Approaches and Outcomes for Implementing Evidence-Based Practices in Child Welfare

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Agenda

- Present a few implementation conceptual models
- Illustrate implementation phases and levels
- Describe important implementation outcomes with examples
- Describe some work in progress
- Provide list of resources
Is Implementation a Sprint or Marathon?
Current (2010): a recent study found that “hand hygiene” compliance is only 34% among health care providers.


It takes **17 years** to turn **14 per cent** of original research to the benefit of patient care.

E.A. Balas, 2000
Three Elements of Evidence-Based Practice

- **Research evidence**
  - RCT is most rigorous
  - Other designs also provide evidence

- **Clinical expertise/judgement**

- **Consumer choice, preference, culture**

Source: American Psychological Association, 2005; Institute of Medicine, 2001
What About “Practice-Based Evidence”?

- Interventions or service models that are in development
- Interventions developed in the community
- Most of these are in need of rigorous evaluation
- Determine if it meets APA/IOM criteria

Source: American Psychological Association, 2005; Institute of Medicine, 2001
Some Key Terms

Dissemination

- “targeted distribution of information and intervention materials to a specific public health or clinical practice audience. The intent is to spread knowledge and the associated evidence-based interventions.”

Implementation

- “the use of strategies to introduce or change evidence-based health interventions within specific settings”

Source: National Institutes of Health PAR-10-038
Other terms....

- **Diffusion**
  - Natural spread of an innovation

- **Adoption**
  - Active uptake of a technology or treatment

- **Sustainment/Maintenance**
  - Continued institutionalization of EBP

- **Sustainability**
  - Characteristic of an EBP or intervention that supports its continued use in practice (*with fidelity)

- **De-adoption**
  - Decision to stop using the EBP

Source: Aarons Hurlburt & Horwitz, 2011; Greenhalgh, et al., 2004; Rogers, 1995; Massatti, Sweeney, & Panzano, & Roth, 2008
Traditions that Inform Implementation

Management Science
Organizational development
Organizational psychology
Business Quality Improvement
Health Care Quality Improvement
Public health
Population health
Education
Ethnography
Informatics
Economics
Engineering/Systems Dynamics
Why Frameworks?

To (hopefully) create effective implementation
How Frameworks Can Help

Frameworks
- Thinking about implementation process
- Thinking about structural requirements for implementation
- Planning for implementation
- Guiding implementation

Helps us to consider multiple determinants of implementation and plan accordingly
General Considerations in Frameworks

- Phases
- Levels
- Structures
- Processes
- Interactions
RE-AIM Model

Source: Glasgow, Vogt & Boles (1999)
http://www.re-aim.org/2003/fig-arch.html
RE-AIM Elements

- **Reach** the target population
- **Effectiveness** or efficacy of the intervention
- **Adoption** by target settings or institutions
- **Implementation**, consistency of delivery of intervention
- **Maintenance** of intervention effects in individuals and settings over time

Source: Glasgow, Vogt & Boles (1999)
http://www.re-aim.org/2003/fig-arch.html
National Implementation Research Network (NIRN) Stages

- Exploration and Adoption
- Program Installation
- Initial Implementation
- Full Operation
- Innovation
  - Be careful to avoid drift…
- Sustainability

Source: Fixsen, Naoom, Blase, Friedman, & Wallace (2005)
CFIR Matrix
Source: Damschroder et al., 2009

