Dissemination and Implementation Evaluation Research

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June 14 - 16, 2010
AEA/CDC Evaluation Institute

It's a Simple Question -

What are the best modalities for disseminating what kinds of information to what kinds of individuals within what types of organizations about what kinds of programs - leading to what decisions about adoption - leading to what dimensions and levels of fidelity and adaptation, as moderated by what kinds of capacity building, technical assistance, training, monitoring, and supervision?
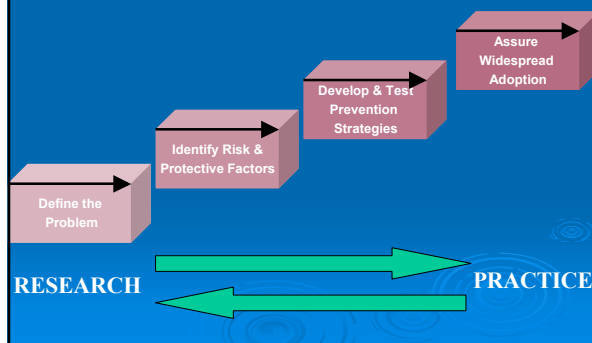

Role of Evaluation

Evaluation can be done in order to study the effectiveness of dissemination and implementation efforts

Evaluation can be the innovation/practice we are trying to disseminate and implement

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Background

➢ Existing gap between effective practices (i.e., theory & science) and what is actually done (i.e., policy & practice).
➢ Dissemination and implementation have been given less attention than the development and evaluation of programs
➢ Why?
  • Differences in roles
  • Differences in language
  • Amount of effort needed

The Research-Practice Link

RESEARCH   PRACTICE

The Dissemination/ Implementation Process

RESEARCH   PRACTICE

What's In a Name?

Knowledge to Action
Research to Practice
Knowledge Translation
Knowledge Transfer
Technology Transfer

Diffusion
Diffusion of Innovation
Implementation
Dissemination and Implementation
Translation
Science to Service

Innovation and Diffusion

- Diffusion – "the process by which an innovation is communicated through certain channels, over time among members of a social system"
- The gap between scientific evidence and practice is often evident
- In some cases, innovations diffuse despite evidence that they don't work
- In other cases, innovations diffuse *prior* to effectiveness evidence being available
- Finally, prevention interventions often *don't diffuse* even when research evidence shows they *do* work

Dissemination in Practice

- Dissemination – Intentional Spreading
- Who is responsible
  - Innovator?
  - Federal government?
  - Local government?
- Modalities
  - Traditional academic
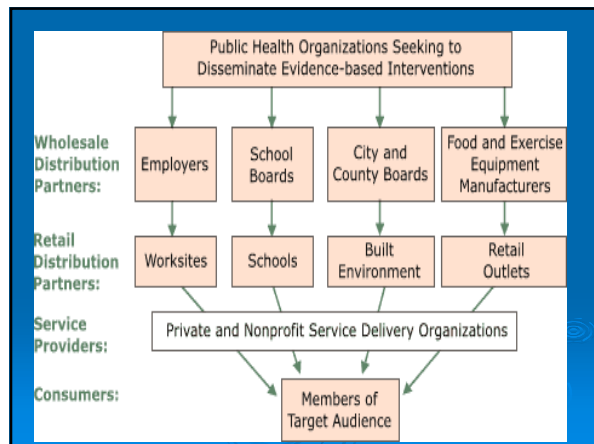 - Interactive Websites

Dearing's Top 10 Dissemination Mistakes

1. We assume evidence matters in the decision making of potential adopters
2. We substitute our perceptions of those of potential adopters
3. We use intervention creators as intervention communicators
4. We introduce interventions before they are ready
5. We assume that information will influence decision-making

6. We confuse authority with influence
7. We allow the first to adopt (innovators) to self-select into our dissemination efforts
8. We fail to distinguish among change agents, authority figures, opinion leaders and innovation champions
9. We select demonstration sites on criteria of motivation and capacity
10. We advocate single interventions as the solution to a problem

Marketing Approach to Dissemination/Adoption

- Marketing is a population-based behavior management strategy
- 4 P's – product, place, price, and promotion
- Conduct consumer research with prospective adopters
- Build sustainable distribution channels to promote and deliver programs
- Improve access to easily implemented programs

Dissemination and Diffusion Research Questions

Who are the most influential people for disseminating knowledge?

