Implementation Research and Quality Improvement Applications in US Primary Care Settings

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“Push and Pull”

**Push of research**
- EBI
- Implementation Strategy
- Implementation Plan
- Evaluate implementation and effectiveness
- Determine impact

**Pull of practice**
- Locally identified need / challenge
- Select strategies to enhance organizational capacity
- Select, adapt, and implement EBIs
Quality Improvement vs. Implementation Science

**Quality Improvement**
- Origin: Industry
- Transforming systems of care to improve health care quality and delivery
- Driven by specific problems in systems
- Goal to improve care quality AND generate knowledge for local improvement
- Limited exploration of mechanisms of change

**Implementation Science**
- Origin: Behavioral Science and HSR
- Developing approaches to close the gap between research and practice
- Often driven by an under-utilized EBI
- Goal to improve care quality AND produce generalizable knowledge
- Focus on implementation outcomes and mechanisms of change

QI regularly involves implementing evidence AND IS consistently addresses organizational and setting-level factors
Pros and Cons

- QI Pros
  - Highly local
  - Implementers highly engaged
  - Small tests of change, PDSA
  - Faster, more nimble
  - Less costly
  - Rapid and iterative

- QI Cons
  - Knowledge gained does not benefit other settings

- IS Pros
  - Strive for generalizable knowledge
  - Attention to contextual determinants guided by TFM

- IS Cons
  - Slow, takes years
  - Complex implementation strategies
  - Implementation many not be aligned with local context
Quality Improvement as:

Implementation Strategy to enhance EBI uptake

Approach to building practice capacity
EvidenceNOW

Improving Blood Pressure Control among Patients with Hypertension in US primary care practices
Designs: Hybrid Type III Cluster-randomized and Stepped-wedge trials
Unit of analysis: Primary care practice
Outcomes

- Aspirin Use
- Blood Pressure Control
- Cholesterol Management
- Smoking Cessation
- Practice Capacity
Background

Smaller practices vary substantially in ABCS quality metrics

As of January 2017
https://www.ahrq.gov/data/infographics/evidencenow.html
Background

• Smaller practices face many challenges in making practice improvements
  • Time constraints
  • Staff shortages
  • Narrow financial margins
  • Lower capacity

• Quality improvement support can help
  • Practice facilitation is an effective strategy to improve delivery of primary care services


Implementation Strategy and QI Interventions

JNC7 guidelines recommended BP target of 140/90 mmHg for individuals with hypertension

Implementation Strategy – External agents are the actors

- Practice facilitation
  - Interactive problem solving and support for QI activities
  - EHR/HIT support to measure outcome metrics

QI interventions – Clinic teams are the actors

- Primary care practices implemented QI changes using iterative PDSA QI cycles
  - Measurement training
  - Taking at least two BP measurements in-office
  - Documenting BPs in discrete fields
Improving Blood Pressure Clinical Metrics

**ELEMENTS**

1. **Assess Practice**
   - Assess features of local setting: practice size and ownership; current blood pressure process.

2. **Facilitation**
   - Consider working with a facilitator; most practices, particularly health- and hospital-system owned need at least 10 hours to achieve improvement target.

3. **Operational Change**
   - Align the operational change to local needs, using some combination of the following two elements:
     - Review and institute proper blood pressure measurement and/or
     - Take second blood pressure if first is elevated and document it

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### Facilitation to build capacity

