### Implementation Science

“Methods or techniques used to enhance the adoption, implementation, and sustainability” of a practice (Proctor et al., 2013).

- Systems are central focus of support for effective use of practices
- Uses bi-directional feedback loops
- Practices selected based on local need and fit
- Aligns initiative and leverages resources to meet coherent goals
- Iterative cycles of data guide improvement
- Follows a stage-based approach to change

### Improvement Science

A methodology that uses cycles of inquiry to learn what is needed to improve practice (Bryk et al., 2015).

- Problem specific and user focused
- Address variation in performance
- Cannot improve what cannot be measured
- Anchors improvement in disciplined inquiry
- Sees the system
- Accelerates improvement through Networked Communities

### Commonalities and Complements

<table>
<thead>
<tr>
<th>Use teaming structures</th>
<th>Use a variety of data</th>
<th>Focus on systems</th>
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<tbody>
<tr>
<td>Network Improvement Communities and Linked Implementation Teams use data to identify needs, develop theories of action, and follow iterative cycles of improvement that prioritize implementers’ voices in planning and problem solving.</td>
<td>Both sciences use data related to process, fidelity, context, organizational factors, and stakeholder input to drive problem solving and decision making.</td>
<td>Both approaches are system focused. Improvement science focuses on factors outside individuals while implementation science focuses on roles, structures, and functions that support capacity to use a practice with fidelity.</td>
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<th>Use Improvement Cycles</th>
<th>Start small across varied contexts</th>
<th>Focus on practitioner level needs</th>
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<td>Repeated Plan-Do-Study-Act (PDSA) cycles answer questions (What are we trying to accomplish? How will we know that a change is an improvement? What change can we make that will result in improvement?) to learn and improve practices and systems as a result of change.</td>
<td>Both sciences propose starting small with learning from PDSA cycles before scaling using either a Transformation Zone or Improvement Project methodology to develop capacity, refine the practice, and build readiness before scaling.</td>
<td>Both sciences emphasize use of a systemic selection process. Improvement science identifies high leverage problems and related solutions. Similarly, implementation science examines fit and need of systems, practices, and users.</td>
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**The goal is not to answer factual questions about what is, but rather to determine what is required.**


**They knew what they wanted to happen but were now trying to figure out how to get it to happen.**

Bryk et al., 2015

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**Implementation Science**

- Improves practices and systems as a result of change.

**Improvement Science**

- Focuses on factors outside individuals.

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**Networked Communities**

- Use teaming structures
- Start small across varied contexts
- Focus on practitioner level needs

**Use Improvement Cycles**

- Repeated Plan-Do-Study-Act (PDSA) cycles answer questions.