What are the most effective modalities for knowledge dissemination?

What are the effective components of dissemination messages (e.g., the role of evidence)?

Who should be the targets of dissemination (e.g., policy makers, practitioners)?

ADOPTION

Why do organizations adopt programs?

What characteristics of individuals, organizations, and programs (and their interaction) affect adoption?

How can evaluation research help answer these questions

Why Don't They Come After You Built It?

➢ Inadequate or incomprehensible information
➢ "Information Fatigue Syndrome"
➢ Wariness of programs "not invented here"
➢ Concerns about appropriateness of a generic innovation for a specific context
➢ Lack of trust of scientific findings
➢ Daily management/organizational survival vs. strategic planning and innovation

Adoption/Diffusion Principles
cf. Rogers, 1995

➢ *relative advantage –* compared to alternatives
➢ *compatibility* - the consistency of the innovation with the values and needs of an adopter
➢ *complexity* - the simplicity or complexity of the innovation itself
➢ *trialability* - the ability to try out an innovation
➢ *observability* - the ability to observe directly the effects and benefits of the innovation
➢ *flexibility –* degree to which the program can be adapted to local conditions

Adoption Research Questions

Who is responsible for making adoption decisions within what kinds of organizations?

What factors do decision-makers consider when choosing whether or not to adopt?

What are the characteristics of organizations that are high or low adopters?

What program characteristics interact with these processes?

How can we influence these processes?

IMPLEMENTATION

What are the issues and processes associated with implementing programs (e.g., adaptation, fidelity)?

How do we evaluate implementation processes?

How do we understand and study implementation as both process and outcome?

Stages of Implementation
(Fixsen et al, 2005)

Stages of the Implementation Process

Exploration & Adoption
↓
Program Installation
↓
Initial Implementation
↓
Full Operation
↓
Innovation
↓
Sustainability

- Implementation is a process not an event.

- It is important for organizations and systems to stay on track and recognize and solve common implementation problems in a timely and effective manner.

- During initial stages of implementation, success is associated with a range of contextual, organizational variables and with fidelity to the evidence-based practice or program.

Effectiveness and Implementation – 2 axes

HI Effectiveness
HI Implementation

*Model program implemented with fidelity

LO Effectiveness
HI Implementation

*DARE implemented with fidelity to content and delivery format

HI Effectiveness
LO Implementation

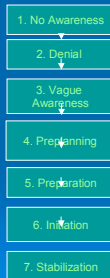*Half of model program sessions are delivered
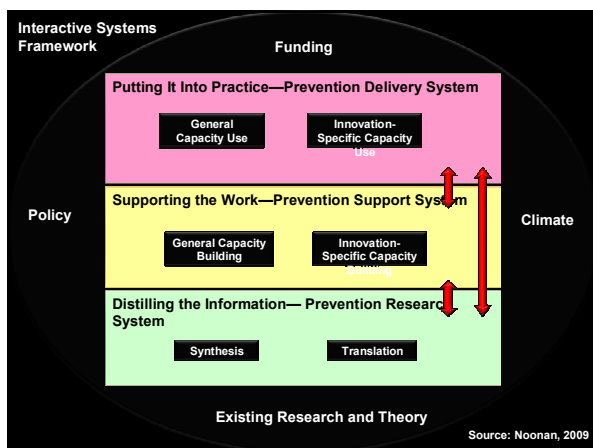
LO Effectiveness
LO Implementation

*One-hour session in assembly hall delivered by a boring person

Community Readiness for Implementation of Evidence-based Practices & Programs

Stages of Community Readiness

1. No Awareness
2. Denial
3. Vague Awareness
4. Preplanning
5. Preparation
6. Initiation
7. Stabilization

1. Not a problem, just the way it is
2. Some recognition of the problem
3. Recognition with some notion of doing something, no clarity
4. Clear recognition of problem, something needs to be done, leaders emerge
5. Active planning with a focus on detail, leadership active, resources are being assessed
6. Efforts justified by preparation, policies & actions underway, enthusiasm high, problems are few
7. Programs operating w/community and administrative support, staff trained, limitations encountered, and resistance overcome.
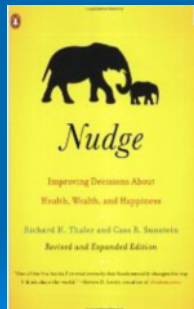
Interactive Systems Framework

