lifecycle to optimize the organization's capability to use data to generate information that informs policy, strategy, and operational management.
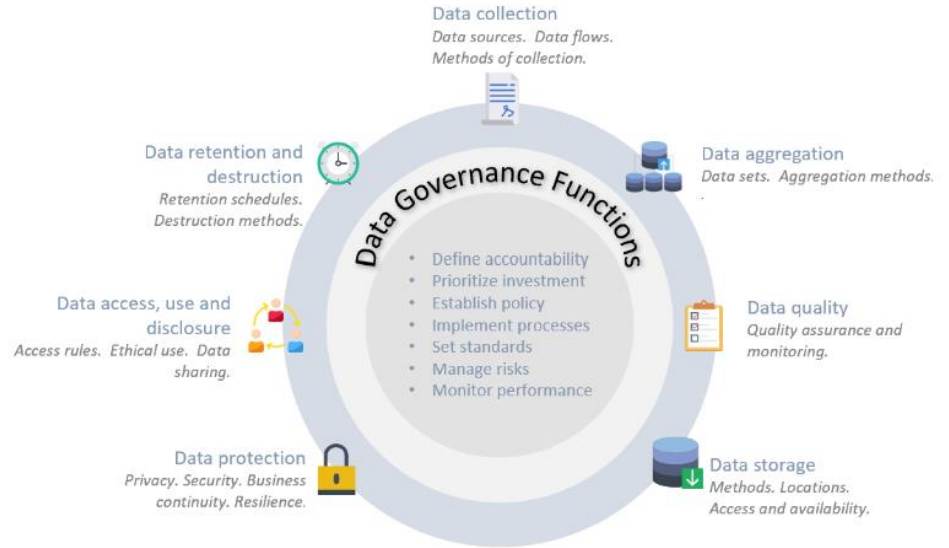
- Many health organizations recognize the importance of their data and information assets, but struggle to understand:
  - Who "owns" the data, and who can make decisions about data;
  - Where is data is stored and who can access it;
  - How to ensure data quality and interoperability;
  - How to protect data from threats such as inappropriate access and use, and;
  - What tools, resources, and skillsets are needed to manage and use data effectively.
- Data governance enables organizations to effectively manage, protect, maintain, and use data to generate information that improves health care quality, health outcomes, and health system performance.

What organizations should implement data governance?

- Any organization that collects, manages or uses health data should implement data governance practices. There are often many different organizations involved in the collection, management and use of health data. It is important that data governance structures and practices are aligned, and ideally integrated, across organizations with health data assets. An integrated and collaborative approach to information governance enables health organizations to effectively manage, maintain, and use data to improve health care quality and performance within and across organizational boundaries.

- In many countries, the Ministry of Health is best positioned to take on the national leadership role in establishing data governance within the health system. However, depending on the national context, other national agencies could also take on a leadership role.

- Whether or not the Ministry of Health takes on a national leadership role for data governance, as an organization that collects and uses health information for decision-making, it should establish its own data governance practices. Where applicable, the Ministry of Health should look to align its data governance practices with other key national stakeholders, such as the national statistics authority or the national vital statistics authority.

What should data governance address?

- Data governance functions should include defining accountabilities, prioritizing investment requirements, establishing policies, implementing processes, setting standards, managing risks, and monitoring performance related to data throughout its lifecycle.

Data collection
Data sources. Data flows. Methods of collection.

Data retention and destruction
Retention schedules. Destruction methods.

Data aggregation
Data sets. Aggregation methods.

Data access, use and disclosure
Access rules. Ethical use. Data sharing.

Data Governance Functions
- Define accountability
- Prioritize investment
- Establish policy
- Implement processes
- Set standards
- Manage risks
- Monitor performance

Data quality
Quality assurance and monitoring.

Data protection
Privacy. Security. Business continuity. Resilience.

Data storage
Methods. Locations. Access and availability.

How is data governance implemented?

- Data governance is an organizational capability. Organizations should expect that it will take investments of both time and resources to implement and strengthen data governance. Data governance is a journey of continuous improvement.
- To plan, implement, and continuously improve data governance, organizations should consider people, processes and technology. The table below provides a high-level framework for planning and implementing data governance.

People	Processes	Technology
Decision-making Structure Establish a data governance structure which includes both executive decision-making and technical bodies to define priorities for investment, develop and endorse policies and standards, and to identify and manage risks.	**Data Asset Management** Develop an inventory and classification of data assets, and document data standards (e.g. health data dictionary). Define and document data flows. Define principles and rules for data retention and destruction.	**Tools and Technology** Identify and implement the tools and technologies (software and hardware) required to effectively manage data throughout its lifecycle, and to generate information for decision-making.
Roles and Responsibilities Define operational functions and responsibilities for the management of data throughout its lifecycle. Clarify decision rights. Identify and validate data owners, data stewards, and data consumers.	**Enabling Processes and SOPs** Establish and document processes and standard operating procedures (SOPs) for managing data throughout its lifecycle (e.g. data collection, data quality, storage, access, use, destruction, etc.).	**Quality, Availability and Security** Ensure information systems are designed, implemented and maintained to ensure quality, availability and security of data.
Communication and Transparency Educate stakeholders on roles, responsibilities, policies and processes for data management. Ensure that decisions related to data are documented and widely communicated. Monitor and communicate adherence to policies, processes, and standards.	**Standards and Policy Management** Establish collaborative processes for the ongoing management and oversight of standards (e.g. data dictionaries, taxonomies and business rules) and policies (e.g. data management principles, privacy and security policies, guidelines for secondary use of data, etc.).	**Performance** Ensure hardware, network infrastructure, software and storage are monitored for performance (e.g., availability, reliability, usability, cost-effectiveness, etc.). Identify remediation strategies for technology performance improvement (e.g. configuration, training, investment).

Toolkit metadata

Name	**Understanding Data Governance in Public Health**
Acronym	IS4H- KMCAI
Version	1.0
Date	October, 2018
Description	**Knowledge Capsules** are "rapid learning materials" in which we will provide health workers with knowledge, information and data on specific subjects, in a practical, dynamic and useful way. Each capsule is related to the IS4H technical elements. This knowledge capsule is about Artificial Intelligence and Public Health.
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