Implementation Strategies for Integration in the Current Healthcare Landscape

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Lessons from Implementation Science that Help You Get Where You Need to Go

Disclaimer

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Objectives

1. Define *implementation* and *implementation science*

2. Understand the *implementation gap*, its relation to treatment fidelity, and its effects on patient outcomes

3. Describe *strategies* from implementation science research to assist with organizational changes and promote the best patient outcomes

Implementation and Implementation Science
ATTC Network Model of the Innovation Process

ATTC Technology Transfer Workgroup, 2011, Journal of Substance Abuse Treatment
Implementation

• Incorporating an innovation into routine practice
• Includes a range of strategies to address individual, organizational, and systemic characteristics (e.g., skills training, administrative buy-in, policy changes)

ATTC Technology Transfer Workgroup, 2011, Journal of Substance Abuse Treatment

A Brief History of the Field
Everett M. Rogers
Diffusion of Innovations

- Popularized adoption curve
- Focused on diffusion up to decision to adopt
- Identified attributes of innovation that affected adoption

Implementation Science

- Combines research across fields
  - Rural sociology
  - Public health
  - Communication & marketing
  - Evidence-based medicine
  - Organizational change
- Studies what strategies can help most efficiently implement innovations and evidence-based practices

Greenhalgh et al., 2004
Implementation Science

- Multiple models and terms
  - CFIR – Consolidated Framework for Implementation Research (Damschroder et al., 2009)
  - Implementation Framework (Fixsen et al., 2005)
  - RE-AIM - Reach, Effectiveness, Adoption, Implementation, and Maintenance (Glasgow et al., 2001)
  - TCU Program Change Model (Simpson & Flynn, 2007)
- Popular interest: The Tipping Point by Malcolm Gladwell

The Implementation Gap, Its Relation to Treatment Fidelity, and Its Effects on Patient Outcomes
The Implementation Gap

Effective Intervention \[\times\] Ineffective or Insufficient Implementation = Inconsistent; Not Sustainable; Poor Outcomes

State Implementation & Scaling-up of Evidence-based Practices Center
http://sisep.fpg.unc.edu/

The Implementation Gap Can Lead to False Conclusions

- Martinson report (1974)
  - Reviewed research on offender rehabilitation interventions
  - Concluded there were no effective interventions (e.g., psychotherapy, vocational training, work release)

- Panel on Research on Rehabilitative Techniques (Sechrest, White, & Brown, 1979)
  - Only parts of most interventions were implemented, rather than the whole intervention
  - Evaluation of the interventions was not rigorous
  - Martinson’s interpretations were premature and unjustified
### What Works

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Effective</th>
<th>NOT Effective</th>
</tr>
</thead>
</table>
| Effective    | • Performance Implementation (High Fidelity) | • Paper Implementation
              | • Procedure Implementation (Low Fidelity) |
| NOT Effective|           |               |

Fixsen & Blase, 2008

### Implementation Gap Example: Assertive Community Treatment (ACT)

- Treating patients with mental health and substance use disorders using a multi-disciplinary team

<table>
<thead>
<tr>
<th></th>
<th>Strong Implementation (High Fidelity) ACT team</th>
<th>Weak Implementation (Low Fidelity) ACT team</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment Drop-outs</td>
<td>15%</td>
<td>30%</td>
</tr>
<tr>
<td>Substance Use in Remission</td>
<td>55%</td>
<td>13%</td>
</tr>
<tr>
<td>Hospital Admissions</td>
<td>2.87</td>
<td>4.69</td>
</tr>
</tbody>
</table>

McHugo et al., 1999
Implementation Gap → Fidelity → Outcomes

**Fidelity**: How closely an implemented intervention matches the original

Adapted from Wendy Hausotter

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**Fidelity Case Study: OREOs**

What are the key characteristics of this “model” cookie?

Adapted from Wendy Hausotter
Which of These Represents Fidelity to the Original Model?

Active Ingredients or Core Components

Recipe

- Program structure (e.g., sequence of sessions)
- Program content (e.g., concepts or skills)
- Method of delivery (e.g., group, individual)

Core components must be implemented precisely as intended to achieve demonstrated outcomes.

Adapted from Wendy Hausotter
If You Cook Up Your Own Model…

Does it produce the desired outcome? How would you know?

Adapted from Wendy Hausotter

Implementation Gap/Fidelity Example: Effect on Recidivism in 509 Juvenile Justice Studies

<table>
<thead>
<tr>
<th>Number of favorable features</th>
<th>Distribution of programs</th>
<th>Percentage reduction in recidivism</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>7%</td>
<td>+12</td>
</tr>
<tr>
<td>1</td>
<td>50%</td>
<td>-2</td>
</tr>
<tr>
<td>2</td>
<td>27%</td>
<td>-10</td>
</tr>
<tr>
<td>3</td>
<td>15%</td>
<td>-20</td>
</tr>
<tr>
<td>4</td>
<td>2%</td>
<td>-24</td>
</tr>
</tbody>
</table>

Dennis, 2016; as adapted from Lipsey, 1997, 2009

The more features, the lower the recidivism
Monitoring Fidelity – Quality Assurance

Methods
- **Observation (audio, video, in-person) - BEST METHOD**
- Practitioner completed checklists
- Patient ratings