Funding

Putting It Into Practice—Prevention Delivery System

General Capacity Use   Innovation-Specific Capacity Use

Policy

Supporting the Work—Prevention Support System

General Capacity Building   Innovation-Specific Capacity

Climate

Distilling the Information— Prevention Research System

Synthesis   Translation

Existing Research and Theory

Source: Noonan, 2009

Joyce & Showers Meta-Analysis (2002)

Component	Knowledge	Skill Demonstration	Use in Class
Theory & Discussion	10%	5%	0%
Training Demo	30%	20%	0%
Practice & Feedback	60%	60%	5%
Coaching in Classroom	95%	95%	95%

Nudges & Persuasion

Choice Architecture:
Healthy Defaults
Anchors
Follow the Herd
Loss Aversion
Framing

Nudge
Improving Decisions About
Health, Wealth, and Happiness

Richard H. Thaler and Cass R. Sunstein
Revised and Expanded Edition

What Can We Do?

Start with existing efforts & evaluate

Understand what practitioners need

Design and evaluate strategies that are feasible to use in organizations characterized by:
  Limited resources
  High turnover rates

Program Fidelity

➢ The degree of fit between the protocol, program model or developer-defined components of a program and its actual implementation in a given organizational or community setting – consistency with a curriculum, protocol, manual, or guidelines

Program Adaptation

➢ Deliberate or accidental modification of the program, including:
  • deletions or additions (enhancements) of program components
  • modifications in the nature of the components that are included
  • changes in the manner or intensity of administration of program components called for in the program manual, curriculum or core components analysis
  • cultural and other modifications required by local circumstances

Core Components

➢ Core components are the most essential and indispensable components of an intervention practice or program or the most essential and indispensable components of an implementation practice or program.

Why Assess Fidelity?

• Important for both research/evaluation
• Important for management/administration
• Increasing need to identify and implement evidence-based practices
• Measuring natural variation in multi-site studies
• Measuring program drift in comparison groups
• Determining readiness for scaling up

Fidelity Criteria
(Mowbray et al – 2003)

1. Identify critical (core) components
2. Find sources of data for each
3. Determine methods of data collection
4. Develop operational definitions and anchors
5. Collect data
6. Examine reliability and validity

Dimensions of Fidelity
Dusenbury, et al (2003)

- Adherence
- Duration
- Quality of delivery
- Participant responsiveness
- Program differentiation

Domains of Fidelity

- Participant characteristics
- Staff characteristics
- Staff training
- Materials
- Procedures - curriculum
- Setting
- Dosage
- Evaluation – data collection

Measurement of Fidelity

➢ I = Prospective students are given written information about the program and spend one day in the program prior to their choosing whether to enter or not
➢ A: Prospective students visit the program and receive written information prior to their choice of whether to enter the program or not
➢ U: Prospective students neither spend a day at the FOCUS program nor receive written information prior to their choice of whether to enter the program or not.

Interrelationships Among Fidelity, Reinvention, and Effectiveness

	Fidelity	Reinvention	Effectiveness
Fidelity	(.81)		
Reinvention	.52**	(.80)	
Effectiveness	.38**	.33**	(.90)

** $p < .01$

Example 2 – Noonan, Emshoff, et al. 2009

As programs are transported to new settings:

1. What individual, organizational, institutional characteristics are associated with the adoption of evidence-based programs?
   - *If you build it, who comes and why?*

