



# Informatics

## Informatics Domain Definition

To conduct research within the context of real-world health systems using appropriate study designs and analytic methods to assess outcomes of interest to health systems stakeholders.

## Domain Competencies and Objectives Relevant to Informatics

- Using data from electronic health records and other clinical information sources for quality improvement
- **Using data from clinical information systems (e.g., EHR, decision support, medical imaging, dashboards) for research\***
- Using data to assess and monitor the health of specific populations (e.g., health system, provider clinics)
- Identifying and using additional data sources (e.g., registry, Medicare, geographic) that can be linked to health system clinical data to improve the accuracy of intervention and outcome data
- **Assessing data quality (e.g., accuracy, missingness) and processes for ensuring data quality (e.g., error prevention, following data standards)\***
- Assessing social and behavioral determinants of health

\*Competencies in **bold** are highlighted in this Use Case

## Applied LeaRRning Case: Data Quality In Electronic Medical Record Research

This case presented by Dr. French focuses on assessing the quality of data within the electronic health record. She discusses examples of data quality assessments she conducts in her work and shares data science and reproducible research principles for streamlining this process.

## Learning Resources to Advance Your Competencies in Informatics

### Introduction to Informatics

- [Electronic health records to facilitate clinical research](#)

### Readings

- [A harmonized data quality assessment terminology and framework for the secondary use of electronic health record data](#)
- [Methods for enhancing the reproducibility of biomedical research findings using electronic health records](#)

### Other Resources

- [EHR Data Quality: Johns Hopkins Informatics Grand Rounds](#)
- [Reproducible Rehabilitation \(ReproRehab\) Research Educational Program](#)
- [The OMOP Common Data Model](#)

### Tools

- **[REporting of studies Conducted using Observational Routinely-collected health Data \(RECORD\)](#)**
- [OMOP Standardized Vocabulary](#)
- [Data Quality Dashboard](#)
- [ReproRehab Database](#)

\*Bolded items were presented in the case.

To continue learning about Informatics visit the [LeaRRn Resource Database](#)