Expert Recommendations for Tailoring Strategies to Context

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...and the rest of the ERIC Team

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- Research Social Worker, Mental Health Service, Central Arkansas VA Healthcare System

**Enola Proctor**
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**Jeff Smith**
- Implementation Coordinator, QUERI for Team-Based Behavioral Health, Central Arkansas Veterans Healthcare System, North Little Rock AR
Agenda

**Byron Powell**
- Refining a Compilation of Discrete Implementation Strategies and Determining Their Importance and Feasibility

**Tom Waltz**
- Structuring Complex Recommendations: Methods and General Findings

**Laura Damschroder**
- Matching refined compilation of strategies to contextual constructs in the Consolidated Framework for Implementation Research (CFIR)
Poll Question

Which response best describes the nature of your work?

◦ I conduct or collaborate on implementation research studies
◦ I implement programs and/or engage in quality initiatives
◦ I do some of both
◦ None of the above
Refining a Compilation of Discrete Implementation Strategies and Determining Their Importance and Feasibility

Byron J. Powell, PhD
Thomas J. Waltz, PhD, PhD
Matthew J. Chinman, PhD
Laura J. Damschroder, MS, MPH
Jeffrey L. Smith, PhDc
Monica M. Matthieu, PhD
Enola K. Proctor, PhD
JoAnn E. Kirchner, MD
Implementation Strategies

“Methods or techniques used to enhance adoption, implementation, and sustainability of a clinical program or practice.” (Proctor, Powell, & McMillen, 2013)
Initial Question

What strategies can be used to implement evidence-based innovations in clinical settings?
Problem

• Literature a “Tower of Babel” (McKibbon et al., 2010)
• Strategy terms and definitions used inconsistently
• Strategies poorly described
68 discrete strategies

- Planning
- Educating
- Financing
- Restructuring
- Managing quality
- Attending to policy context

Limitations:

- Not informed by wide-range of implementation & clinical experts
- No consensus beyond review team
- Categories not empirically derived
Poll Question #2

Have you heard of the “ERIC” compilation of implementation strategies?

- What is ERIC?
- Yes, but I haven’t thought about using it
- I have thought about using the ERIC list of strategies
- I have used the ERIC list in my work
Purpose of Stage 1 & 2 of ERIC

**Stage 1:** Establish expert consensus on a common nomenclature for implementation strategy terms and definitions

**Stage 2:** Develop conceptually distinct categories of implementation strategies and ratings of their feasibility and effectiveness

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http://www.implementationscience.com/content/9/1/39

**STUDY PROTOCOL**

Expert recommendations for implementing change (ERIC): protocol for a mixed methods study

Thomas J Waltz, Byron J Powell, Matthew J Chinman, Jeffrey L Smith, Monica M Matthieu, Enoia K Proctor, Laura J Damschroder, and JoAnn E Kirchner
Expert Panel Participants

Snowball reputation-based sampling procedure:

• Editorial board of *Implementation Science*
• IRC’s for VA QUERIs
• IRI faculty and fellows
• Restricted to 4 primary time zones in U.S.

71 participants

• 97% from U.S.; 3% from Canada
• 90% had expertise in implementation
• 45% also experts in clinical practice
• ~66% affiliated with VA
Stage One: 3 Round Delphi

- Seeded with Powell et al. (2012) compilation
- Rounds 1 & 2 – Asynchronous web-based surveys to refine and extend original compilation
- Round 3 – Web-based polling and consensus process

Powell et al. (2012)  Rounds 1 & 2 (n = 57 & 43)  Round 3 (n = 40)
Round 3 Voting Procedures

- Approval Poll
  - Consensus (One with highest % of those >=60%)
  - No consensus (none >=60% OR a tie >=60%)
    - Tie >=60% Discussion about those >=60%
      - Re-poll (Run-off)
        - Move to next (consensus or not)
    - None >=60% Discuss all
      - Re-poll (Run-off)
        - 2 choices: Top one wins
        - 3+ choices: Re-poll w/ top 2
      - Move to next
Stage 2: Concept Mapping

- 35 members of the expert panel
- Engaged in structured sorting and rating tasks in Concept Systems Global MAX™
- Multidimensional scaling and hierarchical cluster analysis used to produce visual representations of interrelationships
Participant View of Sorting Task

Expert Recommendations for Implementing Change (ERIC)

PROJECT FOCUS PROMPT:

3 out of 73 sorted.

