Implementation Science: A Community (Informed) Perspective

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Greetings from PENN
Overview

- Research and community issues impacting implementation research
- Exemplar
- Moving forward
Implementation Research

Implementation research is the systematic study of how a specific set of activities and designed strategies are used to successfully integrate an evidence-based public health intervention within specific settings (e.g. primary care clinic, community center, school).

(Schillinger, 2010)
“Where did the field get the idea that evidence of an intervention’s efficacy from carefully controlled trials could be generalized as the ‘best practice’ for widely varied populations and situations?”

(Green, 2001; p. 167)
Bridging the Gap

Research
- Time and resource intensive
- Focus on maximum intensity
- Limited generalizability (site, patient, population)
- Limited flexibility, high fidelity

Community Implementation
- Limited resources
- Need minimal intensity
- Need high inclusion in diverse settings
- Adaptation and flexibility
Tension

Research-driven Translation Models
- Relies on academics
- Limited community involvement, ownership
- Limited consideration of community assets, priorities, challenges
- Tiers of evidence
- Single focus

Community Models
- Community-driven
- Focus on local solutions and expertise
- Limited consideration of EBI’s
- Tears of evidence
- Comprehensive focus

(Layde et al, 2012)
And so we feel very limited because. … there’s just this clash of, it’s like a culture clash to me around the culture of research and the culture of the street and the reality of these people’s lives. (ED)

(Dolcini et al, 2010)
Health Impact Pyramid

- Counseling and Education
- Clinical Interventions
- Long-Lasting Protective Interventions
- Changing the Context to Make Individuals’ Default Decisions Healthy
- Socioeconomic Factors

(Health Impact Pyramid, Frieden, TR.)
Exemplar
Sexual risk reduction intervention for Latino youth
Six-session, small group format
RCT – long term outcomes
  – Increased condom use
  – Decreased sexual intercourse
  – Decrease in number of partners
Community engaged approach
Diffusion of Effective Behavioral Interventions

CDC/DHAP
Research to Practice Model
Interactive Systems Framework (ISF) for Dissemination and Implementation

Prevention Synthesis and Translation

Prevention Support System

Prevention Delivery System

(Wandersman et al., 2008)
Preparation Synthesis and Translation

- Preparing innovations discovered in research for use in real world settings
- Identification of key elements and critical features associated with intervention effectiveness.

(Wandersman et al, 2008)
Replicating Effective Programs

- Started in 1996
- Convert effective research-based interventions into packages of “how to” materials for use by local agencies
- Fidelity to original protocol
Products

Science and program overview
Core elements
Pre-implementation
Costs/staffing
Resources
Logic model
¡Cuídate! - Core Elements

1. Incorporating the theme of ¡Cuídate!—taking care of oneself and one’s partner, family and community--

2. Using culturally- and linguistically-appropriate materials and activities to show and emphasize core Latino cultural values and how they are consistent with safer sex behavior.

3. Incorporating activities that increase knowledge and influence positive attitudes, beliefs, and self-efficacy regarding HIV sexual risk-reduction behaviors.

4. Modeling and practicing the effective use of condoms.

5. Build skills in problem solving, negotiation of safe sex, and refusal of unsafe sex.

6. Delivering sessions in highly participatory, interactive small groups.
¡Cuídate! - Key Characteristics

1. Six 60-minute modules delivered over 2 days
2. Small mixed gender groups of 6 to 10 participants
3. Age range of participants 13-18 years
4. Facilitators able to work with youth and demonstrate correct condom use techniques
5. Use of role-plays and scenarios to demonstrate specific points and practice prevention skills
6. Use of music and videos
7. Sessions conducted in English or Spanish
Facilitator Training Outcomes

- Agencies were able to carry out the program with fidelity
- Adolescents and facilitators reacted favorably to the program
- Affirmation of training and supporting materials
- Identification of unplanned situations and solutions affecting implementation
Prevention Support System

- Development of support for those who will be implementing the innovation
  - Innovation specific
    - Info to guide in decisions to use or not
    - Training for implementation
    - Technical assistance
      - Evaluation, adaptation, relation to program and health outcomes
  - General capacity
    - Focused on enhancing organizational capacities that support the intervention program
      - Staffing, grant writing
Effective Interventions: HIV Prevention That Works

CDC
Centers for Disease Control and Prevention

AHRQ
Agency for Healthcare Research and Quality

The National Campaign
to Prevent Teen and Unplanned Pregnancy

National Episcopalian AIDS Coalition

WA PREP
For Healthy Youth
So it was more a matter of elimination as opposed to “YES, we know how to do this stuff.” Because, in fact, it represented a totally new way of doing things for us and for the agencies we’re working with, and it probably wasn’t the best match.

