Implementation Science
Making It Happen

• Letting it happen
  – Diffusion; networking; communication

• Helping it happen
  – Dissemination; manuals; websites

• Making it happen
  – Purposeful and proactive use of implementation practice and science

Based on Hall & Hord (1987); Greenhalgh, Robert, MacFarlane, Bate, & Kyriakidou (2004); Fixsen, Blase, Duda, Naoom, & Van Dyke (2010)
<table>
<thead>
<tr>
<th>Basic Research</th>
<th>Applied Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest-Driven</td>
<td>Mission-Driven</td>
</tr>
<tr>
<td>Internal Validity (Rigor)</td>
<td>External Validity (Relevance)</td>
</tr>
<tr>
<td>Eventually Useful</td>
<td>Immediately Useful</td>
</tr>
</tbody>
</table>

Contribute to Knowledge Base and Theory
• Fairweather, Sanders, & Tornatzky (1974)
  – Purposeful approaches to use of Lodges in random samples of hospitals
  – Dissemination of manuals plus telephone consultation produced little impact
  – Face-to-face “action consultation” was more effective – lots of communication to resolve conceptual, structural, and policy issues en route to using the Lodges
Implementation Science


Mission-Driven process of research and development (30+ Yrs)
Implementation Science

• Accumulation of data
• Summaries of the literature on diffusion and dissemination
• Synthesis of the implementation evaluation literature

Poised for more evidence-informed implementation of EBPs and other innovations
• Sufficient data to move from making lists (facilitators & barriers) to making sense
  – Frameworks to guide implementation work
    • Meyers, Durlak, and Wandersman (2012) comparison of 25 implementation frameworks
    • Tabak, Khoong, Chambers, & Brownson (2012) reviewed 61 models for diffusion, dissemination, and implementation
Formula: Applied Implementation

- Effective Interventions
- Effective Implementation
- Enabling Contexts

= Socially Significant Outcomes
APPLIED Implementation Science: Active Implementation Frameworks

- Usable Interventions
- Implementation Stages
- Implementation Drivers
- Improvement Cycles
- Implementation Teams
Applied Implementation

WHAT: Effective Interventions

× Effective Implementation

× Enabling Contexts

= Socially Significant Outcomes
Usable Intervention Criteria

- **Clear description of the program**
  - Philosophy, values, principles (guidance)
  - Inclusion – exclusion criteria (beneficiaries)

- **Clear essential functions that define the program** (core components)

- **Operational definitions of essential functions** (practice profiles; do, say)

- **Practical performance assessment**
  - Highly correlated (0.70+) with desired outcomes
Functional Family Therapists (WSIPP)

% Recidivism

Control Group: 22% Recidivism

Highly Competent & Competent Therapists
N=12; 204 Families
13% Recidivism

Borderline & Not Competent Therapists
N=13; 223 Families
28% Recidivism
Applied Implementation

WHAT: Effective Interventions

HOW & WHO: Effective Implementation

Enabling Contexts

Socially Significant Outcomes
Stages of Implementation

Fixsen, Naoom, Blase, Friedman, & Wallace, 2005
Reliable Benefits

Consistent uses of Innovations

Performance Assessment (fidelity)

Integrated & Compensatory

Leadership Drivers

Facilitative Administration

Technical

Adaptive

Leadership Drivers

Decision Support Data System

Facilitative Administration

Org...
Organization & Leadership Drivers

Fixsen, Blase, Timbers, & Wolf (2001)
Improvement Cycles

- **Rapid cycle (PDSA) problem solving**
  - Shewhart (1931); Deming (1986)

- **Usability testing**
  - Rubin (1994); Nielsen (2000)

- **Practice-policy communication loop**
  - Fixsen, Blase, Metz, & Van Dyke (2013)
Minimum of three people (four or more preferred) with expertise in:
- Innovations
- Implementation
- Organization change

Tolerate turnover; teams are sustainable even when the players come and go (Higgins, Weiner, & Young, 2012; Klest & Patras, 2011)
## Implementation Team

<table>
<thead>
<tr>
<th>Implementation Drivers</th>
<th>T1</th>
<th>T2</th>
<th>T3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selection</td>
<td>1.44</td>
<td>2.00*</td>
<td>1.89*</td>
</tr>
<tr>
<td>Training</td>
<td>1.33</td>
<td>1.50*</td>
<td>1.10</td>
</tr>
<tr>
<td>Coaching</td>
<td>1.27</td>
<td>1.73*</td>
<td>1.83*</td>
</tr>
<tr>
<td>Perf. Assessment</td>
<td>0.78</td>
<td>1.34</td>
<td>2.00*</td>
</tr>
<tr>
<td>DSDS</td>
<td>0.18</td>
<td>1.36</td>
<td>2.00*</td>
</tr>
<tr>
<td>Fac. Administration</td>
<td>1.38</td>
<td>2.00*</td>
<td>2.00*</td>
</tr>
<tr>
<td>Systems Intervention</td>
<td>1.29</td>
<td>1.86*</td>
<td>2.00*</td>
</tr>
</tbody>
</table>

**Average Composite Score**
- 1.1
- 1.68*
- 1.83*

**Fidelity (% of cases)**
- 18%
- 83%
- 83%

2 = Fully in Place  
1 = Partially in Place  
0 = Not in Place

Metz et al. (2013)
<table>
<thead>
<tr>
<th>EFFECTIVE USE OF IMPLEMENTATION SCIENCE &amp; PRACTICE</th>
<th>LETTING IT HAPPEN</th>
<th>HELPING IT HAPPEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO Impl. Team</td>
<td>Saldana &amp; Chamberlain, 2012</td>
<td>Green, 2008</td>
</tr>
<tr>
<td>Effective</td>
<td>80%, 3 Yrs</td>
<td>14%, 17 Yrs</td>
</tr>
</tbody>
</table>
Applied Implementation

WHAT: Effective Interventions

HOW/WHO: Effective Implementation

WHERE: Enabling Contexts

= Socially Significant Outcomes
Creating Enabling Contexts

“External” System Change Support

“The fault cannot lie in the part responsible for the repair.” Ashby (1956)

Adaptive Challenges
- Duplication
- Fragmentation
- Hiring criteria
- Salaries
- Credentialing
- Licensing
- Time/scheduling
- Union contracts
- RFP methods
- Laws & regulations
A fundamental truth:
• People cannot benefit from innovations they do not experience

Effective Innovations
• If we cannot use them as designed
• They will not produce desired outcomes
Active implementation frameworks are not an end point, but a new beginning related to implementation of knowledge, science, and policy.
For More Information

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For more on Implementation Science
http://nirn.fpg.unc.edu
www.globalimplementation.org
Thank You for Your Support

- Annie E. Casey Foundation (EBPs and Cultural Competence)
- William T. Grant Foundation (Implementation Literature Review)
- Substance Abuse and Mental Health Services Administration (Implementation Strategies Grants; National Implementation Awards)
- Centers for Disease Control & Prevention (Implementation Research)
- National Institute of Mental Health (Research And Training Grants)
- Juvenile Justice and Delinquency Prevention (Program Development And Evaluation Grants)
- Office of Special Education Programs (Scaling up and Capacity Development Center)
- Administration for Children and Families (Child Welfare Leadership; Capacity Development Center)
- Duke Endowment (Child Welfare Reform)