| Code | Topic/Description | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| I. INTRODUCTION CHARACTERISTICS | | | | | | | | | | | | | | | | | | | | |
| A | Intervention Source | ✓ | | | | | | | | | | | | | | | | | | |
| B | Evidence Strength & Quality | | | | | | | | | | | | | | | | | | | |
| C | Relative advantage | | | | | | | | | | | | | | | | | | | |
| D | Adequacy | | | | | | | | | | | | | | | | | | | |
| E | Testability | | | | | | | | | | | | | | | | | | | |
| F | Complexity | | | | | | | | | | | | | | | | | | | |
| G | Design Quality and Packaging | | | | | | | | | | | | | | | | | | | |
| H | Cost | | | | | | | | | | | | | | | | | | | |
| II. OUTER SETTING | | | | | | | | | | | | | | | | | | | |
| A | Patient Needs & Resources | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| B | Cosmopolitanism | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| C | Peer Pressure | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| D | External Policies & Incentives | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| III. INNER SETTING | | | | | | | | | | | | | | | | | | | |
| A | Structure Characteristics | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| B | Networks & Communication | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| C | Culture | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| D | Implementation Climate | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| D.1 | Tension for Change | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| D.2 | Compatibility | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| D.3 | Relative Priority | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| D.4 | Organizational Incentives & Rewards | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| D.5 | Goals and Feedback | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| D.6 | Learning Climate | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| D.7 | Readiness for Implementation | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| D.8 | Leadership Engagement | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| D.9 | Available Resources | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| D.10 | Access to Knowledge and Information | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| IV. CHARACTERISTICS OF INDIVIDUALS | | | | | | | | | | | | | | | | | | | |
| A | Knowledge & Beliefs about the Intervention | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| B | Self-Efficacy | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| C | Individual Stage of Change | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| D | Individual Identification with Organization | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E | Other Personal Attributes | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| V. PROCESS | | | | | | | | | | | | | | | | | | | |
| A | Planning | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| B | Preparing | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| B.1 | Opinion Leaders | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| B.2 | Formal appointed internal implementation leaders | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| B.3 | Champions | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| B.4 | External Change Agents | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| C | Executing | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| D | Reflecting & Evaluating | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
Consolidated Framework for Implementation Research (CFIR)

The five CFIR domains are:

- Intervention characteristics
- Outer setting
- Inner setting
- Characteristics of the individuals involved
- Process of implementation

Source: Damschroder et al., 2009
Exploration, Preparation, Implementation, Sustainment (EPIS) Model

- Key phases of the implementation process
- Multilevel
- Frames implementation factors across levels within each phase
- Enumerates common and unique factors across levels and across phases

Source: Aarons, Hurlburt, & Horwitz (2011) APMH/MHSR
Phases and Transition Points in the EPIS Model

**Exploration Phase**
- Evaluate EBP Fit
- Identify outer context issues
- Identify inner context issues

**Preparation Phase**
- Training Coaching Begins
- Marketing EBP to stakeholders
- Address outer context issues
- Address inner context issues

**Implementation Phase**
- EBP Being Delivered with Fidelity
- Leadership and support for EBP
- Alignment of outer context support
- Problem solving inner context issues

**Sustainment Phase**
- EBP quality assurance
- Alignment and contingency management
- Supervision incentivization turnover mgmt
Why Consider Multiple Phases?

- Characterizes process of implementation
- Develops a way to think about what supports are needed during the implementation process
- Helps in providing a “long-term view”
- Helps in planning
Why Consider Levels of Change?

Four Levels of Change for Assessing Performance Improvement:

- Larger System/ Environment
  - Assumptions about Change: Reimbursement, legal, and regulatory policies are key

- Organization
  - Assumptions about Change: Structure and strategy are key

- Group / Team
  - Assumptions about Change: Cooperation, coordination, & shared knowledge are key

- Individual
  - Assumptions about Change: Knowledge, skill, and expertise are key

