The Future of Community-Engaged & Practice-Based Research: Challenges and Opportunities

“The Future of Community-Engaged Research”
May 2, 2011
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The Challenges & Opportunities

- The two biggest challenges:
  - To close the gap between what policy makers, program planners, practitioners and communities need & what they are getting from our research
  - The obesity epidemic

- The two biggest opportunities
  - Extend CBPR principles to work with policy makers, program planners & practitioners in use of natural experiments
  - Combine CBPR with multi-site RCT methods that expand the external validity of the results
Problems Identified by IOM Report* (www.nap.edu)

- Narrow focus: Lack of attention to larger systems context
- Lacking details of implementation process
- Lack of relevance to real world
- Many studies focus on one intervention, but obesity may require a combination of interventions; in fact, some things appear not to work when tested alone, but are essential ingredients in a more comprehensive program

*IOM Conclusions about Status of Evidence

- The current evidence lacks the power to set a clear direction for obesity prevention across a range of target populations
- This lack of evidence for effectiveness seen as a lack of effectiveness
- It is difficult to fund, conduct & publish research on community, environmental, and policy-based obesity prevention initiatives
- Assessing or reporting on the generalizability of research results to other populations or settings has not been given priority

Types of Community-Engaged Evidence for Health Research

- Participatory research evidence
  - Community-Based Participatory Research (CBPR)
  - Practice-based or action research
- Surveillance evidence
- Population diagnostic evidence
- Program evaluation evidence
  - Multi-component
  - Continuous quality improvement
  - How context effects (moderates) outcomes
Three Paradoxes

- The internal validity—external validity paradox
  - The more rigorously controlled a study testing the efficacy of an intervention, the less reality-based it becomes, so it cannot be taken to scale or generalized.

- The specificity – generalizability paradox
  - The more relevant and particular to the local context, the less generalizable to other contexts.

- The homophily -- social distancing paradox
  - The effectiveness of indigenous community health workers draws on their commonalities with the community, but they are sometimes seen as losing that.

Six Questions About CBPR

- What is it? Define participatory research, CBPR.
- What is the added value for health behavior research?
- What predicts outcomes in CBPR? What are successful methods to establish CBPR, measure CBPR-related outcomes?
- What sustains effective partnerships?
- The Intersection of CBPR and translational research: What is the cutting edge in community engagement in translating health behavior research to practice?
- Innovations in health behavior research targeting improvements in minority health and health disparities using CBPR?
- Measurement issues in CBPR
- Challenges, opportunities for health behavior research & CBPR.
"It's simple, Dr. Green. Just chip away anything that doesn't look like health education."

"It's easy, Green, just chip away at anything that doesn't look like CBPR."

Definition and Standards of Participatory Research for Health*

Systematic investigation...
Actively involving people in a co-learning process...
For the purpose of action conducive to health
--not just involving people more intensively as subjects of research or evaluation


"To begin with, I would like to express my sincere thanks and deep appreciation for the opportunity to meet with you. While there are still profound differences between us, the very fact of my presence here tonight is a major breakthrough."
Gary Larson

“I want you to quit smoking and lose 35 pounds. Then I want you to come back and tell me how the hell you did it.”

1. What constitutes CBPR?
2. What is the added value?
3. What predicts successful outcomes?
4. What sustains it?
5. What translates it into policy or changes in practice?
6. Challenges and opportunities for health behavior research
The Spheres of Practice-Based, Community-Based, Academic & Participatory Research

Number of Publications on CBPR Based on Scopus Search*

Top 9 journals publishing CBPR papers

*Based on unpublished Scopus review by Doug Brugge, Tufts U., 2011.
Second Tier of CBPR Journals*

- *Social Science and Medicine (16)
- *Journal of Empirical Research on Human Research Ethics (14)
- *AIDS Education and Prevention (14)
- *Family and Community Health (14)
- *American Journal of Community Psychology (13)
- *American Journal of Bioethics (13)
- *Cancer (13)
- *Journal of General Internal Medicine (13)

