Digital Transformation of Healthcare

Study Design and Data Collection

Michoel Snow, M.D. Ph.D., Glen Ferguson, Ph.D.

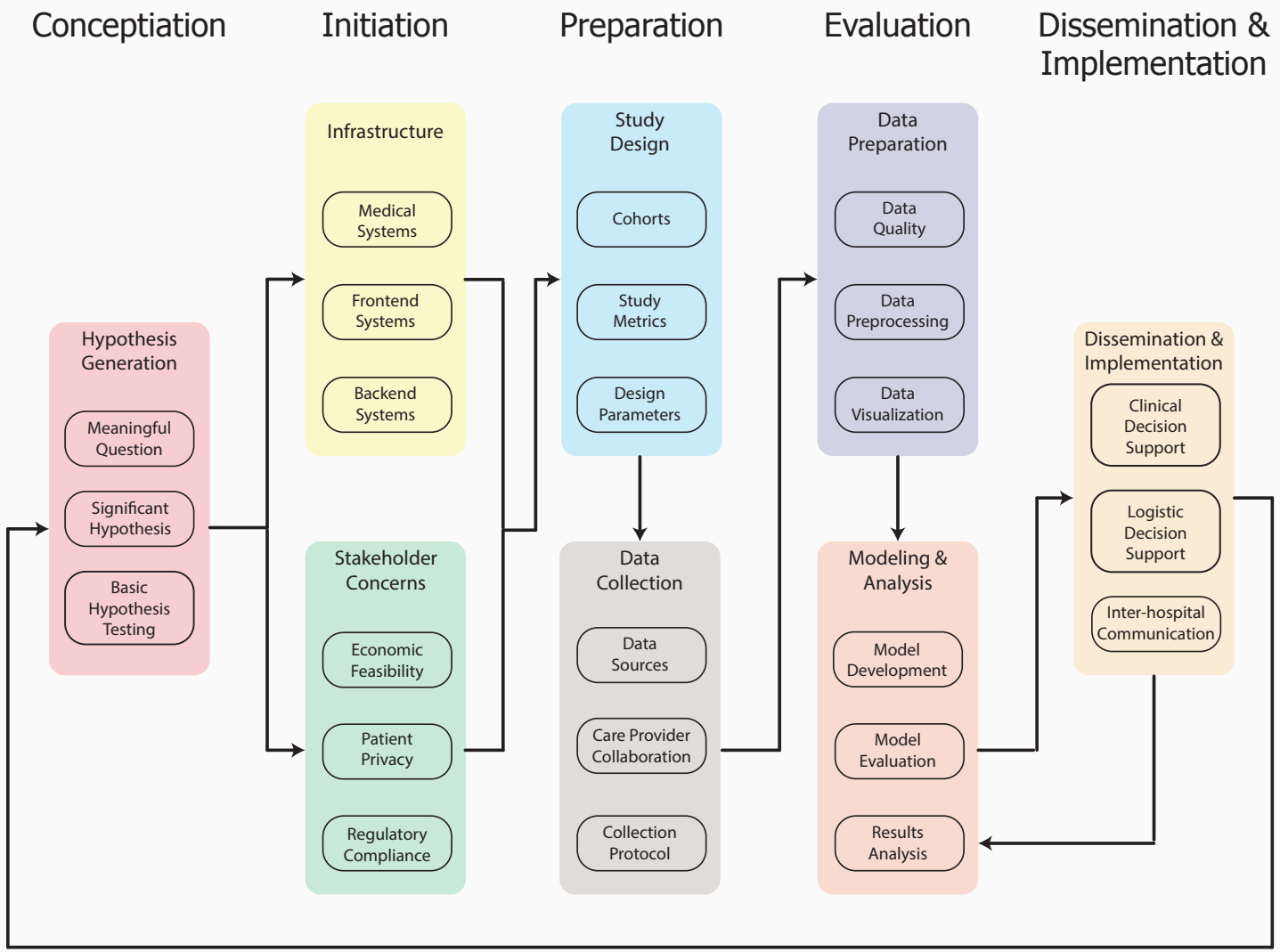
Center for Health Data Innovations

Study Design and Data Collection

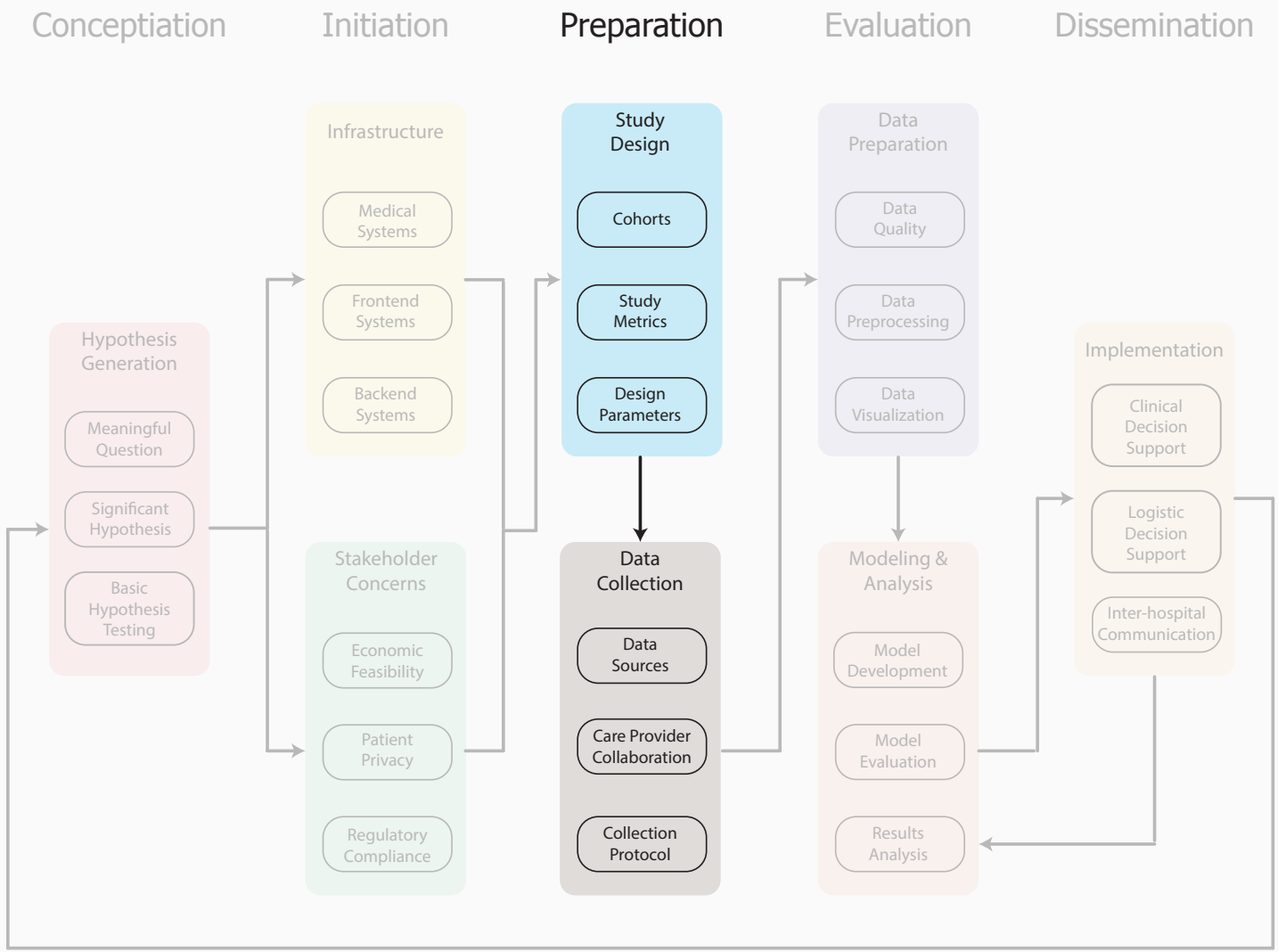
After this lecture students will be able to

- Assess the quality of data
- Trace the steps where data quality can be affected
- Define measures to ensure quality assurance and quality control of data
- Describe the components of an ETL pipeline
- Examine data for problems and discuss possible causes
- Design a process for imputation of missing data

Bioinformatics Pipeline



Study Design and Data Collection



Ancillary Data Sources

- What other kinds of data can be useful to a study (in addition to those generated by the hospital)?

Ancillary Data Sources

- What other kinds of data can be useful to a study (in addition to those generated by the hospital)?
- What are the different ways to get that data?

Mobile Health Overview

- What devices can we use?

Mobile Health Overview

- What devices can we use?
- What information can we get from patients, using these devices?

Mobile Health Overview

- What devices can we use?
- What information can we get from patients, using these devices?
- What information should we get from a moral standpoint?

Mobile Health Overview

- What devices can we use?
- What information can we get from patients, using these devices?
- What information should we get from a moral standpoint?
- What information do we want and how often do we want it?

mHealth Usability

- What elements do you have to consider when designing mHealth applications?
- What are the technical (backend) issues?