2. What factors influence implementation with fidelity to the original model?
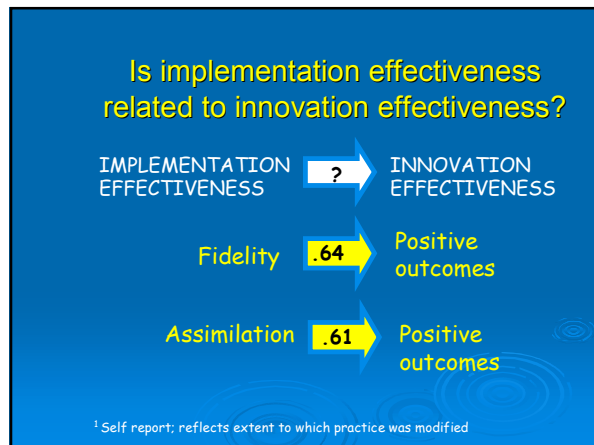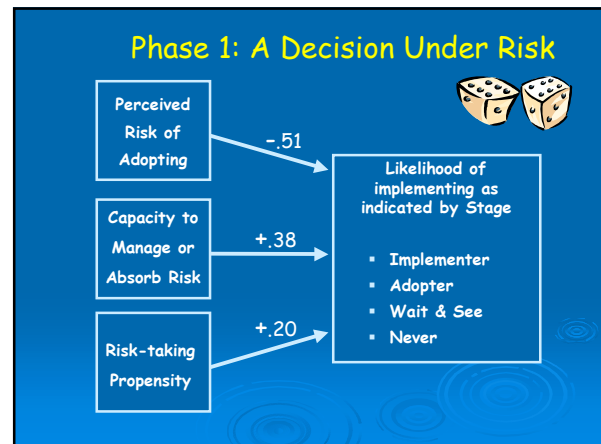   - *Once it is built, is it used as intended?*

Example 3

The Innovation Diffusion and Adoption Research Project (IDARP)

Funded by the ODMH & the Mac Arthur Foundation

Phyllis C. Panzano, Ph.D. , PI   Dee Roth, M.A., Co-PI
Bev Seffrin, Ph.D, Senior Consultant   Dushka Crane-Ross, Ph.D., Project Manager
Decision Support Services, Inc.   Ohio Dept of Mental Health, OPER

ODMH RESEARCH RESULTS BRIEFING
2003

Phase 1: A Decision Under Risk

Perceived Risk of Adopting → $-.51$ → Likelihood of implementing as indicated by Stage

Capacity to Manage or Absorb Risk → $+.38$

Risk-taking Propensity → $+.20$

Likelihood of implementing as indicated by Stage:
- Implementer
- Adopter
- Wait & See
- Never

Is implementation effectiveness related to innovation effectiveness?

IMPLEMENTATION EFFECTIVENESS → **?** → INNOVATION EFFECTIVENESS

Fidelity → **.64** → Positive outcomes

Assimilation → **.61** → Positive outcomes

[1] Self report; reflects extent to which practice was modified

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Conclusions

There is good evidence that successful implementation efforts designed to achieve beneficial outcomes for consumers require a longer-term multilevel approach.

Neither information dissemination nor training, by themselves, are effective behavior change strategies

There is little research related to organizational and system influences on implementation, or the mechanisms for their impact on implementation efforts.

The most noticeable gap in the available literature concerns interaction effects among program, dissemination, adoption, and implementation factors and their relative influences over time.

Recommendations

For Policy Makers and Planners
1. Infuse knowledge about implementation into state and federal policy
2. Invest in development and use of implementation technologies
3. Develop funding strategies to support implementation of evidence-based programs

For Research
1. Identify core intervention components of evidence based programs and practices
2. Determine effectiveness of implementation procedures as they are actually used in practice
3. Measure implementation outcomes independent of a specific program or practice
4. Describe organizational and socio-political factors hospitable to implementation

For those representing programs
1. Develop partnerships with skilled researchers
2. Establish a community of practice at implementation sites
3. Share lessons learned across functional teams from different programs

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Implementation Research: A Synthesis of the Literature - Dean Fixsen and Associates – U. of South Florida

Dissemination of Innovation as Social Change – Mayer and Davidson in *Handbook of Community Psychology (2000) –* Rappaport and Seidman (ed.)

New Directions for Evaluation – Knowledge Utilization, Implementation, Transfer, and Translation: Implications for Evaluation Winter, 2009