Leverage Past Contributions to Evaluation

Using the CFIR to Produce Actionable Evaluation Results

Rebecca Butcher, MS, MPH
Karen Schifferdecker, PhD, MPH

American Evaluation Association Annual Meeting
Nov. 15, 2019
Our Session

- Challenges to Implementation
- The Consolidated Framework for Implementation Research (CFIR)
- Example Use of CFIR
- Demonstration & Discussion
Implementation Challenges

Complex, fragmented systems

Shifting policy & practice landscape

Multi-levels

Variability
Gaps

Research

Practice
Implementation science

The scientific study of methods to promote the systematic uptake of research findings and other EBPs into routine practice, and, hence, to improve the quality and effectiveness of health services.

Why Use Implementation Frameworks

- Identify potential determinants of success
- Clarify constructs to be measured
- Guide implementation strategies
- Compare results across different interventions
- Inform future efforts
- Contribute to implementation science
The Consolidated Framework for Implementation Research (CFIR)

Five CFIR Domains

- Characteristics of the Intervention
- Characteristics of Individuals
- Implementation Process
- Outer Setting
- Inner Setting
Characteristics of the Intervention

Intervention source
Evidence strength & quality
Relative advantage
Trialability
Complexity
Adaptability
Design quality & package
Cost

Roger’s Diffusion of Innovations
Characteristics of Individuals

Knowledge & beliefs about the intervention
Self-efficacy
Individual stage of change
Identification with organization
Other personal attributes, e.g., values, motivations, competence

Health Belief Model
Bandura’s Social Cognitive Theory
Theory of Planned Behavior
Implementation Process

Planning
Engagement
  Opinion leaders
  Appointed internal project leaders
  Champions
  External change agents
Executing
Evaluating & Reflecting
Outer Setting

Needs & resources of those served
Networking/collaboration with external agencies ("cosmopolitanism")
Peer pressure
External policy & incentives
Inner Setting

Structural characteristics

Networks and communication

Culture

Implementation Climate

- Tension for change
- Compatibility
- Relative priority
- Organizational incentives & rewards
- Goals & feedback
- Learning climate

Readiness

- Leader engagement,
- Available resources
- Access to knowledge & information, e.g., trainings
Small Group Discussion

How could the CFIR be helpful when designing the implementation of a complex project?

How could the CFIR be useful for designing the evaluation?
Our Use of the CFIR
Partners for Change Project

Aim: Install Trauma-Informed practices
- New Trauma & MH screening tool in CW
- Case planning & referrals to MH
- EBP training to MH providers

Statewide implementation
2 Cohorts
Project Design & Timeline

Context Evaluation (Inner & Outer Settings; Policies; Workforce Data; Funding)

# Project Outcomes

<table>
<thead>
<tr>
<th>Level</th>
<th>MAIN OUTCOMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>System-level</td>
<td>New policies &amp; practices installed System gains in Trauma-Informed care Service array reconfiguration?</td>
</tr>
<tr>
<td>Workforce level</td>
<td>Gains in knowledge &amp; skills Use of new screening tools Attitudes &amp; commitment to new practices Coordination between CW &amp; MH</td>
</tr>
<tr>
<td>Child &amp; Family level</td>
<td>Number of youth screened → referred to MH Trauma &amp; well-being scores; # of Exposures Family satisfaction &amp; use of supports</td>
</tr>
</tbody>
</table>

However, results quite mixed…
DCYF Staff Trauma Screening Practices

Self-reported frequency and proficiency with trauma screening increased immediately following each cohort’s implementation (training) phase, but generally stayed at modest levels for duration of project.
Over time, average ratings of the **perceived value or usefulness of trauma practices** declined among staff in both cohorts.
Motivation for our CFIR Analysis

Explain our mixed results

Identify factors most influential to implementation

Guide future initiatives in the state

Photo by David Travis on Unsplash
CFIR Methods

Step 1:
Inventory our available data
How well did we capture CFIR domains & main constructs?

<table>
<thead>
<tr>
<th>CFIR Domain &amp; Construct</th>
<th>Definition</th>
<th>Evidence for Construct: Data Source; Participants</th>
<th>Timing (PFC Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Intervention Source</td>
<td>Perception whether intervention is internally or externally developed</td>
<td>Interviews: S, Sup, L, MHP</td>
<td>X</td>
</tr>
<tr>
<td>B. Evidence Strength &amp; Quality</td>
<td>Perceptions of evidence that intervention will achieve desired results</td>
<td>Interviews: S, Sup, L, MHP Survey (useful items): S, Sup, MHP</td>
<td>X</td>
</tr>
<tr>
<td>C. Relative Advantage</td>
<td>Perception of advantage of selected intervention(s) over alternative solutions</td>
<td>Interviews: S, Sup, L, MHP Survey (useful items): S, Sup, MHP</td>
<td>X</td>
</tr>
<tr>
<td>D. Adaptability</td>
<td>Degree to which intervention can be adapted, refined, adjusted to meet local needs</td>
<td>Interviews: Project Leaders Implementation design (document review)</td>
<td>X</td>
</tr>
<tr>
<td>E. Trialability</td>
<td>Ability to test intervention on small scale</td>
<td>Pilot phase in study design</td>
<td>X</td>
</tr>
<tr>
<td>F. Complexity</td>
<td>Perceived difficulty of intervention, e.g., duration, scope, radicalness, complexity, disruptiveness</td>
<td>Interviews: S, Sup, L, MHP Focus Groups: S</td>
<td>X</td>
</tr>
<tr>
<td>G. Design Quality &amp; Packaging</td>
<td>Perceived excellence in how intervention is bundled, presented, and assembled</td>
<td>Interviews: S, Sup, L, MHP Focus Groups: S</td>
<td>X</td>
</tr>
<tr>
<td>H. Cost</td>
<td>Costs of intervention; costs of implementation and maintenance</td>
<td>Time Study Survey Cost Study</td>
<td>X</td>
</tr>
</tbody>
</table>
CFIR Methods (cont.)