Source: Shortell, (2004) Medical Care Research and Review
## Exploration Phase

<table>
<thead>
<tr>
<th><strong>OUTER CONTEXT</strong></th>
<th><strong>INNER CONTEXT</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention characteristics</td>
<td>Intervention characteristics</td>
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<tr>
<td>Sociopolitical Context</td>
<td>Organizational characteristics</td>
</tr>
<tr>
<td>Legislation</td>
<td>Absorptive capacity</td>
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<tr>
<td>Policies</td>
<td>Knowledge/skills</td>
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<tr>
<td>Monitoring and review</td>
<td>Readiness for change</td>
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<tr>
<td>Funding</td>
<td>Receptive context</td>
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<tr>
<td>Service grants</td>
<td>Culture</td>
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<td>Research grants</td>
<td>Climate</td>
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<td>Foundation grants</td>
<td>Leadership</td>
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<td>Continuity of funding</td>
<td>Individual adopter characteristics</td>
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<tr>
<td>Client Advocacy</td>
<td>Values</td>
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<td>Consumer organizations</td>
<td>Goals</td>
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<td>Interorganizational networks</td>
<td>Social Networks</td>
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<tr>
<td>Direct networking</td>
<td>Perceived need for change</td>
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<tr>
<td>Indirect networking</td>
<td></td>
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<tr>
<td>Professional organizations</td>
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<td>Clearinghouses</td>
<td></td>
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<td>Technical assistance centers</td>
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Source: Aarons, Hurlburt, & Horwitz (2011)
Preparation Phase

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<tr>
<th>OUTER CONTEXT</th>
<th>INNER CONTEXT</th>
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<tbody>
<tr>
<td><strong>Sociopolitical</strong></td>
<td><strong>Organizational characteristics</strong></td>
</tr>
<tr>
<td>Federal legislation</td>
<td>Size</td>
</tr>
<tr>
<td>+ Local enactment</td>
<td>Role specialization</td>
</tr>
<tr>
<td>Definitions of “evidence”</td>
<td>Knowledge/skills/expertise</td>
</tr>
<tr>
<td><strong>Funding</strong></td>
<td>Values</td>
</tr>
<tr>
<td>Support tied to federal and state</td>
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<tr>
<td>policies</td>
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<td><strong>Client advocacy</strong></td>
<td><strong>Leadership</strong></td>
</tr>
<tr>
<td>National advocacy</td>
<td>Culture embedding</td>
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<tr>
<td>Class action lawsuits</td>
<td>Championing adoption</td>
</tr>
<tr>
<td><strong>Interorganizational networks</strong></td>
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<tr>
<td>Organizational linkages</td>
<td></td>
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<tr>
<td>Leadership ties</td>
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<tr>
<td>Information transmission</td>
<td></td>
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<tr>
<td>Formal</td>
<td></td>
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<tr>
<td>Informal</td>
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</table>

Source: Aarons, Hurlburt, & Horwitz (2011)
# Implementation Phase

## Outer Context

<table>
<thead>
<tr>
<th>Sociopolitical</th>
<th>Legislative priorities</th>
<th>Administrative costs</th>
</tr>
</thead>
</table>

### Funding

- Training
- Sustained fiscal support
- Contracting arrangements
- Community based organizations

### Interorganizational networks

- Professional associations
- Cross-sector
- Contractor associations
- Information sharing
- Cross discipline translation

### Intervention developers

- Engagement in implementation

### Leadership

- Cross level congruence
- Effective leadership practices

## Inner Context

### Organizational Characteristics

- Structure
- Priorities/goals
- Readiness for change
- Receptive context
- Culture/climate

### Innovation-values fit

- EBP structural fit
- EBP ideological fit

### Individual adopter characteristics

- Demographics
- Adaptability
- Attitudes toward EBP

Source: Aarons, Hurlburt, & Horwitz (2011)
# Sustainment Phase

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<tr>
<td>Leadership</td>
<td>Leadership</td>
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<tr>
<td>Policies</td>
<td>Embedded EBP culture</td>
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<tr>
<td>Federal initiatives</td>
<td>Critical mass of EBP provision</td>
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<tr>
<td>State initiatives</td>
<td>Social network support</td>
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<tr>
<td>Local service system</td>
<td>Fidelity monitoring/support</td>
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<tr>
<td>Consent decrees</td>
<td>EBP Role clarity</td>
</tr>
<tr>
<td>Funding</td>
<td>Fidelity support system</td>
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<tr>
<td>Fit with existing service funds</td>
<td>Supportive coaching</td>
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<tr>
<td>Cost absorptive capacity</td>
<td>Staffing</td>
</tr>
<tr>
<td>Workforce stability impacts</td>
<td>Staff selection criteria</td>
</tr>
<tr>
<td>Public-academic collaboration</td>
<td>Validated selection procedures</td>
</tr>
<tr>
<td>Ongoing positive relationships</td>
<td>Valuing multiple perspectives</td>
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Source: Aarons, Hurlburt, & Horwitz (2011)
Implementation Outcomes

What are implementation outcomes?