Unsorted statements:
Alter patient/consumer fees
Assess for readiness and identify barriers and facilitators

Unnamed Pile 1
Access new funding

Unnamed Pile 2
Alter incentive/allowance structures

Unnamed Pile 3
Build a coalition

http://www.conceptsystemsglobal.com
Participant View of Rating Task

**Expert Recommendations for implementing Change (ERIC)**

<table>
<thead>
<tr>
<th>Project Home</th>
<th>Brainstorming (73)</th>
<th>Sorting</th>
<th>Importance</th>
<th>Feasibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>My Account</td>
<td>My Projects</td>
<td>Edit Profile</td>
<td>Change Password</td>
<td>Sign out</td>
</tr>
</tbody>
</table>

**Progress:**

- Importance Rating [PREVIEW]

Please rate the following statements. We recognize that your rating may vary with the specifics of a particular implementation initiative. Later in the ERIC process, participants will be asked to recommend specific strategies given descriptions of specific implementation initiatives and organizational contexts. For now, please base your ratings on your general impression.

Please select a number from 1 to 5 for each discrete implementation strategy to provide a rating in terms of how important you think it is. Keep in mind that we are looking for relative importance use all the values in the rating scale to make distinctions. Use the following scale:

**Importance Rating**

- 1 = Relatively unimportant
- 2 = Somewhat Important
- 3 = Moderately Important
- 4 = Very Important
- 5 = Extremely Important

**Project Focus Prompt:**

- Show unrated statements only
- Show all statements

<table>
<thead>
<tr>
<th>Statement</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access new funding</td>
<td></td>
</tr>
<tr>
<td>Alter Incentive/allowance structures</td>
<td></td>
</tr>
<tr>
<td>Alter patient/consumer fees</td>
<td></td>
</tr>
<tr>
<td>Assess for readiness and identify barriers and facilitators</td>
<td></td>
</tr>
<tr>
<td>Audit and provide feedback</td>
<td></td>
</tr>
</tbody>
</table>

http://www.conceptsystemsglobal.com
Stage 1: Results of Rounds 1-3

- Majority of terms and definitions from original compilation (69%) considered “no contest” and weren’t subjected to voting

- 21 strategies and five new strategies voted on in R3

- Alternative def. selected 81% of the time
  - 75% of definitions from Powell et al. retained

- Each new strategy retained

- Final compilation = 73 strategies
A refined compilation of implementation strategies: results from the Expert Recommendations for Implementing Change (ERIC) project

Byron J Powell¹*, Thomas J Waltz², Matthew J Chinman³, Laura J Damschroder⁵, Jeffrey L Smith⁶, Monica M Matthieu⁶, Enola K Proctor⁸ and JoAnn E Kirchner⁶,⁹
Cluster Solution

Change infrastructure

Utilize financial strategies

Support clinicians

Engage consumers

Adapt & tailor to context

Provide interactive assistance

Use evaluative and iterative strategies

Train and educate stakeholders

Develop stakeholder interrelationships
## Provide Interactive Assistance

<table>
<thead>
<tr>
<th></th>
<th>Centralize technical assistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>Facilitation</td>
</tr>
<tr>
<td>53</td>
<td>Provide clinical supervision</td>
</tr>
<tr>
<td>54</td>
<td>Provide local technical assistance</td>
</tr>
</tbody>
</table>

![Diagram with numbered points and connections]
Support Clinicians

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>Create new clinical teams</td>
</tr>
<tr>
<td>30</td>
<td>Develop resource sharing agreements</td>
</tr>
<tr>
<td>32</td>
<td>Facilitate relay of clinical data to providers</td>
</tr>
<tr>
<td>58</td>
<td>Remind clinicians</td>
</tr>
<tr>
<td>59</td>
<td>Revise professional roles</td>
</tr>
</tbody>
</table>
Relative Ratings by Cluster

