Public Health and Policy Dissemination Research

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Objectives

1. To describe opportunities for D&I research in the public health system.
2. To frame a series of D&I challenges.
3. To explore the basis for evidence-based policy.
4. To understand the challenges and opportunities in translating evidence to policy.
Public Health Orientation

• In contrast to medical model, which focuses on treatment of illness (some prevention) in individuals

• Public health is focused on community-based approaches to prevent disease and disability in populations

→ ecologic view of health, such that individuals are placed within larger social and environmental context which defines the conditions that determine health

• BUT -- variation in resources, priorities and level of intervention
Major trends and patterns in public health (a.k.a., D&I research opportunities!)

• Accreditation of public health agencies
• Quality improvement
• Minimum set of functions (recent IOM report)
• ACA – increased integration of prevention/population health with healthcare
Evidence-based Public Health

“The development, implementation, and evaluation of effective programs and policies in public health through application of principles of scientific reasoning.”


And, the process of EBPH…

Agency (health department)-level structures and activities that are positively associated with performance measures (e.g., achieving core public health functions, carrying out evidence-based interventions).

Brownson et al. AJPM 2012; 2012;43(3):309-319
Spectrum of Evidence

- Scientific literature in systematic reviews
- Scientific literature in one or more journal articles
- Public health surveillance data
- Program evaluations
- Qualitative data
  - Community members
  - Other stakeholders
- Media/marketing data
- Word of mouth
- Personal experience

Sources for evidence-based public health interventions

- Systematic reviews
  - Guide to Community Preventive Services, aka, the Community Guide, [www.thecommunityguide.org](http://www.thecommunityguide.org)
    - Recommended
    - Recommended against
    - Insufficient evidence
- Combination of research- and practice-tested
  - UNC Center of Excellence for Training and Research Translation, [www.center-trt.org](http://www.center-trt.org)
    - Research-tested
    - Practice-tested
    - Emerging
The challenge of D&I for PH settings

Survey of state and local public health practitioners

- Only 30% of local public health practitioners had heard of the Community Guide

- In state-level agencies, 90% had heard of guide
  - Much fewer reported making changes to existing (20%) or new programs (35%) on the basis of recommendations

A Framework for Disseminating Evidence-Based Health Promotion Practices  Harris et al. Preventing Chronic Disease 2012;9:110081.
EBP or PBE

“If we want more evidence-based practice, we need more practice-based evidence”
- L. Green


• **D&I Science** – primarily concerned with how to get more evidence-based interventions to appropriate audiences and practice settings
• **Flip side**– what are the characteristics of practice settings that influence the ability to disseminate and implement?
Public Health Services and Systems Research

“A field of inquiry examining the organization, financing, and delivery of public health services at local, state and national levels, and the impact of these activities on population health.”

Mays, Halverson, Scutchfield 2003

Key component of PHSSR is participatory research: Public Health Practice Based Research Network
The public health delivery system

Public Health System
- Scale of operations
- Resources & expertise
- Participation incentives
- Needs
- Preferences
- Risks
- Threats
- Environment

Public Health Agency
- Scope of services
- Staffing levels & mix
- Intergovernmental relationships
- Legal authority
- Funding levels & mix
- Governing structure
- Leadership

Strategic Decisions
- Compatibility of missions
- Distribution of effort
- Nature & intensity of relationships
- Decision Support
  - Surveillance & IT
  - Performance measures
  - Practice guidelines
  - Accreditation

Outputs and Outcomes
- Reach
- Effectiveness
- Timeliness
- Adherence to EBPs
- Efficiency
- Equity

Mays et al. 2009
Example of a D&I Trial in Public Health

A randomized controlled trial evaluating the impact of knowledge translation and exchange strategies


• A randomized trial to evaluate the effectiveness of three different implementation strategies for improving knowledge translation and exchange in health departments
  1. Access to online registry
  2. Tailored messaging
  3. Knowledge broker
• 108 health departments (Canada)
• Primary outcome: extent to which research evidence was used in a recent program decision
• Secondary outcome: change in sum of evidence-informed healthy body weight promotion policies or programs
THE POTENTIAL:

How has health [or other] policy, today, already affected your life [positively or negatively]?
Top 10 public health achievements

• **Examples**
  – Vaccination
  – Motor-vehicle safety
  – Safer workplaces
  – Fluoridation of drinking water
  – Recognition of tobacco use as a health hazard

• Each of these advances involved policy

• Big P and small p

What is policy?