*Monitoring fidelity promotes fidelity!*

Adapted from Wendy Hausotter


![Graph showing % Change in Abstinence with and without Coaching, Certification, and Monitoring](image-url)

- **Effects associated with Coaching, Certification and Monitoring (OR=7.6)**
- Training Only: 4%
- Training, Coaching, Certification, Monitoring: 24%

*Dennis, 2016: CSAT 2008 SA Dataset subset to 6 Month Follow up (n=1,961)*
“First do it right, then do it differently.”
Blase and Fixsen (2005)

Implementation Science Strategies to Get You Where You Need to Go
Difficult to Change Practice and Make it Stick (Routine)

“Passive approaches are generally ineffective and unlikely to result in behavior change” (Grimshaw, 2001)
“Train and hope” doesn’t work either (Stilen, 2013)

Use Implementation Science to Create Successful Change

http://sisep.fpg.unc.edu/learning-zone/science-of-implementation/
Create a Successful Implementation Team

• **Organizational Sponsor**
  • Leads implementation effort, appoints Change Agent
  • Acts as a mentor to maintain enthusiasm
  • Problem-solver, assists Change Agent and Team
Create a Successful Implementation Team

- Organizational Sponsor
- Change Agent
  - Overall responsibility for implementation and planning
  - Supervisory position with responsibility and authority to implement policy and programmatic changes
  - Recognized/respected for leadership, organizational savvy, and persistence

Create a Successful Implementation Team

- Organizational Sponsor
- Change Agent
- Implementation Team
  - Comprised of staff from all levels/roles
    - Administrative, Supervisory, Support, Technical, IT
    - Patients and clients
  - Meets regularly
  - Reviews implementation planning
Implementation Drivers

- Key elements to address
  - Capacity
  - Infrastructure

http://sisep.fpg.unc.edu/learning-zone/science-of-implementation/

Training Alone is Never Enough

Study of implementing new education practices in the classroom.

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<tr>
<th>TRAINING COMPONENTS</th>
<th>OUTCOMES</th>
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<tr>
<td></td>
<td>(% of Participants)</td>
</tr>
<tr>
<td></td>
<td>Knowledge</td>
</tr>
<tr>
<td>Theory and Discussion</td>
<td>10%</td>
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Joyce & Showers, 2002,
Designing Training and Peer Coaching: Our needs for learning, VA, USA, ASCD
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<th>Skill Demonstration</th>
<th>Use in the Classroom</th>
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<tr>
<td>Theory and Discussion</td>
<td>10%</td>
<td>5%</td>
<td>0%</td>
</tr>
<tr>
<td>..+Demonstration</td>
<td>30%</td>
<td>20%</td>
<td>0%</td>
</tr>
<tr>
<td>..+ Practice &amp; Feedback</td>
<td>60%</td>
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<td>60%</td>
<td>60%</td>
<td>5%</td>
</tr>
<tr>
<td>+ Coaching in Classroom</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
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**Implementation Drivers**

- **INTEGRATED & COMPENSATORY**
  - Staff Performance Evaluation
  - Decision Support Data Systems
  - Facilitative Administrative Supports
  - Recruitment and Selection
  - Preservice Training
  - Consultation & Coaching
  - Systems Interventions

**Must be addressed for successful implementation**

Implementation Research, Fixsen et al., 2005; http://nirn.fpg.unc.edu/
Use Implementation Drivers to Develop an Implementation Plan

<table>
<thead>
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<th>Implementation Driver</th>
<th>Implementation Steps</th>
<th>Staff</th>
<th>Deadline</th>
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<tr>
<td>Recruitment/Staff Selection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decision Support Data Systems</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td></td>
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<tr>
<td>Recruitment/Staff Selection</td>
<td>1. Finalize Implementation Team</td>
<td>Change Agent</td>
<td>11/11</td>
</tr>
<tr>
<td></td>
<td>2. Meet every 2 weeks through March, then re-evaluate</td>
<td>Team</td>
<td>11/18</td>
</tr>
<tr>
<td>Decision Support Data Systems</td>
<td>1. Determine issues and system limits with EMR</td>
<td>Admin &amp; IT staff</td>
<td>11/15 initial report</td>
</tr>
<tr>
<td></td>
<td>What if only some items are completed?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Can all staff complete the screener?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td>1. Education for nurses on all shifts</td>
<td>Health coach supervisor</td>
<td>11/18</td>
</tr>
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**Improvement Cycles**

- Manage change
- Keep the focus on what is working

Plan: Plan the change using the implementation plan

Do: Make the change

Study: Evaluate what happened

Act: Continue or go back to planning

http://sisep.fpg.unc.edu/learning-zone/science-of-implementation/
Implementation Stages

- Multiple stages to every change
- Several months to years

From: http://sisep.fpg.unc.edu/learning-zone/science-of-implementation/
Use Implementation Science to Create Successful Change

- Teams
  - Build an implementation team
- Drivers
  - Training alone is never enough
  - Detailed implementation plan
- Improvement Cycles
  - PDSA cycles
- Stages
  - Implementing new practices takes months to years
  - Recognize the change process

http://sisep.fpg.unc.edu/learning-zone/science-of-implementation/

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