Scaling and Implementation Science

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Big question for policy makers, system administrators, and directors of human service organizations:

What will it take to:

- Purposely and reliably produce,
- Continually improve, and
- Scale up

social impact in complex human services?
Science to Service

Science → Implementation → Service
“Evidence-based” Health

• Best practices are not yet common practices in human services

• Medical error is the third leading cause of death (after heart disease and cancer)
  Greer (1993); IOM (2000); Starfield (2000)

• “[We] identified a tremendous amount of work being done around the world to improve healthcare. … these initiatives tend to be fragmented from an implementation standpoint.”
  Perla, Bradbury, & Gunther-Murphy (2013)
Convergence in the new millennium

1. Innovation science
2. Implementation science
3. Improvement science
4. Complexity theory

Implementation science is universal and applies equally to any human service sector (shared learning!)

Fixsen, Naoom, Blase, Friedman, & Wallace (2005)
Formula for Success

Effective Innovations × Effective Implementation × Enabling Contexts

= Socially Significant Outcomes
Implement = Use

Implementation Science = The study of factors that influence the full and effective use of innovations in practice

The goal is not to answer factual questions about what is, but rather to determine what is required (mission driven)

Convergence: Active Implementation Frameworks

- Usable Innovations
- Implementation Stages
- Implementation Drivers
- Improvement Cycles
- Implementation Teams
- Enabling Change
Reliable Benefits

Consistent uses of Innovations

Fidelity

Integrated & Compensatory

Leadership Drivers

Technical

Adaptive

Organization Drivers

Facilitative Administration

Decision Support Data System

Competency Drivers

Coaching

Training

Selection

Implementation Drivers
# Implementation Teams

## Implementation

<table>
<thead>
<tr>
<th>INNOVATION</th>
<th>Expert Impl. Team</th>
<th>NO Impl. Team</th>
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<tbody>
<tr>
<td>Effective</td>
<td>80%, 3 Yrs</td>
<td>14%, 17 Yrs</td>
</tr>
<tr>
<td></td>
<td>Effective use of Implementation Science &amp; Practice</td>
<td>Letting it Happen Helping it Happen</td>
</tr>
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- Fixsen, Blase, Timbers, & Wolf, 2001
- Saldana & Chamberlain, 2012
- Balas & Boren, 2000
- Green, 2008
## Evidence: Quick Summary

<table>
<thead>
<tr>
<th>Competency Drivers</th>
<th>Haphazard Attempts</th>
<th>Implementation On Purpose</th>
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<tbody>
<tr>
<td></td>
<td>5 - 15% use in practice</td>
<td>80 - 95% use with all Drivers</td>
</tr>
<tr>
<td>Fidelity in Practice</td>
<td>29% EBP outcomes if low fidelity use</td>
<td>81% EBP outcomes if high fidelity use</td>
</tr>
<tr>
<td>Implementation Team</td>
<td>18% fidelity with no/poor Drivers</td>
<td>83% fidelity if Drivers at criteria</td>
</tr>
<tr>
<td>Training + Coaching + Fidelity</td>
<td>22% staff retained 3+ yrs.</td>
<td>58% staff retained 3+ yrs.</td>
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<tr>
<td>Competency + Organization Drivers</td>
<td>17% organizations sustain 6+ yrs.</td>
<td>84% organizations sustain 6+ yrs.</td>
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Social Impact (product) = Number Benefiting from an Innovation (numerator) \div Population of Potential Beneficiaries (denominator)
Atom-based Scaling

- Atom-based innovations have the essential features built into the pill, software, hardware, other components
- The quality of the numerator is established and tested in ultra-clean and mechanized production facilities
- Post-production industries are available to maintain, repair, and sustain an innovation
Interaction-based Scaling

- Interaction-based innovations are “built into” the skill sets of practitioners
- The quality of the numerator is fragile and must be assessed frequently in messy human service environments
- Post-production Implementation Teams must be available to maintain, sustain, and improve the use of innovations
Invent a new future for health services

- Stop wasting time and money on implementation methods that don’t work (and never have!)
  - Sugai’s Law: For every new initiative, stop two (ineffective; harmful) current ones.
  - De-scale: Avoid layering and fragmentation
- Set aside 20% of funds for implementation
- Require regular reports of fidelity data
Wexelblatt’s Scheduling Algorithm

Faster

Better

Cheaper

Pick any two!
Contribute!

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www.globalimplementation.org
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