Why do we need to think differently about implementation outcomes?

How do implementation outcomes differ from clinical outcomes?
  – Implementation effectiveness
  – Innovation effectiveness

Source: Klein, Conn, & Sorry, 2001)
Implementation Outcomes

- **Intervention Strategies**
  - Evidence Based Practices
  - Implementation Strategies
    - Systems
    - Environment
    - Organizational
    - Group/Learning
    - Supervision
    - Providers
    - Consumers

- **Implementation Outcomes**
  - Fidelity
  - Reach
  - Acceptability
  - Sustainability
  - Uptake
  - Costs
  - Workforce

- **Outcomes**
  - Service Outcomes
    - Efficiency
    - Safety
    - Effectiveness
    - Equity
    - Patient-Centered
    - Timeliness

- **Client Outcomes**
  - Symptoms
  - Functioning
  - Satisfaction
  - Quality of Life

Source: Proctor, Landsverk, Aarons, Chambers, Glisson, Mittman (2009); Proctor, Silmere, et al., (2011);
Mixed-Methods Study of Statewide EBP Implementation (NIMH PI: Aarons)

- Implementation of SafeCare® in Oklahoma’s Statewide Children’s Services System

- Organizational and provider focused

- Mixed Methods
  - quantitative and qualitative components

- Longitudinal at organization/team level

- Requires collaboration and ongoing relationship building and maintenance
Mixed-Methods EBP Implementation Study
NIMH 5R01MH072961 (PI: Aarons) Implementation
NIMH 5R01MH065667 (PI: Chaffin) Effectiveness

Legend
- EBP SafeCare
- Usual Care

Map not to Scale

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## SafeCare Effectiveness Study

NIMH 5R01MH065667 (PI: Chaffin) Effectiveness  
NIMH 5R01MH072961 (PI: Aarons) Implementation

<table>
<thead>
<tr>
<th></th>
<th>Monitored</th>
<th>Non-Monitored</th>
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<tbody>
<tr>
<td><strong>SafeCare</strong></td>
<td>SafeCare + Coaching</td>
<td>SafeCare Protocol No Coaching</td>
</tr>
<tr>
<td><strong>Services as Usual</strong></td>
<td>Services as Usual + Coaching</td>
<td>Usual Care No Coaching</td>
</tr>
</tbody>
</table>
Figure 1. Integrative Model for Study of Implementation of EBP in Human Service Organizations. (Adapted from Aarons, Woodbridge, & Carmazzi, 2003; Frambach & Schillewaert, 2002; Knudsen, Johnson, & Roman, 2002); Note: SC-ES=SafeCare Effectiveness Study
Figure 1. Kaplan-Meier Survival Function Estimates (Retention Probability) by Study Condition. Note: SC/M = participating in SafeCare and fidelity monitoring; SC/Non = participating in SafeCare, but not fidelity monitoring; SAU/M = services as usual and receiving fidelity monitoring; and SAU/Non = services as usual and not receiving fidelity monitoring. N=153.

All cases SafeCare reduced recidivism

Indicated cases SafeCare reduced recidivism

FIGURE 1: Plots of 2-level CPS recidivism survival models with propensity stratification and covariates. Full sample and customary SC inclusion subpopulation survival for first child maltreatment recidivism report.