*Based on unpublished Scopus review by Doug Brugge, 2011

Authors publishing most CBPR articles*

- Minkler, M. (23)
- Israel, B.A. (21)
- Parker, E.A. (15)
- Jones, L. (13)
- Hergenrather, K.C. (11)
- Rhodes, S.D. (10)
- Schulz, A.J. (10)
- Flicker, S. (9)
- Macalvany, A.C. (8)
- Wallerstein, N. (8)
- Rhodes, S.D. (7)
- Eng, L. (7)
- Travers, R. (7)
- Wells, K.B. (6)
- Santorini, K. (6)
- Montano, J. (6)
- Farquhar, S.A. (6)
- Sullivan, M. (6)
- Shiu-Thornton, S. (6)
- Vasques, V.B. (6)
- Horovitz, C.R. (6)
- Christopher, S. (6)

*Scopus

Institutions with Most CBPR Publications

- Univ of Michigan School of Public Health (47) & Univ Michigan, Ann Arbor (29)
- UCLA (35) & UCLA Sch of Public Health (20) & David Geffen School of Medicine at UCLA (19)
- UC Berkeley (33)
- UC San Francisco (31)
- RAND Corporation (23)
- The University of British Columbia (23)
- Univ of California at San Francisco (22)
- Univ of Illinois at Chicago (22)
- Univ of California, San Francisco (22)
- Johns Hopkins Bloomberg School of Public Health (18) & JHU (18)
- Mount Sinai School of Medicine (18)
- University of Washington (18)
- Univ of Washington Seattle (18)
- CDC (18)
- Columbia Univ (18) & Med Center (12)
- University of New Mexico (18)
- Wake Forest Univ School of Medicine (18)
- Univ of Pennsylvania (18)
- Harvard School of Public Health (18)
- University of Minnesota (14)
- University of Florida (14)
- University of South Carolina (14)
- George Washington University (13)
- VA Medical Center (13)
- National Inst Environmental Health Sci (13)
- Cairo R. Drew Univ of Med and Science (13)
- University of Arizona (12)
- Medical College of Georgia (12)
- University of Maryland (10)
Subject Areas with Most CBPR Pubs*

- Medicine & Public Health (1,056)
- Social Sciences (407)
- Nursing (187)
- Environmental Science (141)
- Psychology (118)
- Agricultural and Biological Sciences (54)
- Health Professions (53)
- Biochemistry, Genetics and Molecular Biology (49)
- Business, Management and Accounting (33)

- Economics, Econometrics and Finance (22)
- Earth and Planetary Sciences (19)
- Engineering (19)
- Pharmacology, Toxicology and Pharmaceutics (13)
- Immunology and Microbiology (12)
- Neuroscience (12)
- Computer Science (9)
- Arts and Humanities (6)
- Dentistry (5)

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- Computer Science (9)
- Arts and Humanities (6)
- Dentistry (5)
- Energy (4)
- Chemical Engineering (3)
- Chemistry (2)
- Multidisciplinary, Mathematics, Material Science, Decision Sciences, Veterinary (1)
- Undefined (26)

*Scopus

The Lenses of Scientists, Health Professionals and Lay People
Closing the Gaps Between Population & Scientists or Practitioners’ Perception of Needs, and Funders’ Assessments

Reconciling Perceived Needs, “Actual Needs,” & Resources

New (neglected) Evidence Forms

- Participatory research evidence
  - Community-Based Participatory Research
  - Practice-based or action research
- Surveillance evidence
- Population diagnostic evidence
- Program evaluation evidence
  - Multi-component evaluations
  - Continuous quality improvement
  - How context effects (moderates) outcomes


Uses of Evidence & Theory in Population-Based, Diagnostic, Planning & Evaluation Models*

1. Assess Needs & Capacities of Population
2. Assess Causes (X) & Resources
3. Design & Implement Program
4. Evaluate Program

Reconsider X & Resources

Evidence from community or population

Evidence from Etiologic Research

Evidence from Efficacy Studies, and Use of Theory to Fill Gaps

Program Evidence & Effectiveness Studies, and use of Theory

*Green & Kreuter. Health Program Planning. 4th ed. NY: McGraw Hill, 2005, Fig. 5.1.