Use evaluative and iterative strategies
Provide interactive assistance
Adapt and tailor to context
Develop stakeholder relationships
Train and educate stakeholders
Engage consumers
Support clinicians
Utilize financial strategies
Change infrastructure

Importance
4.19
Feasibility
4.01

Use evaluative and iterative strategies
Train and educate stakeholders
Develop stakeholder relationships
Adapt and tailor to context
Provide interactive assistance
Support clinicians
Engage consumers
Utilize financial strategies
Change infrastructure
“Go Zone”

Assess for readiness & identify barriers and facilitators

Audit & Feedback

Start dissemination organization
Use of concept mapping to characterize relationships among implementation strategies and assess their feasibility and importance: results from the Expert Recommendations for Implementing Change (ERIC) study

Thomas J. Waltz, Byron J. Powell, Monica M. Matthieu, Laura J. Damschroder, Matthew J. Chinman, Jeffrey L. Smith, Enola K. Proctor, and JoAnn E. Kirchner
Uses of Compilation & Ratings

• Building blocks for strategy development and testing
• Improve specification and reporting of strategies in efficacy, effectiveness, and implementation research
• Assess strategy use prospectively or retrospectively
Limitations

• Expert panel limited to North America
• In-person meetings may have added nuance
• Compilation is not linked to:

Context  Theory  Evidence
Develop expert consensus on the types of strategies needed to implement different clinical innovations in different settings
Initial Question

What strategies are most important to implement different types of evidence-based innovations in different settings?
Menu Based Choice

**ERIC project’s penultimate activity was a menu based choice (MBC) task.**

- MBC methods are used in consumer marketing research (aka “build your own” tasks), to identify optimal product configuration for goods and services.
- MBC tasks are useful for providing a context rich structure for making decisions that involve multiple elements.
Methods

Panelists to examine 73 implementation strategies organized into 9 categories

MBC Task: Build multi-strategy implementation approaches for 3 particular clinical practice changes being implemented in VA healthcare settings.

Each practice change with 3 accompanying scenarios describing:

• Specific relative strengths and weaknesses

  AND

• Varying contextual characteristics
High Priority Clinical Practice Initiatives

3 VA quality improvement efforts focused on:

1. Improving safety for patients taking antipsychotic medications (*Smith*)

2. Depression outcome monitoring in primary care mental health (*Kirchner*)

3. Prolonged exposure therapy for treating post-traumatic stress disorder (*Matthieu*)
Practice Initiative Scenario Development

• Developed using key informant interviews
• Current expertise in the respective area
• Provide common and realistic challenges they face in routine service delivery in VA settings:
  - Front line providers
  - Clinical managers
  - Health service researchers
  - Implementation scientists
• Initial draft scenario developed by study team lead with input from clinical providers, managers, and researchers

• Reviewed and edited by entire ERIC study team, then sent back to lead for content validity

• Final review by purposefully chosen content experts in the specific practice change and familiar with implementation science (i.e., target group)
  • Asked to rate “for each of the three scenarios, how similar that clinic is to the clinic you work in and to other clinics in the VA”
  • Asked for “suggestions for improving the content of the scenario narratives so they better match your PTSD clinic or other known PTSD clinics at the VA.”
Expansion for Context and Evidence

- ERIC project staff then systematically expanded each of the scenarios to:

  * address varying organizational contexts
    - Organizational culture
    - Leadership
    - Evaluation infrastructure

  * across levels of evidence
    - Strength and quality
    - Relative advantage
    - Compatibility
    - Adaptability
## Example of Varying Context