Source: Chaffin, Hecht, Bard, Silovksy & Beasley (2012) Pediatrics
OK Qualitative Results – Service Providers

6 primary factors associated with EBP implementation

- Acceptability of the EBP to the caseworker and to the family
- Appropriateness of the EBP to the needs of the family
- Caseworker motivations for using the EBP
- Experiences with being trained in EBP
- Extent of organizational support for EBP
- Impact of the EBP on process and outcome of case management

Source: Aarons and Palinkas (2007) APMH
OK Qualitative Results – Management/Executive Directors

6 primary factors associated with EBP implementation

– Availability of resources
– Positive external relations
– Support of agency leadership for EBPs
– Creating high motivation/low resistance in staff
– Tangible benefits for staff
– Perceived benefits outweigh perceived costs

Source: Palinkas and Aarons (2009) IJCHHD
“THIS IS IMPRESSIVE ROBERTS, BUT I’M NOT SURE THAT IT QUALIFIES AS WORK-PLACE LEADERSHIP”
Effects of Type of Leadership on Team Climate for Innovation and Staff Attitudes Toward Adopting EBP

Figure 1. Multigroup Clustered Path Analysis: Association of Transformational Leadership and Leader-Member Exchange with Team Climate for Innovation and Team Climate for Innovation with Staff Attitudes toward Innovation Adoption During Innovation Implementation compared to Services as Usual. Note: N=140; Teams Implementing the SafeCare (n=85) / Teams Providing Services as Usual (n=55);

\[
\chi^2 (4) = 1.105; p = .894; CFI = 1.000, TLI = 1.037, RMSEA = 0.000, SRMR = 0.013; *p < .05, **p < .01, ***p < .001
\]

Source: Aarons and Sommerfeld (2012) JAACAP
Phase 1
Development of the
intervention
Oregon 3 County
Study ($N = 70$)

Phase 2
Original developers
train and supervise
Cohort 1
Interventionists in
San Diego ($n = 508$).

Phase 3
Cohort 1 Interventionists
from San Diego train
Cohort 2 Interventionists
($n = 192$).

Developers supervise
Cohort 1’s supervision of
Cohort 2, but have no
direct contact with Cohort
2 Interventionists.

Cascading Implementation outcomes

- Baseline rates of behavior problems did not differ for phase 2 and phase 3 children.

- No differences between rates of child problems at treatment termination for phases 2 and 3.

- Assignment to the KEEP intervention group was associated with a significant decrease in child problems from baseline to termination.

- No decrement in treatment effect when intervention developers pulled back and had the staff trained in phase 2 provide training and supervision for phase 3 interventionists.

- With proper training and ongoing supervision, KEEP can be transported to third generation interventionists not directly trained or supervised by the intervention developers.

## ARC Org Improvement Model
(Availability, Responsiveness, Continuity)
(Charles Glisson & colleagues)

<table>
<thead>
<tr>
<th>Stage</th>
<th>Component</th>
<th>Phase</th>
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<tbody>
<tr>
<td></td>
<td>I Problem Identification</td>
<td>II Direction Setting</td>
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<tr>
<td>Collaboration</td>
<td>1. Leadership</td>
<td></td>
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<tr>
<td></td>
<td>2. Personal Relationships</td>
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<td></td>
<td>3. Network Development</td>
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<td>Participation</td>
<td>4. Team Building</td>
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<td></td>
<td>5. Information and Assessment</td>
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<td>6. Feedback</td>
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<td></td>
<td>7. Participatory Decision-Making</td>
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<td></td>
<td>8. Conflict Management</td>
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<tr>
<td>Innovation</td>
<td>9. Goal Setting</td>
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<td></td>
<td>10. Continuous Improvement</td>
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<td></td>
<td>11. Job Redesign</td>
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<td></td>
<td>12. Self-Regulation</td>
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</tbody>
</table>

Source: adapted from Glisson & Schoenwald, 2005)
Greater reduction in child behavior problems for ARC combined with MST
No differences in adherence (coded tapes, client report, supervisor report)
Significant reduction in out of home placements for ARC and MST (no interaction)
Reductions in staff turnover

Source: Glisson, Schoenwald, Hemmelgarn, Green, Dukes, Armstrong & Chapman (2010) JCCP
Child Welfare Implementation Projects Currently Under Way
Community Development Teams to Scale-Up MTFC in California
NIMH R01MH076158, CR2P, PI: P. Chamberlain

- Implement Multidimensional Treatment Foster Care (MTFC) in California counties not already using MTFC.