- “those laws, regulations, formal and informal rules and understandings that are adopted on a collective basis to guide individual and collective behavior”
  - Policies tend to influence the environment (legal, social, economic, and physical)
  - Affects on social norms (subtle effects)
  - Importance noted in the definitions of core functions of PH
For policy…

“Laws are like sausages. You should never watch them being made.”

• Honoré Mirabeau, 1918
A scenario for your table

- Research aim: To understand the diffusion of local (governmental and business) clean indoor air in southern states in the US
  - A study of late adopters
  - County/city level adoption

- Some particular challenges for this research?
- Some types/examples of evidence needed (level of evidence)?
- What design makes sense?
## Domains of Evidence-Based Public Health Policy

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<thead>
<tr>
<th>Domain</th>
<th>Objective</th>
<th>Data Sources</th>
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<tbody>
<tr>
<td>Process</td>
<td>To understand approaches to enhance the likelihood of policy adoption</td>
<td>• Key informant interviews</td>
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<td>• Case studies</td>
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<td>Content</td>
<td>To identify specific policy elements that are likely to be effective</td>
<td>• Systematic reviews</td>
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<td>• Content analyses</td>
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<td>Outcome</td>
<td>To document the potential impact of policy</td>
<td>• Surveillance systems</td>
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<td>• Natural experiments tracking policy-related endpoints</td>
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Examples of Policy Translation Challenges (most research has been on barriers)

For the policy maker:
1. Poor timing
2. Ambiguous findings & lack of relevant data

For the researcher:
1. Mismatch of randomized thinking with nonrandom problems
2. Lack of control over the independent variable

Evidence hierarchies are common and often useful, but...relevance for policy?
The best is the enemy of the good”
-Voltaire

The problem of randomized trials and parachutes....

The effectiveness of parachutes has not been subjected to rigorous evaluation by using randomised controlled trials....

Smith and Pell, BMJ, 2004
Examples from ongoing policy dissemination research (policy content & process)

(*Overall goal:* Understand and enhance dissemination of EB policy among state level policy makers)
Overview: Conveying information via policy briefs

Phase 1: Audience Research

– Most policy briefs are text heavy and not “brief”
– Randomized experiment
  • Compare data vs. narrative
  • Three key groups of policy makers in six states:
    – legislators
    – legislative staff members
    – executive branch administrative leaders
  • Read a brief then responded to a short questionnaire
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<th>Data</th>
<th>Narrative</th>
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<td>Local</td>
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<tr>
<td>State</td>
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Data trees on brief *usefulness*
Legislators
3.7 (3.6 to 3.8)
(n=74)

P = .044

Story-focused brief
3.5 (3.3 to 3.6)
(n=35)

Data-focused brief
4.0 (3.8 to 4.1)
(n=39)

P = .035

State-level data
3.1 (2.9 to 3.3)
(n=18)

Local-level data
3.8 (3.6 to 4.1)
(n=17)

Republican
3.5 (3.3 to 3.8)
(n=19)

Democrat
4.4 (4.2 to 4.5)
(n=20)
Overall Likelihood of Use

• One size does not fit all!!
• Higher among
  – Women
  – Those who identify themselves as socially liberal
  – Respondents older than 52 years
  – Those without graduate education
Take home points

1. There are emerging changes in the PH system that make ideal D&I research opportunities.

2. Policy has an enormous impact on health and is in need of quality dissemination research.

3. More than many other areas, the issues are ideal for opportunistic, natural experiments.