

Syllabus

Introduction to Learning Health System Research

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The mission of the QPSi is to pioneer AI-enhanced quality and patient safety innovations to optimize health care delivery and reduce preventable harm.

The QPSi provides a comprehensive Academy to train health professionals, students, board members and other stakeholders in the fundamental and advanced topics pertaining to quality improvement, patient safety, health care delivery, and applications of artificial intelligence to these domains.

This course provides an overview of the foundational principles of conducting research in a learning health system environment. This course will provide introductory knowledge regarding the relevance of various topics to the learning health system, including learning health system researcher competencies and improvement and implementation science.

COURSE OVERVIEW:

In 2007, the Institute of Medicine (IOM) proposed the Learning Health System (LHS) concept as an integrated clinical, operational, and research health system environment focused on improving quality and outcomes of care. The LHS integrates improvement science strategies and an array of other scientific methodologies at the point of care to improve quality and accelerate the translation of scientific discovery into practice.

COURSE OBJECTIVES:

- Identify key features of learning health systems
- Connect learning health systems competencies with improvements to healthcare delivery and research-driven improvements in individual, population, and system outcomes
- Recognize the role of improvement and implementation science in learning health systems

MATERIALS: *RECOMMENDED TEXT*

- Learning Health Systems. Agency for Healthcare Research and Quality. Available at: www.ahrq.gov/learning-health-systems
- Forrest CB, Chesley FD Jr, Tregear ML, Mistry KB. Development of the Learning Health System Researcher Core Competencies. *Health Serv Res.* 2018 Aug;53(4):2615-2632. doi: 10.1111/1475-6773.12751. Epub 2017 Aug 4. PMID: 28777456; PMCID: PMC6051975.

COURSE SCHEDULE

- Module 1 - Addressing the Quality & Practice Gaps
- Module 2 - Foundations of Learning Health Systems
- Module 3 - Learning Health Systems Researcher Competencies
- Module 4 - Improvement and Implementation Science in the Learning Health System
- Module 5 - Case Studies in Improvement and Implementation Science