<table>
<thead>
<tr>
<th>Relatively Weak</th>
<th>Relatively Strong</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Culture:</strong></td>
<td><strong>Culture:</strong></td>
</tr>
<tr>
<td>• resources <strong>not allocated well</strong></td>
<td>• resources <strong>generally allocated well</strong></td>
</tr>
<tr>
<td>• staff/clients <strong>held in low regard</strong></td>
<td>• staff/clients <strong>valued</strong></td>
</tr>
<tr>
<td>• <strong>lack of consistency</strong> in an individuals’ roles in relation to the treatment team and leadership</td>
<td>• <strong>consistency</strong> of individuals’ roles in relation to the treatment team and leadership</td>
</tr>
<tr>
<td><strong>Leadership:</strong></td>
<td><strong>Leadership:</strong></td>
</tr>
<tr>
<td>• poor/inconsistent support for the practice change</td>
<td>• strong/consistent support for the practice change</td>
</tr>
<tr>
<td>• authoritarian/autocratic</td>
<td>• transformational leadership</td>
</tr>
<tr>
<td>• poorly defined roles</td>
<td>• clearly defined roles</td>
</tr>
<tr>
<td>• poor organizational structures</td>
<td>• effective organizational structures</td>
</tr>
<tr>
<td><strong>Evaluation:</strong></td>
<td><strong>Evaluation:</strong></td>
</tr>
<tr>
<td>• absence of feedback</td>
<td>• feedback for individual, team and system performance</td>
</tr>
<tr>
<td>• narrow use of performance information sources</td>
<td>• use of multiple sources of information on performance</td>
</tr>
<tr>
<td>• productivity measures (e.g., wRVU) <strong>de-incentivize</strong> the practice change</td>
<td>• productivity measures (e.g., wRVU) <strong>incentivize</strong> the practice change</td>
</tr>
</tbody>
</table>
# Example of Varying Evidence

<table>
<thead>
<tr>
<th>Practice Change</th>
<th>Evidence: Perceived evidence for the practice change is relatively <strong>weak</strong></th>
<th>Evidence: Perceived evidence for the practice change is relatively <strong>strong</strong></th>
<th>Practice Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Prolonged Exposure for PTSD</td>
<td><strong>Evidence</strong> Strength &amp; Quality: Evidence Strength &amp; Quality: Research supporting the practice change is viewed as poorly applicable to the clinical setting or is not valued as evidence</td>
<td><strong>Although</strong> Prolonged Exposure is an evidence-based practice for the effective treatment of PTSD, care providers and mental health leadership at PTSD Clinic X are skeptical of the claim that this specific treatment can help improve care for their patients with PTSD any better than the treatment options currently offered.</td>
<td><strong>Evidence</strong> Strength &amp; Quality: Evidence Strength &amp; Quality: Research supporting the practice change is viewed as applicable to the clinical setting and is valued as evidence for the practice change</td>
</tr>
</tbody>
</table>
Sampling Strategy

8 member investigative team

Purposive snowball sampling strategy:

• Began with experts identified in the earlier modified-Delphi process

• Leverage current professional relationships

• Recruit and retain (N=20) panelists for each practice initiative

• Labor intensive MBC task (45-180 minutes; \( M=90 \) minutes)

• Identified lead study team member for follow-up
### Participant Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Depression</th>
<th>PE for PTSD</th>
<th>Safety Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants</td>
<td>20</td>
<td>22</td>
<td>20</td>
</tr>
<tr>
<td>VA Affiliation</td>
<td>75%</td>
<td>91%</td>
<td>75%</td>
</tr>
<tr>
<td>Implementation (IS)</td>
<td>35%</td>
<td>36%</td>
<td>42%</td>
</tr>
<tr>
<td>Expertise</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical Expertise</td>
<td>20%</td>
<td>10%</td>
<td>43%</td>
</tr>
<tr>
<td>IS and Clinical</td>
<td>45%</td>
<td>55%</td>
<td>32%</td>
</tr>
<tr>
<td>Expertise</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- 31% of recruited experts participated
- Target duration for data collection phase: 6 weeks
- Actual duration of data collection phase: 12 weeks
Materials Developed for Panelists

Essential Supporting Documents included:

• Introduction
• Description of the background for the targeted practice initiative
• Details of the target practice
• Processes integral to implementing the target practice
• Three scenarios, each with different relative strengths and weaknesses
  • Narrative
  • Side-by-side
Optional Supporting Documents

Brief Compilation: List of all the strategies and their definitions

ERIC Comprehensive Compilation: Brief Compilation and summaries of ratings that were obtained in the Concept Mapping task in ERIC Phase 1.