- Test the effectiveness of the Community Development Team (CDT) model to promote the adoption, implementation, and sustainment of MTFC.

- Randomly assign counties to:
  - CDT plus Standard implementation of MTFC
  - Standard implementation of MTFC only

- Both CDT and SI counties receive resources needed to implement MTFC. Counties pay for all direct services to children and families.


Source: http://projectreporter.nih.gov/project_info_details.cfm?aid=7901565&icde=12638651
Interagency Collaborative Teams to Scale-Up Evidence-Based Practice (NIMH R01MH092950 Aarons & Hurlburt)
Adaptation

- What types of adaptations may be needed to fit EBPs to local context?

- How do local contexts need to adapt to be ready for EBP implementation?

- How can we conduct adaptation in a planned and efficient way keeping fidelity to EBP core elements?

- What do we really need to know about system and organizational readiness to implement EBP prior to implementation?
Dynamic Adaptation to Implement an Evidence-Based Child Maltreatment Intervention

(CDC R01CE001556, PI: Aarons)

- Phased approach to implementing EBP
  - Allows for appropriate intervention adaptations
  - Allows system and organization adaptations
  - Minimize drift

- Pre-implementation assessment
  - System, organizations, provider, consumer

- Multi-stakeholder "implementation resource team"

- Ongoing outcomes and fidelity/satisfaction data feedback

- Data feedback to IRT and coaches

- Randomize multiple cohorts into ADAPTS vs. usual implementation

Source: Aarons, Green, Palinkas, Self-Brown, Whitaker, Lutzker, Silovsky, Hecht, Chaffin (In press) Implementation Science
Implementation Resource Team
- Academic Researchers
- Intervention Developers
- Trainers/Coaches
- Administrators
- Clinicians
- Peer-Leaders

Ad-Hoc Adaptation
- Client Emergent Issues
  - Provider knowledge, skills, abilities
  - Available resources

Outcomes
- Fidelity
- Client Satisfaction
- Patient Retention
- Patient Compliance
- Provider retention
- Provider Satisfaction
- Initiating treatment
- Completing treatment
- Treatment rates

Ad-Hoc Adaptation
- Client Emergent Issues
  - Provider knowledge, skills, abilities
  - Available resources

Ongoing Feedback

Implementation Resource Team
- EBP Training with Context Driven Adaptation Support

Ad-Hoc Adaptation
- Client Emergent Issues
  - Provider knowledge, skills, abilities
  - Available resources

Ongoing Feedback

Exploreation Phase

Preparation Phase

Implementation Phase

Sustainment Phase

System Level Assessment
- Funding/Resources
- Internal or Contracted Services
- Politics
- Policies

Organization Level Assessment
- Training Space and Resources
- Senior Leadership Buy-in
- Team Level Leadership
- Culture/Climate

Provider Assessment
- Education Level
- Primary Discipline
- Experience EBP
- Dispositional Innovativeness
- Attitudes toward EBP

Client Characteristics
- Age/Gender
- Culture
- Previous Treatment
- Substance Abuse
- Mental Health

Note: Adapted from Aarons, Hurlburt and Horwitz (2011), Aarons and Green (2010), and Aarons, Green, Palinkas, Self-Brown, Whitaker, and Lutzker (In preparation). The contents of boxes do not capture every contingency or issue, but contents are exemplars. The Implementation Resource Team and stakeholders collaborate to make system, organization, and intervention delivery adaptations without compromising core elements of an EBP.