Reasons for Surveillance as a Challenge and an Opportunity

For CBPR
- Communities need/want more particular, local data
- CBPR projects usually can’t afford to do population surveys, much less time-series surveys

For health behavior research
- Provides the most powerful alternative to RCTs for population-level change & community interventions
- Provides the most credible source of evidence for external validity and dissemination of practice-based evidence

Change in Per Capita Cigarette Consumption
California & Massachusetts vs Other 48 States, 1984-1996

Percent Reduction

Other 48 States California Massachusetts

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PRECEDE-PROCEED as both Logic Model and Procedural Model

- **Precede Evidence Tasks:** Specifying needs as measurable baselines, objectives & targets for evaluation.

- **Proceed Evaluation Tasks:** Monitoring & Continuous Quality Improvement

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11 of 10
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Mediating and Moderating Variables

\[\text{Intervention or Program} \rightarrow \text{Mediator} \rightarrow \text{Outcome Variable(s)}\]

\[\text{Mediator} \rightarrow \text{Moderators}\]

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Challenges to “Best Practices” from Controlled Trials*

- Challenge of translating “best practices” from science to practitioner behavior, and to public health
- …of generalizing from research in one place, with one population, to other places, people and circumstances
- …of imposing experimental controls to generate “best practices” for community and population efforts
- Recommend “best practices” with “best processes” of locally-specific, diagnostic-planning procedures & CBPR to adapt efficacy-tested interventions to moderating variables…

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The Multi-Site Translational Community Trial (mTCT) Proposal*

- Blends the internal validity advantages of:
  - Cluster randomized trial or multi-site RCT
  - Fidelity to the function (but not the form) of an efficacy-tested intervention
- With the external validity advantages of:
  - Diversity of settings, cultures, circumstances
  - Adaptation of the form (not the function) of the efficacy-tested intervention
- With some sacrifice of CBPR degrees of freedom


The mTCT for Practice-Based, Community-Based, Academic to Participatory Research

Aligning Evidence* with (and deriving it from) Practice: Matching, Mapping, Pooling & Patching

- Matching ecological levels of a system or community with RCT evidence of efficacy for interventions at those levels
- Mapping theory to the causal chain to fill gaps in the evidence for effectiveness of interventions
- Pooling experience to blend interventions to fill gaps in evidence for the effectiveness of programs in similar situations
- Patching pooled interventions with indigenous wisdom and professional judgment about plausible causes & interventions to fill gaps in the program for the specific population

The Ultimate Litmus Test for University Values

“A university’s values are most clearly described by its promotion and tenure policy and by the criteria used to evaluate faculty members”

—Conrad Weiser et. al. 
Scholarship Unbound for the 21st Century, 2000

Scholarship in the Health Professions*

- “Federal funders of research and academic institutions should recognize and reward faculty scholarship related to public health practice research”
- “Academic institutions should develop criteria for recognizing and rewarding faculty scholarship related to service activities that strengthen public health practice”
- “Schools of public health should provide increased academic recognition and reward for policy-related activities.”


The Case for Participatory and Practice-Based Research

- “Participatory approach at the front-end of the research pipeline is the best assurance of relevance and utilization of the research at the other end of the pipeline.”
- “If we want more evidence-based practice…
  …we need more practice-based evidence”
  - AJPH, 2006
6 Challenges & Opportunities

- Reform the research funding priorities
- Reform publication criteria
- Reform the criteria for inclusion & weighting of studies into systematic reviews & research syntheses;
- Reform the derivation and qualification of practice guidelines from the systematic reviews;
- Reform the academic promotion & tenure criteria & weights given to community- & practice-based research;
- Reform the research training of students & fellows in methods of practice-based and participatory research

A Vision

- A future in which we would not need to ask how to get more evidence-based practice…
- Rather, how to engage students, practitioners, patients and communities in a participatory process of practice-based research and program evaluation?
- How to adapt the “best practices” guidelines through best processes of collecting data to diagnose the behavioral needs of their patients & communities…

The Vision (expanded)

- How to match evidence-based interventions to those needs, filling gaps in the evidence with the use of theory, mutual consultation, and prospective testing of complementary interventions
- The cumulative, building-block tradition of evidence-based medicine from RCTs would be complemented by parallel strengthening and support of a tradition of participatory research & evaluation conducted in practice settings.