Concept Mapping Results:
1. Summary of the sorting and rating data from the concept mapping task expert panelists completed in ERIC Phase 1.
2. Graphs that group the strategies spatially based on how often they were sorted together as similar.
3. Plots depict the average importance and feasibility ratings expert panelists provided for each strategy.

Approval Webinar Results: All of the strategies and the definitions that were evaluated in the modified-Delphi process in ERIC Phase 1.
   - Each definition and its alternatives are presented with voting data for strategies with alternative definitions proposed.
Menu Based Choice Task

Implementation of Prolonged Exposure for Treating PTSD among Veterans in the VHA

Please view the file PE for PTSD Description for the prose descriptions of the elements of this practice change (p. 2) and descriptions of Scenarios A, B, and C. Additional support materials are described in the Read First worksheet in this Excel workbook (bottom left tab).

This worksheet is for Scenario A, found on p. 4 of the PE for PTSD Description file.

To make a recommendation, click on a cell & small arrow will appear to the right. If you click on that arrow, you will view your recommendation options.

Please make a recommendation for each strategy at each of the three phases of implementation.

<table>
<thead>
<tr>
<th>Use Evaluative and Iterative Strategies</th>
<th>Pre-implementation</th>
<th>Active Implementation</th>
<th>Sustainment</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assess readiness and identify barriers and facilitators</td>
<td>A. absolutely essential</td>
<td>likely essential</td>
<td>B. likely essential</td>
<td></td>
</tr>
<tr>
<td>Audit and provide feedback</td>
<td>A. absolutely essential</td>
<td>A. absolutely essential</td>
<td>A. absolutely essential</td>
<td></td>
</tr>
<tr>
<td>Conduct cyclical small tests of change</td>
<td>D. absolutely inessential</td>
<td>D. absolutely inessential</td>
<td>D. absolutely inessential</td>
<td></td>
</tr>
<tr>
<td>Conduct local needs assessment</td>
<td>D. absolutely inessential</td>
<td>D. absolutely inessential</td>
<td>D. absolutely inessential</td>
<td></td>
</tr>
<tr>
<td>Develop a formal implementation blueprint</td>
<td>D. absolutely inessential</td>
<td>D. absolutely inessential</td>
<td>D. absolutely inessential</td>
<td></td>
</tr>
<tr>
<td>Develop and implement tools for quality monitoring</td>
<td>D. absolutely inessential</td>
<td>D. absolutely inessential</td>
<td>D. absolutely inessential</td>
<td></td>
</tr>
<tr>
<td>Develop and organize quality monitoring systems</td>
<td>D. absolutely inessential</td>
<td>D. absolutely inessential</td>
<td>D. absolutely inessential</td>
<td></td>
</tr>
<tr>
<td>Obtain and use patients/consumers and family feedback</td>
<td>C. likely inessential</td>
<td>C. likely inessential</td>
<td>C. likely inessential</td>
<td></td>
</tr>
<tr>
<td>Purposefully re-examine the implementation</td>
<td>D. absolutely inessential</td>
<td>D. absolutely inessential</td>
<td>D. absolutely inessential</td>
<td></td>
</tr>
<tr>
<td>Stage implementation scale up</td>
<td>D. absolutely inessential</td>
<td>D. absolutely inessential</td>
<td>D. absolutely inessential</td>
<td></td>
</tr>
</tbody>
</table>

Provide Interactive Assistance

| Centralize technical assistance | D. absolutely inessential | D. absolutely inessential | D. absolutely inessential | |
| Facilitation | B. likely essential | C. likely inessential | C. likely inessential | |
| Provide clinical supervision | A. absolutely essential | A. absolutely essential | A. absolutely essential | |
| Provide local technical assistance | B. likely essential | B. likely essential | C. likely inessential | |

Adapt and Tailor to the Context

| Promote adaptability | D. absolutely inessential | D. absolutely inessential | D. absolutely inessential | |
| Tailor strategies | D. absolutely inessential | D. absolutely inessential | D. absolutely inessential | |

