

# PM&R Implementation Science Special Issue

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## 8. Manuscript Title

Relevance of Learning Health Systems Research to Psychiatrists: A Commentary

## 9. Abstract (500 words maximum)

As healthcare attempts to bridge the gap between evidence and practice, the concept of Learning Health System (LHS) is becoming increasingly relevant. LHS integrates evidence with health systems data, driving healthcare quality and outcomes forward through updates in policy, practice, and care delivery. LHS research is also becoming increasingly important, and several initiatives to increase research capacity, expertise and implementation are underway, including attempts to stimulate increasing number of LHS researchers. To address this need, The Agency of Healthcare Research & Quality (AHRQ) identified 33 core competencies, grouped into eight domains, for training LHS researchers. The domain names and definitions are: 1) Systems Science: To understand how health systems are financed and operate and how to apply systems theory to research and implementation; 2) Research Questions and Standards of Scientific Evidence: To ask meaningful questions relevant to health system stakeholders and evaluate the usefulness of scientific evidence and insights; 3) Research Methods: To conduct research within the context of complex health systems using appropriate study designs and analytic methods to assess outcomes of interest to health systems stakeholders; 4) Informatics: To know how to use information systems to conduct LHS research and improve patient and health system outcomes; 5) Ethics of Research and Implementation in Health Systems: To ensure that research and quality improvement performed in health care settings adheres to the highest ethical standards; 6) Improvement and Implementation Science: To reduce avoidable variation in process and outcomes and ensure the systematic uptake of research findings in a health system; 7) Engagement, Leadership, and Research Management: To engage stakeholders in all aspects of the research process and effectively lead and manage LHS research teams and projects. Recently, and 8) Health and Healthcare Equity and Justice: To know how to assess health equity and apply LHS science methods to advance equity and justice in healthcare delivery systems and health.

Several Physical Medicine & Rehabilitation (PM&R) physicians (physiatrists), clinicians and researchers are affiliated with or employed by LHS. As LHS research and need for training in LHS research becomes increasingly important, there is a growing need for better awareness and understanding of LHS and LHS research competencies among physiatrists as well.

Among the principal aims of LeaRRn, an NIH-funded rehabilitation research resource center, are to advance LHS research capacity & provide education and training to the rehabilitation research community in LHS research in collaboration with health system partners. A needs assessment survey was recently administered to inform development of educational resources. 410 respondents including rehabilitation professionals from physical therapy (38%), communication sciences and disorders (22%), and occupational therapy (10%) responded to the survey; however, only a small percentage of respondents were physiatrists (8%). Results from this survey indicates strong interest but limited knowledge in LHS research competencies and strong interest in opportunities to advance skills and training.

The purpose of this commentary is to define LHS, reflect on its relevance to physiatrists and to summarize the survey findings so to improve awareness and stimulate interest in LHS research among physiatrists.

## 10. Key Words (must list at least 1 up to 6 maximum)

- 1 : Learning Health Systems
- 2 : Rehabilitation Research
- 3 : Competencies
- 4 : Needs Assessment

## 11. Key Implementation theories or frameworks used in this manuscript

Initiatives to increase research capacity in learning health systems (LHS) research include stimulating increasing number of LHS researchers. This commentary attempts to highlight findings of a recently conducted needs assessment survey so as to stimulate research and researchers in LHS rehabilitation research.