Step 2:

Rated findings at two time points – early and late implementation

3-point scale applied to each construct

-1 negative influence

0 neutral or mixed

+1 positive influence
<table>
<thead>
<tr>
<th>Domain Totals</th>
<th>Rating</th>
<th>Early</th>
<th>Late</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention Characteristics (8 constructs)</td>
<td>Positive</td>
<td>+2</td>
<td>+1</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
<td>-2</td>
<td>-5</td>
</tr>
<tr>
<td>Individuals (5 constructs)</td>
<td>Positive</td>
<td>+3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>1</td>
<td>-1</td>
</tr>
<tr>
<td>Outer Setting (4 constructs)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Positive</td>
<td>+3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
<td>0</td>
<td>-1</td>
</tr>
<tr>
<td>Inner Setting (12 constructs)</td>
<td>Positive</td>
<td>+8</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
<td>-1</td>
<td>-9</td>
</tr>
<tr>
<td>Implementation Process (7 constructs)</td>
<td>Positive</td>
<td>+4</td>
<td>+2</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td>Positive</td>
<td>+20</td>
<td>+3</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
<td>-3</td>
<td>-16</td>
</tr>
</tbody>
</table>
Main Sources of Our Mixed Results

**Implementation**

**Intervention characteristics**
- Intervention source
- Evidence strength and quality
- Relative advantage
- Adaptability
- Trialability
- Complexity
- Design quality
- Cost

**Inner setting**
- Structural characteristics
  - Networks and communications
  - Culture
  - Implementation climate
    - Tension for Change
    - Relative Priority
    - Clarity of Goals

**Outer setting**
- Patient needs and resources
- Cosmopolitanism
- Peer pressure
- External policies and incentives

**Individuals involved**
- Knowledge and beliefs about the intervention
- Self-efficacy
- Individual stage of change
- Individual identification with organization
- Other personal attributes

**Implementation process**
- Planning
- Engaging
- Executing
- Reflecting and evaluating
Data Sources: New Hampshire Drug Monitoring Initiative, December 2018; NH Bureau of EMS, 2016; Hospital discharge data. *Projected 2018 overdose death rate
Inner Setting: Pressures on DCYF Workforce

Since 2014:

Number of individuals involved in Family Service cases:
- SFY 2012: 6229
- SFY 2013: 5741
- SFY 2014: 5265
- SFY 2015: 5518
- SFY 2016: 5890
- SFY 2017: 7151
- SFY 2018: 7999

Number of children served in Family Services cases:
- SFY 2012: 2052
- SFY 2013: 1876
- SFY 2014: 1734
- SFY 2015: 1841
- SFY 2016: 2031
- SFY 2017: 2478
- SFY 2018: 2748

Number of children in out-of-home placements:
- SFY 2012: 1024
- SFY 2013: 1026
- SFY 2014: 942
- SFY 2015: 982
- SFY 2016: 1160
- SFY 2017: 1517
- SFY 2018: 1729

Data Source: New Hampshire DCYF ROM
Characteristics of Intervention

Screening tool always felt “external”

Unable to show relative advantage of new tool

- Half of cases already receiving MH services at time of screening

Screener in separate documentation platform

- Separate login – difficult access in field
- Screening data not easy to access and use
Practice Activity

Partner with 3-4 others

Think about an initiative you’ve worked on or are implementing now

Pick a few CFIR constructs – see handout

Think about methods/data you’ve used or could use to evaluate the construct

If you have data on the construct, rate whether the data revealed a net positive influence, net negative influence, or was mixed
Group Discussion

Observations & insights in trying to apply CFIR?

How did it work to identify key implementation factors?

Questions that arose?

Opportunities for improvement or alternative approach?

Anything missing?
Lessons Learned about using CFIR

Prospectively and retrospectively
Useful for both implementation planning and evaluation design
Shows promise for cross-project or cross-site investigation

Considerable resources required
Lack of specificity & difficult ‘fit’ with some constructs – especially Outer Setting
Have to consider how to link to outcomes
Resources


https://cfriguide.org/ for a range of resources and tools


Acknowledgements

ACF Funding: # 90C01099 and # 90CO1115

Dartmouth Project Team

- Dartmouth Trauma Intervention Research Center: Drs. Kay Jankowski & Erin Barnett
- Project Coordinators: Becky Parton, MSW & Cassie Yackley, DPsy
- Data Support: Jeremy Huckins, PhD
- Evaluation team members: Beth Boucher, MPH; Laura Pickrell, MPH; Erin Knight, PhD

NH DCYF Leaders & Data Specialists

NH DCYF staff and supervisors

Community Mental Health Providers and Directors