Feel free to take notes in the cells below. Suggestions regarding how to fit particular strategies to your local needs are welcome, but not required.
3 Scenarios Varying Evidence and Context

Scenario A (weak evidence, weak context)

Scenario B (strong evidence, weak context)

Scenario C (weak evidence, strong context)
<table>
<thead>
<tr>
<th>“Absolutely Essential” Strategies (Part 1)</th>
<th>DEP</th>
<th>PTSD</th>
<th>Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assess for readiness and identify barriers and facilitators</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Audit and provide feedback</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Conduct cyclical small tests of change</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Conduct local needs assessment</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Develop a formal implementation blueprint</td>
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<td>X</td>
</tr>
<tr>
<td>Develop and implement tools for quality monitoring</td>
<td></td>
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</tr>
<tr>
<td>Develop and organize quality monitoring systems</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Purposefully re-examine the implementation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facilitation</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Provide clinical supervision</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promote adaptability</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tailor strategies</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Build a coalition</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capture and share local knowledge</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>“Absolutely Essential” Strategies (Part 2)</td>
<td>DEP</td>
<td>PTSD</td>
<td>Safety</td>
</tr>
<tr>
<td>-----------------------------------------</td>
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</tr>
<tr>
<td>Conduct local consensus discussions</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Identify and prepare champions</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Identify early adopters</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Inform local opinion leaders</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Organize clinician implementation team meetings</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Recruit, designate, and train for leadership</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Conduct educational meetings</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Conduct ongoing training</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Develop educational materials</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Distribute educational materials</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Make training dynamic</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Provide ongoing consultation</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Facilitate relay of clinical data to providers</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Remind clinicians</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>“Absolutely INESSENTIAL” Strategies</td>
<td>DEP</td>
<td>PTSD</td>
<td>Safety</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-----</td>
<td>------</td>
<td>--------</td>
</tr>
<tr>
<td>Develop an implementation glossary</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Work with educational institutions</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop resource sharing agreements</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use mass media</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Alter patient/consumer fees</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Develop disincentives</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Make billing easier</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Use capitated payments</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Use other payment schemes</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Change accreditation or membership requirements</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Change liability laws</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Change service sites</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Create or change credentialing and/or licensure standards</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Start a dissemination organization</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
Discussion

- MBC produced distinct recommendations
- Absolutely Essential & Likely Essential ratings
- Epoch data
- More context?
- Potential impact of panel composition on the types of strategies endorsed
- Collaborating with partners
Matching the compilation of ERIC strategies to contextual barriers guided by the Consolidated Framework for Implementation Research (CFIR)

Laura J. Damschroder, MS, MPH
Thomas J. Waltz, PhD, PhD
Byron J. Powell, PhD
Research Question

Which ERIC strategies best address barriers specified by constructs from the CFIR?
Poll Question #3

Have you heard of the CFIR?

- What is the CFIR?
- I am familiar with the CFIR
- I have thought about using the CFIR in my work
- I have used the CFIR in my work
- None of the above
## CFIR: 5 Domains, 39 constructs

<table>
<thead>
<tr>
<th>Construct</th>
<th>Short Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. INTERVENTION CHARACTERISTICS</strong></td>
<td></td>
</tr>
<tr>
<td>A Intervention Source</td>
<td>Perception of key stakeholders about whether the intervention is externally or internally developed.</td>
</tr>
<tr>
<td>B Evidence Strength &amp; Quality</td>
<td>Stakeholders' perceptions of the quality and validity of evidence supporting the belief that the intervention will have desired outcomes.</td>
</tr>
<tr>
<td>C Relative advantage</td>
<td>Stakeholders' perception of the advantage of implementing the intervention versus an alternative solution.</td>
</tr>
<tr>
<td>D Adaptability</td>
<td>The degree to which an intervention can be adapted, tailored, refined, or reinvented to meet local needs.</td>
</tr>
<tr>
<td>E Trialability</td>
<td>The ability to test the intervention on a small scale in the organization [8], and to be able to reverse course (undo implementation) if warranted.</td>
</tr>
<tr>
<td>F Complexity</td>
<td>Perceived difficulty of implementation, reflected by duration, scope, radicalness, disruptiveness, centrality, and intricacy and number of steps required to implement</td>
</tr>
<tr>
<td>G Design Quality and Packaging</td>
<td>Perceived excellence in how the intervention is bundled, presented, and assembled</td>
</tr>
<tr>
<td>H Cost</td>
<td>Costs of the intervention and costs associated with implementing that intervention including investment, supply, and opportunity costs.</td>
</tr>
</tbody>
</table>
Methods
Participants