Source: Aarons, Green, Palinkas, Self-Brown, Whitaker, Lutzker, Silovsky, Hecht, Chaffin (In press) Implementation Science
SafeCare Coaching Study
CDC R18CE001733;
NSTRC/GSU, PI: D. Whitaker

How is implementation affected by type of coaching?

How does operational distance from the intervention developer impact implementation?

Randomly assign 90 providers at 30 agencies to receive one of three types of coaching

Source: http://projectreporter.nih.gov/project_info_details.cfm?aid=8133992&icde=12638573
Community Implementation of KEEP
NIMH R01MH060195
SDSU, PI: J. Price

- Examines fidelity and generalization of the KEEP foster parent training in a child welfare system delivered by a community-based organization (CBO).

- Can KEEP be delivered independently by a CBO and maintained in a manner that preserves fidelity and outcomes?

- Do effects of KEEP generalize (concurrently) to other children currently in foster and kin intervention homes and lead to reductions in overall levels of behavior problems?

- Does KEEP continue to have effects after the completion of the intervention and generalize (temporally) to new children who enter the homes of these families at a later point in time?

Source: http://projectreporter.nih.gov/project_info_description.cfm?aid=8272703&icde=12638581
Dissemination of Effective MH Services in Child-Welfare NIMH RC1MH088732 UIC, PI: S. Leathers

- Addresses intervention uptake and sustainment of parent management training integrated with structured support of learning at home and in school

- Compares EBP use, fidelity, and child outcomes for a group receiving an enhanced implementation strategy vs. a group receiving standard training

- Project-hired MSWs and foster parent advocates ("change agents") will be infused into existing agency social work teams

- Will provide groups and home visits, with shared training and supervision from the research project and agency supervisors
  - Focus on increasing knowledge, exposure, and communication with potential EBP adopters

- Focus on training key opinion leader providers (KOLs) in effective EBP dissemination

Source: http://projectreporter.nih.gov/project_info_description.cfm?aid=7938872&icde=12638597
A Good Framework can Improve the Efficiency of Implementation

Consider
- What is needed at each phase
- What is needed in outer context
- What is needed in the inner context

What are some strategies likely to accelerate the process:
- Strong multi-level leadership
- Structure the Process
- Set Timelines
- Accountability for meeting goals
- Continuous Strategic Planning
- Continuous communications
Where to from Here?

- Many theories and frameworks but we need rigorous testing to develop the evidence.

- Collaboration between implementation researchers, service systems and organizations to identify priorities and develop projects.

- Develop approaches to address system and organization implementation readiness.

- Develop tools to measure implementation processes and outcomes.
Resources

- California Evidence-Based Clearinghouse for Child Welfare
  - Implementation Resources
    - [http://www.cebc4cw.org/implementation-resources/](http://www.cebc4cw.org/implementation-resources/)

- California Institute for Mental Health
  - Community Development Teams Model

- California Social Work Education Center (CalSWEC)
  - Implementation Toolkits
    - [http://calswec.berkeley.edu/calswec/implementTk/impTk_home.html](http://calswec.berkeley.edu/calswec/implementTk/impTk_home.html)

- National Implementation Research Network (NIRN)
  - Various models and resources
    - [http://nirn.fpg.unc.edu/](http://nirn.fpg.unc.edu/)
Resources

- NIH Conference on the Science of Dissemination and Implementation
  - Annual conference with latest findings from implementation research studies

- Global Implementation Conference
  - Every other year – addresses implementation practice and research

- NIH Training Institute on Dissemination and Implementation Research in Health (TIDIRH)
  - Week long training for those wanting to do DI research

- VA Center for Implementation Practice Research and Support (CIPRS)
  - While focused on the VA – many issues and principals are relevant for implementation in general
    - [http://www.queri.research.va.gov/ciprs/training.cfm](http://www.queri.research.va.gov/ciprs/training.cfm)
Is Implementation a Sprint or Marathon?
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