Differences in Definitions of EBPH and Evidence: Implications for Communication with Practitioners

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Abstract
In this study, we interviewed twelve members of an expert panel to elicit their views on Evidence-based Public Health (EBPH), including how they define EBPH, what constitutes "evidence", and what LHDs do that can be described as EBPH. Telephone interviews lasting 60 minutes were recorded and transcribed for basic content analysis. Experts differed in their definitions of EBPH and their views of what constitutes evidence. Definitions of EBPH ranged from the adoption and implementation of rigorously tested interventions to the application of evidence to decision making for population health improvement. Views on what constitutes evidence also varied, from strict "evidence from science" to broader "evidence from experience." Because of these differences in meaning, our study suggests we use more concrete and specific messaging for what practitioners are expected to do.

Keywords
evidence based public health, evidence based decision making

Cover Page Footnote
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Today's public health professionals need to understand the language of *evidence* and *evidence-based public health*. While these terms are widely used, they may not be used consistently and clearly.[1] Communication among and between researchers and practitioners requires language that is mutually understood. In this study, we interviewed twelve members of an expert panel to elicit their views on Evidence-based Public Health (EBPH), including how they define EBPH, what constitutes "evidence," and what local health departments (LHDs) do that can be described as EBPH. As part of a larger study using NACCHO data, we focused on understanding EBPH at the LHD level in order to provide direction in measures development. Telephone interviews lasting 60 minutes were recorded and transcribed for basic content analysis. Experts differed in their definitions of EBPH and their views of what constitutes evidence. Definitions of EBPH ranged from the adoption and implementation of rigorously tested interventions to the application of evidence to decision making for population health improvement. Views on what constitutes evidence also varied, from strict "evidence from science" to broader "evidence from experience." Because of these differences in meaning, our study suggests we use more concrete and specific messaging for what practitioners are expected to do such as "identify intervention approaches demonstrated to be effective from resources such as the Guide to Community Preventive Services."

METHODS

We assembled a panel of experts in EBPH, PHSSR research, and public health practice. A total of 14 experts agreed to participate in the panel as needed over the two-year length of the project. Participants represented LHDs (n=1), state health departments (n=4), national public health practice and/or research organizations (n=7) (NACCHO, NALBOH, ASTHO, the Public Health Foundation, the National Network of Public Health Institutes, the Center for Creative Leadership, and the CDC), and academia (n=2).

We interviewed panelists who agreed to participate by telephone. Each panelist reviewed the questions and sent written responses prior to the interview. This step allowed participants to spend time thinking deeply about the questions prior to the phone interview and to provide a foundation for probing and elaborating on responses during the interview. Twelve of the 14 panelists completed the phone interviews that are the focus of this paper

After providing informed consent, participants responded to a series of questions regarding their definition of EBPH, their views on what constitutes "evidence," and what LHDs do that can be described as EBPH. We recorded the interviews using digital audio recorders and transcribed the interviews verbatim. Transcripts were

imported into QSR NVivo 9.0 for analysis, and were coded using a guide based on the questions asked. The analysis focused on responses to questions on: how EBPH is defined, what is meant by the word "evidence," and examples of EBPH. For these topics, we extracted all coded text segments and summarized the text by participant, selected quotes that illustrated their views, and placed these in a matrix that had columns for each theme, and rows for each participant. Finally, we examined patterns of responses between participants for each theme.

RESULTS

What is evidence-based public health?

Members of the expert panel expressed differing views when asked "What comes to mind when you think about EBPH?" Two dominant themes emerged from their responses. One view was that EBPH had to do with identifying and using interventions or strategies that have been shown to work. In the words of one expert, EBPH is "using strategies that have been studied, tested and shown to make a difference," such as those featured in The Guide to Community Preventive Services. In this view, EBPH is more outcome-focused than in the other dominant view.

Only a few of the interviewees expressed another perspective: policies, processes and administrative structures as types of strategies that have been shown through research to work. These interviewees emphasized decision-making processes that used data and evidence, including but not limited to those to identify and implement evidence-based interventions. One expert, while recognizing that many in the field use EBPH to refer to intervention strategies that have been shown to work, said that EBPH is a multi-step process that incorporates social and contextual factors as well as quantitative data. Another expert referred to "using data…the best available scientific evidence, planning, and engaging the community, doing an evaluation and then disseminating what has been learned."

Importantly, those that held the view that EBPH is the use of tested interventions also recognized the need for processes related to the local community. Most of those, as well as all who identified EBPH as a process, cautioned that contextual factors and population characteristics must be considered when choosing and adapting interventions for local implementation. Two other experts expressed both views of EBPH-- the use of tested interventions and decision-making using data and evidence.

"What counts as evidence?"