Invitations sent via email  
N=435

Respondents completed at least one construct  
N=169 (39%)
Survey of Implementation Experts

Select and rank up to 7 strategies that best address barriers related to Relative Priority:

- Stakeholders perceive that implementation of the innovation takes a backseat to other initiatives or activities.

Conduct local consensus discussions:
Assignment of CFIR constructs

- CFIR Construct Randomly Assigned
  - Willing to do another?
    - Yes: Select & rank up to 7 Best ERIC Strategies
    - No: Closing Questions
  - Closing Questions
Implementation experts have knowledge and experience related

to changing care practices, procedures and/or systems of care.

Based on the above definition...

...could someone accuse you of being an implementation expert?

How much of your employment is with the VA?

How much of your employment is dedicated to research?

Does your employment include any clinical responsibilities?

CHECK ALL THAT APPLY

Nationality of respondent
Mapping Results
Mapping Results: Example

Select and rank up to 7 strategies that best address barriers related to **Relative Priority:**

♦ Stakeholders perceive that implementation of the innovation takes a backseat to other initiatives or activities.

N = 28 respondents:

◦ Endorsed **53** different ERIC strategies in the top best 7
ERIIC strategies chosen: Relative Priority n=28

- Conduct local consensus discussions
- Alter incentive/allowance structures
- Assess for readiness and identify barriers and facilitators
- Mandate change
- Conduct local needs assessment
- Increase demand
- Build a coalition
- Identify and prepare champions
- Promote adaptability
- Involve patients/consumers and family members
- Audit and provide feedback
- Develop a formal implementation blueprint
- Capture and share local knowledge
- Inform local opinion leaders
- Conduct educational outreach visits
- Obtain formal commitments
- Facilitation
- Create or change credentialing and/or licensure standards
- Tailor strategies
- Provide ongoing consultation
- Recruit, designate and train for leadership
- Access new funding
- Use mass media
- Create a learning collaborative
- Make billing easier
- Change accreditation or membership reqs
- Purposely reexamine the implementation
- Remind clinicians
- Conduct ongoing training
- Organize clinician implementation team meetings
- Visit other sites
- Promote network weaving
- Use capitated payments
- Conduct cyclical small tests of change
- Distribute educational materials

Relative Priority

Rank:
Wide distribution of endorsements

Number of ERIC strategies ranked per CFIR Construct
  ◦ Average = 47 strategies (Range: 35 – 55)

Number of respondents varied by CFIR construct
  ◦ Average = 26 (Range: 21 to 33)
  ◦ Normalized the number of “endorsements” as if n=20 for all CFIR constructs
ERIC strategies chosen: Relative Priority n=20

Relative Priority

0  1  2  3  4  5  6  7  8  9  10  11  12  13

Conduct local consensus discussions
Alter incentive/allowance structures
Assess for readiness and identify barriers and facilitators
Mandate change
Conduct local needs assessment
Increase demand
Build a coalition
Identify and prepare champions
Promote adaptability
Involve patients/consumers and family members
Audit and provide feedback
Develop a formal implementation blueprint
Capture and share local knowledge
Inform local opinion leaders
Conduct educational outreach visits
Obtain formal commitments
Facilitation
Create or change credentialing and/or licensure standards
Tailor strategies
Provide ongoing consultation
Recruit, designate and train for leadership
Access new funding
Fund and contract for clinical innovation
Tiers of Endorsement

At least 10 endorsed the strategy → Tier 1★
4 to 9.5 endorsed the strategy → Tier 1
2 to 3.5 endorsed the strategy → Tier 2
1 to 1.5 endorsement the strategy → Tier 3
ERIC strategies chosen: Relative Priority n=20

