Data Quality Improvement

Unit 11.3: Common Causes of
Insufficient Data Quality & Design
Recommendation

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Version 1.0/Fall 2010
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Objectives

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

- Discuss common causes of data
  insufficiency
- Describe how health information
  technology (HIT) design can enhance
  quality

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Causes of Insufficient Data Quality

Systematic
- Unclear or ambiguous definitions
- Incomplete or unsuitable data
- Violations of data collection or
  processing protocols
- Poor screen /interface design
- Programming errors
- Lack of data quality checks

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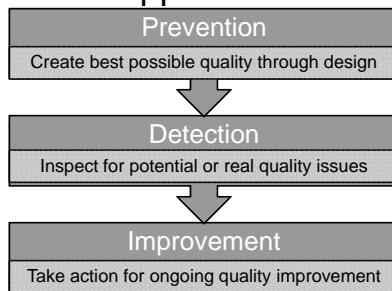3

Causes of Insufficient Data Quality

Random

- Inaccurate transcription or typing errors
- Data overload
- Motivational or turnover

Data Quality Enhancement Opportunities

Prevention
Create best possible quality through design

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Detection
Inspect for potential or real quality issues

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Improvement
Take action for ongoing quality improvement

Best Practices: Prevention

Identify required data elements

Develop a data dictionary

Optimize data capture

Establish collection guidelines

More Best Practices: Prevention

Control user access

Develop user-friendly screens

Create a data monitoring plan

Educate users

Best Practices: Detection

Automatic data checks

Conduct audits/data quality checks

Review collection protocols & report logic

Assess variability in data

Best Practices: Improvement Actions

Provide regular reports to users

Correct inaccuracies & complete missing/incomplete data

Document & correct detected errors

Implement identified system changes

Summary

- Clinical data drive health care decisions.
- Poor data quality have a significant negative impact on healthcare outcomes
- Data quality is multi-dimensional
- Insufficient data are linked to a number of systematic and random causes.
- HIT professionals can use best practices enhance data quality