Digital Transformation of Healthcare

Study Design and Data Collection
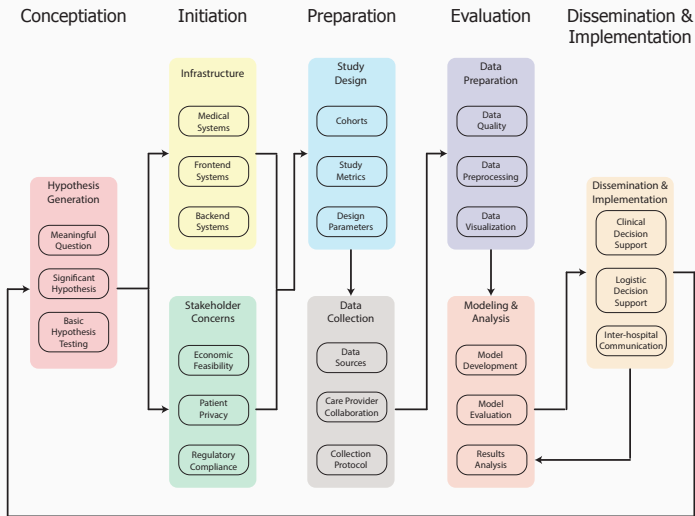
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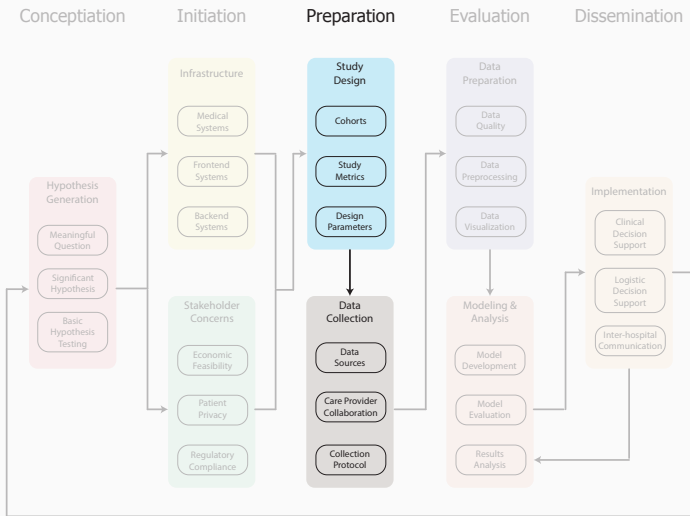
Study Design and Data Collection

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

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Ancillary Data Sources

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- Other Data - Weather data, public health records

- Try to find that data live (csv, api, scraping), can you trust the data source?
    - Weather - download data, weather underground, wunderweather
    - Twitter - api
    - football - scraping (ethics of scraping)
    - Other - ilinet (flu view) pdfs (new york state influenza surveillance)

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- Phones, computers/internet, alexa/google home, smart watches
- passive vs active data collections

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mHealth Usability

- What elements do you have to consider when designing mHealth applications?
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- Some of the main components of usability are - learnability, efficiency/speed, memorability, low error rate, satisfaction

- interoperability, data security, confidentiality, integration with current health care systems