Mechanics of Improvement
CIIS - Quality & Patient Safety Educational Series

Session Title	"Studying Improvement Initiatives"
Presentation Date	March 14, 2019
Learning Objectives	- Identify measurable ways of 'DO'ing - Differentiate between implementation, effectiveness, balancing measures - Discuss how to identify appropriate study designs

Session Resources - Introductions to IIS & QI Approaches
An Introduction to Implementation Science for the Non-Specialist Bauer MS, Damschroder L, Hagedorn H, Smith K, Kilbourne AM. *BMC Psychol*. 2015;3(1),32.   This review provides a broad overview of what implementation science is, how it differs from QI and dissemination. This article provides a useful starting point for individuals new to the field.
The Improvement Guide: A Practical Approach to Enhancing Organizational Performance Langley GL, Moen R, Nolan KM, Nolan TW, Norman CL, Provost LP. *The Improvement Guide: A Practical Approach to Enhancing Organizational Performance* (2nd edition). San Francisco: Jossey-Bass Publishers; 2009.   This book describes the Model for Improvement, a guiding approach for QI initiatives, with clear steps for accelerating change in diverse healthcare settings.
Session Resources - Implementation Strategies, Measures, Study Designs
Designs for Dissemination and Implementation Strategies Brown CH, Curran G, Palinas L, et al. An overview of research and evaluation designs for dissemination and Implementation. *Annual Review of Public Health.* 2017;38:1-22.   Members of a National Institutes of Health study design workgroup integrated their multidisciplinary knowledge on dissemination and implementation designs as well as evaluation strategies in this article. Eights types of study designs for testing implementation strategies are identified and described.
Implementation Outcomes Toolkit Gerke D, Lewis E, Prusaczyk B, Hanley C, Baumann A, Proctor E. Implementation Outcomes. St. Louis, MO: Washington University; 2017 July. Eight toolkits related to dissemination and implementation.

- This toolkit describes commonly used implementation outcomes and offers guidance on how to select outcomes relevant to your implementation science research.

Outcomes for Implementation Research: Conceptual Distinctions, Measurement Challenges, and Research Agenda
Proctor E, Silmere H, Raghavan R, Hovman P, Aarons G, Bunger A… Hensley M. Outcomes for implementation research: conceptual distinctions, measurement challenges, and research agenda. *Administration and Policy in Mental Health and Mental Health Services Research.* 2011;33(2):65-76.
- This article describes the critical distinctions between implementation outcomes, service system outcomes and clinical treatment outcomes. Eight core implementation science outcomes are proposed including: acceptability, adoption, appropriateness, feasibility, fidelity, implementation cost, penetration, and sustainability.

Science of Improvement: Establishing Measures
Institute for Healthcare Improvement.
- This webpage includes an overview of outcome, process and balancing measures. The resource also discusses how to establish measures and examine small tests of change over time.

The Problem with Plan-Do-Study-Act Cycles
Reed JE, Card AJ. BMC Quality & Safety. 2015;0:1-6.
- This brief article is assigned reading in the Institute for Healthcare Improvement curriculum! The authors describe the value of PDSA cycles for healthcare improvement, outline key failure modes that can occur at each stage and strategies to mitigate those challenges.

Study Designs for PDSA Quality Improvement Research
Speroff T, O'Connor GT. Quality Management in Health Care. 2004;13:1.
- This article describes the strengths and weakness of study designs used in health care quality improvement research. The authors have targeted their recommendations for investigators employing PDSA cycles and aim to conduct rigorous, publishable research.