I don’t want to be so crass as if it was just a process of elimination, but in a way we looked at all the things they [CDC] were going to fund, and we said, OK, what can we not do, and crossed those off right away... And, then we had a dialogue in relation to our organizational capacity ...
Diffusion of Effective Behavioral Interventions (DEBI)

- DEBI project started in 2001
- **Goal**
  - Disseminate prevention EBI’s into prevention practice
  - Coordination of a national strategy to provide capacity-building (training, TA) to state-level and community-level HIV prevention programs.
Dissemination Process & Supports

- Development, testing, and revision of Training of Trainers Curriculum
- Development of mechanisms for TA support
- Development of dissemination plans with CDC (DHAP, DRH, DASH)
General Capacity Technical Assistance

- Recruitment and retention
- Funding
- School boards
- Engaging parents
Facilitator Training and TA in Second Life®

- Compare SL training to f2f
- Fidelity to curriculum

(1R21MH09572301A1; Aebersold & Villarruel co-PI's)
Training Participants

Five training sessions occurred from July – October
Total of 35 participants from NY to CA

- Health care providers, community health educators
- Majority female
- Mean age = 33 years
- Hispanic/Latino = 49%
- Only 2 had prior experience using Second Life®
¡Cuídate! Training in Second Life®
Interaction with Materials

Peer and Trainer Feedback

Technical Assistance

Group Work
Participant Facilitator Feedback

Interactive

Engaging
Fun
Information
Group
Hearing
Input
Learning
Comfortable

Discussions
Insights
Input

Sharing

Connect

Feedback

People
Fun
Listening

Listening
Group

Friendly
Helpful
Community Involvement - Dissemination

- Development and review of materials
- Critical feedback
- “Champions” and advocates
- Supporters
- Innovators
Opportunities and Challenges

- Dissemination, scale up, sustainability infrastructures
  - CDC (DHAP/DRH/DSH)
  - Office of Adolescent Health, HHS
  - Select Media
- Quality control, coordination, feedback
  - Trainers, facilitators, adaptations
- Lack of communication between researchers and trainers
Technical Assistance – Effective Approaches?

- Fidelity vs. program adaptation
- Building organizational cultures that support innovation
- Building local evaluative capacity vs. generalizable evaluation findings
- Balancing capacity-building vs. program dissemination efforts

(Mitchell, Florin, Stevenson, 2002)
Prevention Delivery System

Individuals, organizations, and communities that carry out the activities necessary to implement innovations

- Innovation-specific capacity
  - choosing, implementing, and sustaining interventions over time

- General capacity
  - maintaining a functioning organization (e.g. staffing, organizational leadership)

(Wandersman et al, 2008)
Prevention Delivery System

- Match of research and theories with communities’ interests

Climate
- Level of emphasis on EBI’s
  - Policy driven

Funding
- Program specific
- Infrastructure
**Effective Implementation and Dissemination in Minority Communities**

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<th>Establish infrastructure for translation partnership</th>
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| • Identify partners and secure their involvement  
• Explicitly delineate roles and responsibilities  
• Secure academic-community partnership funding for dissemination & implementation research |  

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<th>Identify multiple inputs – info gathering</th>
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| • Identify multiple candidate EBIs, materials and procedure, community best practices and contextual factors  
• Conduct formative research with community stakeholders |  

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<th>Review and distill information</th>
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| • Review EBIs, community best practices and formative research results and how to integrate them into an intervention  
• Consider how components can accommodate population characteristics, delivery system, and community context |  

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<th>Adapt and integrate program components – translation</th>
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<td>• Design needed adaptations (e.g. culture and language, literacy and preferred learning channels, community context)</td>
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<th>Build general and specific capacity – support system</th>
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<td>• Identify ongoing sources of support for the program and widespread dissemination</td>
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<th>Implement intervention – delivery system</th>
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| • Implement and monitor intervention in community setting  
• Provide ongoing technical assistance and support |  

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<th>Develop appropriate design and measures - evaluation</th>
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| • Develop evaluation designs that are relevant and appropriate for the context  
• Develop relevant and appropriate measures |  

(Napoles, Santoyo-Olsson, and Stewart, 2013)
Promoting EBI’s in Communities

- Technology push
  - Strengthen practice oriented research
  - Community collaboration from development through dissemination

- Market pull
  - Accountability for program efficacy
  - Marketing benefits of EBI’s

- Delivery capacity
  - Training and TA
  - Implementing with fidelity
  - Outcome evaluation

(Mitchell, Florin, Stevenson, 2002)
Bridging the Gap

 “Best practice” as process rather than as packaged interventions
 Emphasize control by practitioner, patient, client, community, or population
 Emphasize local evaluation and self-monitoring
 Research on the tailoring process and new technologies

(Green, 2001)
Potential Areas for Research

Prevention Synthesis and Translation

- Development of methods to define and evaluate core elements of interventions
- Understanding organizational changes required to adopt an evidence-based intervention
- Development of interventions to influence organizational structure, climate, and culture, in order to promote organizational readiness and capacity for intervention dissemination and adoption.

(Program Announcement (PA) Number: PA-08-166)
Potential Areas for Research

**Prevention Delivery System**

- How does financing of organizations (and reimbursement) affect intervention adoption, effectiveness, and sustainability?
- Examining the adaptation process at all levels of the organization (provider/facilitator, organizationally, socio-cultural adaptations)
- Examining how changes in organizational leadership, staff turnover, agency instability, and organizational size affect implementation, effectiveness, and sustainability of interventions.

(Program Announcement (PA) Number: PA-08-166)
Thank you

http://ctsi.ucsf.edu/files/CE/edi_introguide.pdf