**Tier 1**
- n=6
- Conduct local consensus discussions
- Alter incentive/allowance structures
- Assess for readiness and identify barriers and facilitators
- Mandate change
- Conduct local needs assessment
- Increase demand

**Tier 2**
- n=18
- Build a coalition
- Identify and prepare champions
- Promote adaptability
- Involve patients/consumers and family members
- Audit and provide feedback
- Develop a formal implementation blueprint
- Capture and share local knowledge
- Inform local opinion leaders
- Conduct educational outreach visits
- Obtain formal commitments
- Facilitation
- Create or change credentialing and/or licensure standards
- Tailor strategies
- Provide ongoing consultation
- Recruit, designate and train for leadership
- Access new funding
- Fund and contract for clinical innovation

**Tier 3**
- n=29

**Tier 1 ★**
- n=0

*Note: The chart shows a visual representation of the strategies and their prioritization levels across different tiers.*
Tier 1*; n=33
Tier 1; n=332
Tier 2; n=534
Tier 3; n=933
Conclusion

Loose consensus on “best strategies” to address CFIR barriers

- With a few exceptions
- Some CFIR Constructs are broad
- Diverse sample of implementation experts
  - Diverse settings

Nonetheless, this provides a starting point from which to build an evidence base for barrier-specific specific strategies
Design an Implementation Strategy

An evidence base is not yet established for how to tailor implementation strategies. This section describes a few ideas for developing interim tools and the needed evidence base. Please refer to our glossary for language about implementation in this section.

You are in the right place if you:

1. Have completed an assessment to identify the constructs that may be barriers (or facilitators) for implementing an innovation into your setting
2. Intend to implement an innovation into one or many settings and need guidance in selecting techniques to bundle into an implementation strategy tailored to your project.

The CFIR for Implementation Strategies

The CFIR describes four constructs related to the Process of implementation: Planning, Engaging, Executing, and Reflecting and Evaluating. Successful implementation relies on iterative, interacting activities related to these four constructs.

Most prescriptive frameworks and models include some form of these four constructs, though there is variation depending on the framework or model. These four CFIR constructs provide guidance for evaluating the nature and quality of implementation as it unfolds. As CFIR does not provide a step-by-step guide for how to implement innovations into organizations, we do provide links to a few published prescriptive frameworks and models that do provide such guidance (see Additional Resources).
Tailor an Intervention Strategy

<table>
<thead>
<tr>
<th>Intro Domains</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation Characteristics</td>
</tr>
<tr>
<td>Outer Setting</td>
</tr>
<tr>
<td>Inner Setting</td>
</tr>
<tr>
<td>Characteristics of Individuals</td>
</tr>
<tr>
<td>Process</td>
</tr>
</tbody>
</table>

### Process

To learn more see the [wiki](#).

### Constructs

- **Planning**
- **Engaging**
- **Executing**
- **Reflecting & Evaluating**

Quantitative and qualitative feedback about the progress and quality of implementation accompanied with regular person... see the [wiki](#).

Techniques

Select a construct

Learn more about the construct in the wiki, or click Techniques
Tailor an Intervention Strategy

### Process: Reflecting & Evaluating

- Develop and implement tools for quality monitoring systems
- Audit and provide feedback

Select techniques you want to include for each construct...
Tailor an Intervention Strategy

**Process**

**Reflecting & Evaluating**
- Audit and provide feedback

**Inner Setting**

**Structural Characteristics**
- Assess for readiness and identify barriers and facilitators
- Change physical structure and equipment
- Build a coalition

**Leadership Engagement**
- Involve executive boards

**Innovation Characteristics**

**Evidence Strength & Quality**
- Conduct local consensus discussions

The tool will generate a document that lists the techniques you chose which can then be used as a basis for a documented tailored Implementation Strategy.
Questions?

Go to www.CFIRGuide.org for technical assistance using the CFIR
- We will continue to post more tools and information in the coming months

Contact information:
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- Laura Damschroder: laura.damschroder@va.gov