

County of Los Angeles Department of Public Health Evidence-based Public Health Practice

Basic Principles

Public health has been grounded in the science of epidemiology with an emphasis on quantitative methods to address questions of prevalence, effectiveness, and causation. Within this model, health outcomes are primarily attributed to physical, psychological, biological, or environmental causes with interventions focused on encouraging changes in the behavior of individuals. Increasingly, there is acknowledgement of the importance of the social and physical environment determinants of health and the need to understand how contextual factors influence behavior and experience. A greater depth of understanding is needed than quantitative methods supply. Quantitative methods answer questions of effectiveness and causation. Qualitative methods answer questions of how and why. Using a combination of research methods may be the best approach for public health related research that evaluates interventions or strategies (Fielding & Briss, 2006; Jack, 2006; Kohatsu, Robinson, & Torner, 2004; Upshur, 2001; Waters & Doyle, 2002).

For some public health concerns, a sufficient body of research-based knowledge has not yet accrued. In other situations, the appropriate action is based on a different rationale. For example, science does not drive ethical decision-making though it may provide helpful insights (Stetler et al., 1998). Likewise, the practice of public health is often determined by regulations, laws, and public policies rather than purely scientific rationale. However, the County of Los Angeles Department of Public Health is committed to using the best available evidence to make decisions about public health interventions (Fielding & Briss, 2006; Task Force on Community Preventive Services, 2000).

A working definition of evidenced-based public health is “the process of integrating science-based interventions with community preferences to improve the health of populations” (Kohatsu, Robinson, & Torner, 2004).

Hierarchy of Evidence for Public Health Interventions

Tier 1 most desirable→Tier 4 least desirable

Tier 1

Type	Code
Research findings: syntheses, systematic reviews, meta-analyses	1A
Research findings: individual studies (quantitative and qualitative)	1B

Tier 2

Type	Code
Performance data such as program evaluation or peer review reports	2A
Consensus recommendations of recognized experts either local or national	2B

Tier 3

Type	Code
Regulations, laws, or public policies	3A
Philosophical or conceptual bases such as an ethical framework or a professional code of conduct	3B
Grant requirements	3C
Practices of other public health jurisdictions alleged to be effective.	3D

Tier 4

Type	Code
Affirmed experiences such as shared reflections, clinical narratives, or case reports	4A
Best hunches, anecdotal accounts	4B

How to Find Evidence to Support Public Health Practice

Each program should use the best available evidence to decide what activities to support. To do this, programs must know how to FIND evidence, REVIEW it and identify effective STRATEGIES. Here are *Suggested Steps*...

1. Begin with a list of the major population-level goals of your program.

Step 1- Finding Documents for Review

Conduct an Electronic Literature Search

2. Select a bibliographic database (eg, MEDLINE).
3. From your list of program goals, develop a list of KEY WORDS that you will use to search the scientific literature. (e.g., Medical Subject Heading – MeSH terms).
4. Conduct the search.
5. Refine the search as needed (broaden or narrow by adding or removing KEY WORDS).
6. Select source documents for review

Review “Sources” Listed Below

7. Review these sources (eg, www.thecommunityguide.org) to see if there are any items listed that you have not already discovered.
8. Select source documents for review.

Review Bibliographies of Key Documents

9. Look for articles in document bibliographies that did not appear in your electronic literature search.
10. Select source documents for review.

Step 2 – Review Your Source Documents

11. Organize the documents for review, perhaps by the type of article:
 - Original Research Articles
 - Review articles
 - Review articles featuring a quantitative synthesis of results

- Guidelines
12. Abstract pertinent information from each document.
 - a. Name of source, author, date of document
 - b. Methodological Characteristics
 - Type of document or study
 - Study population
 - Sample Size
 - Intervention Characteristics
 - c. Content-specific findings
 - Results
 - Conclusions
 - Other Comments
 - d. Key strategies recommended by the source

Step 3- Prioritizing Your Strategies

13. Compile a comprehensive list of strategies recommended by the source documents.
14. Prioritize the identified strategies based on the “Hierarchy of evidence for public health interventions” described in this document.

Sources of Evidence of Best Practice Strategies for Public Health Practice

Assistant Secretary for Health Best Practice Initiative

<http://www.osophs.dhhs.gov/ophs/bestpractice/>

Cochrane Collaboration Health Promotion and Public Health Field

<http://www.vichealth.vic.gov.au/cochrane/welcome/index.htm>

Cochrane Library is accessible through the public health library at <https://intranet.ladhs.org/lib/>

Division of Quality Improvement and the Office of the Medical Director

<http://lapublichealth.org/qa/interventions.htm>

Evidence-based Practice site of the Agency for Healthcare Quality and Research

<http://www.ahrq.gov/clinic/epcix.htm>

Healthy Minnesotans Strategies for Public Health, Vol. 2

<http://www.health.state.mn.us/strategies/index.html>

Health People 2010 Information Access Program

<http://phpartners.org/hp/index.html>

National Association of County and City Health Officials

<http://www.naccho.org/topics/modelpractices/index.cfm>

National Library of Medicine Health Services Research and Public Health Information Programs

<http://www.nlm.nih.gov/hsrph.html>

Partners in Information Access for the Public Health Workforce

<http://phpartners.org/>

School of Nursing at the University of Illinois, Chicago
Evidence-based Public Health Nursing
<http://www.uic.edu/depts/lib/projects/ebphn/>

Step-by-Step Guide to Delivering Clinical Preventive Services Guidelines for Clinical Preventive Services, 2005
<http://www.ahrq.gov/clinic/prevenix.htm>
<http://www.ahrq.gov/clinic/ppipix.htm>

Task Force on Community Preventive Services
<http://www.thecommunityguide.org/>

The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity
<http://www.surgeongeneral.gov/topics/obesity/>

University of Massachusetts Medical School
Evidence-Based Practice for Public Health
<http://library.umassmed.edu/ebpph/>

U.S. Preventive Services Task Force
<http://www.ahrq.gov/clinic/uspstfix.htm>

References

- Fielding, J. E., & Briss, P. A. (2006). Promoting evidence-based public health policy: Can we have better evidence and more action? *Health Affairs*, 25, 969-978.
- Jack, S. M. (2006). Utility of qualitative research findings in evidence-based public health practice. *Public Health Nursing*, 23, 277-283.
- Kohatsu, N. D., Robinson, J. G., & Torner, J. C. (2004). Evidence-based public health: An evolving concept. *American Journal of Preventive Medicine*, 27, 417-421.
- Stetler, C. B., Brunel, M., Giuliani, K. K., Morse, D., Prince, L., Newell-Stokes, V. (1998). Evidence-based practice and the role of nursing leadership. *Journal of Nursing Administration*, 28(7/8), 45-53.
- Task Force on Community Preventive Services. (2000). Developing an evidence-based Guide to Community Preventive Services-Methods. *Journal of Preventive Medicine*, 18, 35-43.
- Upshur, R. E. G. (2001). The status of qualitative research as evidence. In J. M. Morse, J. M. Swanson, & A. J. Ouzel (Eds.). *The Nature of Qualitative Evidence* (pp. 5-26). Thousand Oaks, CA: Sage.
- Waters, E., & Doyle, J. (2002). Evidence-based public health practice: Improving the quality and quantity of the evidence. *Journal of Public Health Medicine*, 24, 227-229.