Dissemination and Implementation Research

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Center for Nursing Research
The Pipeline Fallacy of Producing & Vetting Research to Get Evidence-Based Practice

14% of new discoveries

Basic Research

The 17-year odyssey

Priorities for Research Funding

Practice

Funding; client or population needs, demands; local practice or policy circumstances; professional discretion; credibility.

Blame the practitioner or blame dissemination?
When has your issue “arrived?”
"Blue Highways" on the NIH Roadmap*

## Dissemination vs. implementation (some fairly arbitrary distinctions)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Dissemination</th>
<th>Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>More messy</td>
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<td>More structured (perhaps)</td>
</tr>
<tr>
<td>Policy and media level</td>
<td>Organizational and clinic level</td>
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</tr>
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<td>Community/whole population</td>
<td>Specific settings/smaller groups/individuals</td>
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<td>All levels: primary, secondary, tertiary prevention</td>
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Definitions* - D&I research

- **Dissemination**: An active approach of spreading evidence-based interventions to the target audience via determined channels using planned strategies.

- **Implementation**: The process of putting to use or integrating evidence-based interventions within a specific setting.

- **Evidence-based intervention**: The objects of dissemination and implementation are interventions with proven efficacy and effectiveness.

*From Dissemination and Implementation Research in Health edited by Bownson, Colditz and Procter*
What we know, dissemination

1. Dissemination generally does not occur spontaneously and naturally;
2. Passive approaches to dissemination are largely ineffective;
3. Single-source prevention messages are generally less effective than comprehensive, multilevel approaches;
4. Stakeholder involvement in the research or evaluation process is likely to enhance dissemination;
5. Theory and frameworks for dissemination are beneficial; and
6. The process of dissemination needs to be tailored to various audiences.
Is it research dissemination or dissemination research?

• Most research dissemination has been passive

• Federal agencies fund both research dissemination and dissemination research
Consider this ..

Of the methods you use to disseminate the research findings, which one do you think generally has the most impact on your career trajectory?

1. Academic journals
2. Press releases
3. Policy briefs
4. Email alerts
5. Academic conferences
6. Seminars or workshops
7. Face-to-face meetings with stakeholders
8. Media interviews
And, this ..

Of the methods you use to disseminate the research findings, which one do you think generally has the most impact on public health or practice or policy?

1. Academic journals
2. Press releases
3. Policy briefs
4. Email alerts
5. Academic conferences
6. Seminars or workshops
7. Face-to-face meetings with stakeholders
8. Media interviews
## A tale of two worlds

<table>
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<th>How practitioners learn about research findings?</th>
<th>How researchers perceive they most effectively reach practitioners?</th>
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<td>1. Professional associations</td>
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Dissemination Science is the study of how evidence-based practices, programs, and policies can best be communicated to an interorganizational societal sector of potential adopters and implementers to produce uptake and effective use.
Dissemination Science

• the study of how
• evidence-based practices, programs, and policies
• can best be communicated
• to an interorganizational societal sector
• of potential adopters and implementers
• to produce uptake and effective use.
Tabak et al. review (AJPM, 2012)

- Identified 109 models
- Exclusions
  - 26 focus on practitioners
  - 12 not applicable to local level dissemination
  - 8 end of grant knowledge translation
  - 2 duplicates
- Included 61 models
Use of theory/frameworks in Dissemination Research

– Do you have a theory/model?
– Is your theory/framework well developed throughout your proposal?
  • Linked to aims, research design, measures, analytic strategies
– When finished, will use of your theory/framework advance the field of dissemination research?
– Is the theory from outside of health?
Dissemination should not be reserved as the “next step” (D4D)

Design with no dissemination: D-No-D
Survey question:
Overall, how do you rate your efforts to disseminate your research findings to non-research audiences?

(from a recent national survey; 266 US researchers)
Some Selected Findings

• 73% spent less than 10% of time on dissemination
• 53% had a person/team for dissemination
• 34% always involve stakeholders
• 17% use a framework/theory

• Lower values for NIH researchers
• Higher values for, practice experience or Practice Research Centers
Designing FOR Dissemination: D4D

“An active process that helps to ensure that public health interventions, often evaluated by researchers, are developed in ways that match well with adopters’ needs, assets, and time frames.”

Brownson et al. Are public health researchers designing for dissemination? Findings from a national survey in the United States. AJPH (September 2013).
What might improve D4D?

• System changes
  – Shift funder/researcher incentives
  – Develop new tools/measures

• Process changes
  – Engage stakeholders early and often
  – Use frameworks/theories
  – Identify means of delivering the messages

• Products
  – Create user friendly summaries
Take home points: Dissemination Research

1. There is a close nexus between dissemination research and research dissemination.

2. Many theories are present with many overlapping constructs.

3. The messier the research topic, the lesser the amount of solid dissemination research.

4. D4D may be a significant consideration in your program of research.
Implementation: The process of putting to use or integrating evidence-based interventions within a specific setting.
What is the Problem?

- New research takes **too long** to get adopted
- Research is often **not aligned** to address critical health/health care problems
- Providers lack **tools/technical assistance** to implement effective treatments
- Large programs being rolled out without **adequate planning** to maximize effectiveness and learning
- **Variation** and patient-centered care
  - Treatments work differently for different people
  - But inefficiency is a problem
Implementation

NIH Definition

“The use of strategies to adopt and integrate evidence-based practices (EBPs) and change practice patterns within specific settings”

How is this different from Dissemination Research?
## Implementation vs. Dissemination (Insights shared by Ross Brownson)

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Implementation
Science
Implementation

- Guideline dissemination insufficient
- Relationships are important
- Health systems continuously adapting
- Top-down AND bottom-up strategies
General Theory of Implementation

Applying Theory: Choosing Implementation Frameworks

• “Theories inform the (frameworks) that provide the undergirding or infrastructure, much like the frame of a house.”
  – Explanatory: how implementation activities will affect a desired change
  – Process: what implementation strategies should be planned

Some Implementation Frameworks

- Consolidated Framework for Implementation Research (CFIR)
- Promoting Action on Research Implementation in Health Services (PARiHS)
- Replicating Effective Programs (REP)
- Reach Effectiveness Adoption Implementation Maintenance (RE-AIM)
- Evidence-based Quality Improvement (EBQI)
- Getting to Outcomes (GTO)
- Precede-Procede
Implementation Frameworks

• Common factors
  – Nature of change (simple or complex)
  – Importance and priority of change
  – Local context (microsystem)
  – External context
  – Target of change

• Most changes require active facilitation
  – Local champions, tools, training

• Barriers differ across sites
  – Leadership, resources, IT, inertia
Take Home Points: Implementation Science

• “Nothing is more practical than a good theory”
  – Understanding what your stakeholders need AND
  – The lay of the land: barriers, facilitators to translation
• Theory should inform implementation strategy and evaluation plan
• Mix top-down and bottom-up efforts
  – centralized and locally driven approaches
THE LATEST RESEARCH SHOWS THAT WE REALLY SHOULD DO SOMETHING WITH ALL THIS RESEARCH
Why should D & I Research be of Interest to ME?

• You have ready partners--the Penn State CTSI is more than bench science!
• NIH is funding D & I Research—consider D4D in your program of research
• Given your investment in research—is the 17 year time lag for 14% of research to ever reach practice acceptable?
Bridging the research-practice gap