<table>
<thead>
<tr>
<th>Summary Table of Strategies of More and Less Effective Facilitators</th>
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<tbody>
<tr>
<td>More effective facilitators</td>
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<tr>
<td>• Aligned EvidenceNOW work with other payer initiatives or practice goals.</td>
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<td>• Used formal assessment tools or causal conversations to assess practice readiness to change and QI capacity.</td>
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<td>• Addressed resistance directly and worked with practice to overcome barriers (e.g., suggesting smaller tests of change, working with EHR vendors, helping reallocate tasks among team members).</td>
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<tr>
<td>Guiding practices though the change process</td>
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<tr>
<td>• Identified pain points through conversation with the practice and discussed next steps.</td>
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<td>• Shared ideas from other practices (&quot;cross-pollination&quot;) and helped tailor to the local context.</td>
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<tr>
<td>• Provided project management support (e.g., agenda setting, notetaking, summarizing action items, assigning tasks to team members, providing reminders).</td>
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<tr>
<td>Articulating strategies to help practices</td>
</tr>
<tr>
<td>Yes—were able to speak in detail about the work they did in specific practices, how this work was tailored, and which changes likely led to improvements.</td>
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| Less effective facilitators                                   |
| • Less evidence of motivating and tailoring.                  |
| • Practice resistance prevented work from being done. Facilitators described not wanting to push the practice too hard. |
| Guiding practices though the change process                   |
| • Didactic meetings with education alone.                      |
| • Did the work for the practice.                              |
| • Presented options for the change process, but did not push the practice to identify their next steps. |
| • Some facilitators did not have structured meetings; emphasis was on just being present in the practice. |
| Articulating strategies to help practices                      |
| No—when asked about work done in specific practices answers were limited to the facilitator’s overall approach, and description of presentations and materials used. |

Blending IS and QI

Advancing Care Together

Integrating Behavioral Health and Primary Care
Premise

• Integrating primary and behavioral health care improves:
  • Clinical outcomes
  • Patient experience
  • Reduces cost
• Yet, real world clinics are struggling to integrate care

Setting

• 11 ambulatory primary care and mental health clinics in Colorado participating in the Advancing Care Together (ACT) Program
• Clinics implemented evidence-based approaches to integrate care for people with primary care and behavioral/mental health care needs
Purpose

To identify strategies to integrate behavioral health and primary care that:

• Real world clinics can implement
• Result in improved care delivery and outcomes
• Can lead to generalizable knowledge
• Can be rapidly disseminated nationally
Methods

• Design – Longitudinal, mixed methods
  • Practices implemented EB integration strategies
    • Systematic screening
    • Co-locating behavioral health and primary care clinicians
  • Independent evaluation team evaluated implementation and outcomes

• Types of data
  • Qualitative – documents, online diaries, field observation, interviews
  • Quantitative – practice and practice member surveys, process tracking, EHR outcome data

• Analyses
  • Merged qualitative and quantitative data
  • Grounded theory; Immersion-crystallization
  • Growth curve models, mixed effects models
Learning Evaluation
Behavioral Health Integration into Primary Care

## Practice-based Evidence

<table>
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<tr>
<th>Construct</th>
<th>Conceptual Definition</th>
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<tr>
<td>Integration REACH</td>
<td>Extent to which integrated services are available to the practice population</td>
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<tr>
<td>Location of integration workforce</td>
<td>Proximity of the professionals on the integrated care team</td>
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<tr>
<td>Approach to patient transitions</td>
<td>Strategies that practice employs when introducing and engaging patients with another professional on the care team</td>
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<tr>
<td>Establish care pathways</td>
<td>Determining the level and type of care practice can provide, including care requiring referral to outside resources</td>
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<td>Shared mental model</td>
<td>Practice members have shared understanding of practice model for integration</td>
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Limitations?

• Non-randomized study BUT practice-based evidence
• Small practice sample size BUT maximum variation sample
• Not generalizable BUT transportable
How can researchers blend QI and IS?

- Partner with interested parties outside academia
- Co-produce interventions
- Work in transdisciplinary research teams
- “Implement” together

- Conduct rigorous mixed-methods evaluations
- Pay attention to conventional wisdom or basic good practice
- Think before creating new ways to “push” research into practice
“To him who devotes his life to science, nothing can give more happiness than increasing the number of discoveries, but his cup of joy is full when the results of his studies immediately find practical applications.”

Louis Pasteur
References


