Curriculum Development Centers Program

Awardee of The Office of the National Coordinator for Health Information Technology

Data Quality Improvement

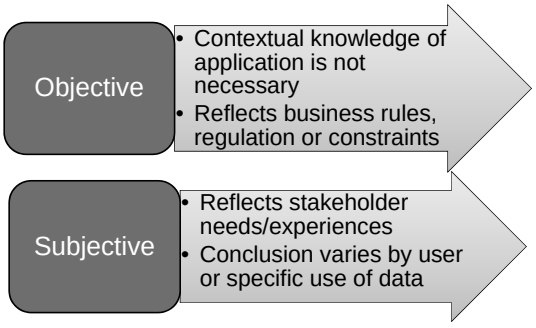
This material was developed by Johns Hopkins University, funded by the Department of Health and Human Services, Office of the National Coordinator for Health Information Technology under Award Number IU24OC000013.

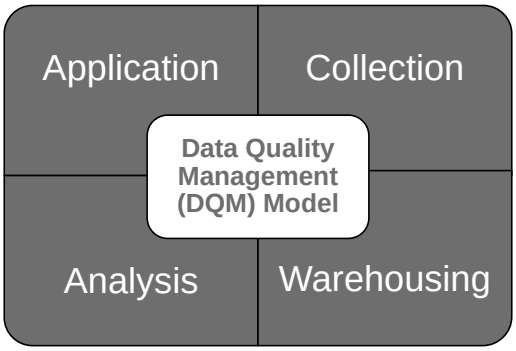
Objective

At the end of this segment, the student will be able to:

- Identify ten attributes of data quality and key process recommendations

Data Quality





Data Quality Attributes

- Definition
- Accuracy
- Accessibility
- Comprehensiveness
- Consistency
- Currency
- Timeliness
- Granularity
- Precision
- Relevancy

Data Quality Attributes

- Definition
- Accuracy
- Accessibility
- Comprehensiveness
- Consistency
- Currency
- Timeliness
- Granularity
- Precision
- Relevancy

Definitions of Data

- Definitions should be provided so current and future users will know what the data mean
- Each element should have clear meaning and acceptable values

AHIMA, 2006

Definitions of Data

Example:
An organization is preparing to participate in a nationally recognized surveillance system for public reporting of hospital-acquired infections. First, they review the definitions for all variables to be submitted to assure they match the definitions required by the database.

Definitions of Data

Key process recommendations:
Develop a data dictionary that represents agreement of all users on the standard definitions, normal and abnormal values, variable properties, etc., that are included in the data. Responsibility for oversight of the management of the data must be assigned.

Data Quality Attributes

- Definition
- Accuracy
- Accessibility
- Comprehensiveness
- Consistency
- Currency
- Timeliness
- Granularity
- Precision
- Relevancy

Accuracy of Data

- **Correct values**
- **Valid**
- **Attached to the correct patient record**

AHIMA, 2006

Accuracy of Data

Example:
The patient's health insurance information must be accurate for billing purposes. If a reference table is available with the codes of all pre-approved insurance providers, an automated process can be put into place to verify data accuracy. Other insurer codes can be entered manually after pre-approval.

Accuracy of Data

Key process recommendations: Establish policies/procedures and provide guidance to ensure integrity, validity and reliability of the data.

AHIMA, 2006

Data Quality Attributes

- Definition
- Accuracy
- Accessibility
- Comprehensiveness
- Consistency
- Currency
- Timeliness
- Granularity
- Precision
- Relevancy

Accessibility of Data

- **Easily obtainable**
- **Legal to access with strong protections and built-in controls**

AHIMA, 2006

Accessibility of Data

Example:
A quality improvement team at a home care agency needs demographic data to complete a clinical outcome analysis for their congestive heart failure patients. They complete the required forms and are granted time-limited access to designated tables in the agency's data warehouse that contain the needed demographics.

Accessibility of Data

Key process recommendations:
Gain consensus on defined minimum amount of data to be accessible to participants to support their mission/objectives. Provide protection controls with traceable audit capability.

Data Quality Attributes

- Definition
- Accuracy
- Accessibility
- Comprehensiveness
- Consistency
- Currency
- Timeliness
- Granularity
- Precision
- Relevancy

Comprehensiveness of Data

- **Required data items are included**
- **The entire scope of required data are collected**
- **Intentional limitations are documented**

AHIMA, 2006

Comprehensiveness of Data

Example:
Hospitals are at risk for non-payment if a patient develops a pressure ulcer in their care. Prompts can be written to require a detailed assessment to determine if any pressure areas were present on admission. This assessment includes the location, size and extent of tissue damage.

Comprehensiveness of Data

Key process recommendations:
Establish guidelines for the most recent and comprehensive data required for the participants mission/objectives.

AHIMA, 2006