Experts' views of evidence ranged from the findings of rigorous scientific studies to evidence from experience. At one end of a continuum, evidence referred to

quantitative data and evidence generated through rigorous intervention testing, which some described as "evidence from science." At the other end was evidence based on experience and community perspectives. Experts noted that this type of evidence could be gained through community stories, expert opinions, program reports and evaluations, and case studies. Two of the experts embraced the entire range of evidence.

"What does EBPH look like in LHDs?"

We also asked experts "What would you be looking for if trying to find out if a local health department is engaged in evidence-based public health? What would you see the local health department doing?" The specific indicators of EBPH that emerged reflected both views of EBPH and both views of "evidence." Table 1 lists practices indicating LHD engagement in EBPH. Practices mentioned are categorized into four groups: use scientific data, use tested interventions, seek to understand the local context, and bring data into decision-making processes.

IMPLICATIONS

While growing, the evidence base for population health is still quite limited.[2-4] Combined with a persistent view that EBPH means the use of rigorously tested interventions, practitioners may be at a loss to how to effectively intervene to address community health issues that lack a substantial evidence base of interventions. To address this challenge, others have emphasized administrative evidence-based practices that foster EBPH[5] as well as EB decision making processes based on the best available theory, data and approaches throughout the process of planning, intervention development and implementation.[2] Furthermore, there is a concern that rigorously tested interventions should not be simply adopted and replicated without regard to important contextual factors that need to be understood for an intervention to be effective in a given community.

To facilitate clear and meaningful communication among practitioners and researchers, we suggest understanding clearly how each view EBPH and using concrete and specific messaging to encourage behaviors and administrative practice such as "promote a evidence-based culture, identify intervention approaches demonstrated to be effective from resources such as the Guide to Community Preventive Services" or "seek to understand the local context by conferring with local experts in the community." These messages may include behaviors related to every step in the process of population health programming from organizational climate to assessment through adaptation of interventions to creating evidence through program evaluation and dissemination.

Table 1: EBPH Practices and Examples

LHDs are engaged in EBPH when they….	
Use scientific evidence:	• Evidence from randomized controlled trials • Peer review journal articles • Grey literature, evaluation reports • Epidemiology and surveillance data • Vital records, hospitalization data and other state-collected data
Use tested interventions	• Guide to Community Preventive services • Promising practices, proven practices, disease-specific best practices
Seek to understand the local context	• Conduct a Community Health Assessment • Use County Health Rankings • Confer with experts in the community • Gather community input
Bring data into decision making process	• Engage in a planning process • Use Community Health Assessment in action planning • Conduct Health Impact Assessments • Evaluate your efforts
Incorporate administrative practices that enhance use of evidence and tested interventions	• Organizational climate fostering evidence-based public health • Leadership speaks about the need for data, evaluation, prevention, policy change and population health • Conduct trainings on evidence-based public health and policy, systems, and environmental change • Partner with community organizations across sectors to implement evidence-based policy, systems, and environmental change

SUMMARY BOX:

What is already known on this topic?

The evidence base for public health practice has increased and practitioners are called to implement evidence-based interventions. However, as widely as the terms *evidence* and *evidence-based public health* are used, they vary in terms of their understood meaning.

What is added by this report?

Results of interviews with a panel of experts in PHSSR research and public health practice illustrate the variation in usage. For example, some experts referred primarily to interventions that had been scientifically tested. Others referred to an extensive decision making process that started with surveillance data and resulted in the implementation and evaluation of tested interventions.

What are the implications for public health practice/policy/research?

Examples, rather than the concepts themselves, may provide more concrete and specific messaging for what practitioners are expected to do.

REFERENCES

1. Rychetnik L, Hawe P, Waters E, Barratt A, Frommer M. A glossary for evidence based public health. J Epidemiol Community Health. 2004 Jul; 58(7):538–545.

2. Brownson RC, Fielding JE, Maylahn CM. Evidence-based public health: A fundamental concept for public health practice. Annu Rev Public Health. 2009; 30:175-201.

3. Green LW, Ottoson JM, Garcia C, Hiatt RA. Diffusion theory and knowledge dissemination, utilization, and integration in public health. Annu Rev Public Health. 2009;30:151-174.

4. Jacobs JA, Jones E, Gabella BA, Spring B, Brownson RC. Tools for implementing an evidence-based approach in public health practice. Prev Chronic Dis 2012;9:110324. DOI: http://dx.doi.org/10.5888/pcd9.110324.

5. Brownson RC, Allen P, Duggan, K, Stamatakis, KA, Erwin PC. Fostering more-effective public health by identifying administrative-based practices: A review of the literature. Am J Prev Med 2012;43(3):309-319.