

VERSION 2.0 WORK IN PROGRESS: Evidence Related to Public Health Research December 2019



The Public Health Accreditation Board is a 501(c)3 nonprofit organization dedicated to improving and protecting the health of the public by advancing and ultimately transforming the quality and performance of state, local, tribal, and territorial public health departments.



Public Health Accreditation Board
1600 Duke Street
Suite 200
Alexandria, VA 22314
Phone: 703-778-4549
Fax: 703-778-4556

www.phaboard.org

This document represents findings from a scan of the literature related to public health research by health departments. It is not meant to be an exhaustive search. If there are other resources on this topic of which you think PHAB should be aware, please contact Jessica Kronstadt at jkronstadt@phaboard.org.

PHAB Domain 10 requires that health departments demonstrate contribution to and application of the public health evidence base. Lifsey et al have noted the importance of evaluating the implementation of population-based interventions to help build the evidence in the field,¹ and others have noted a connection between accreditation and improved evidence-based practice implementation.²

Research Trends in Health Departments

Local health departments

In the 2016 National Association of County and City Health Officials (NACCHO) Profile Study, 11% of local health departments (LHDs) reported that academic institutions have agreements or policies on providing the LHD with access to scientific and professional journals, and 24% reported that faculty from academic institutions served in a consulting role for the LHDs; however medium and large LHDs were more likely to engage in academic partnerships than small LHDs. Additionally, 12% of LHDs reported conducting original research that links health disparities to differences in social or environmental conditions.³

State health departments

According to the Association of State and Territorial Health Officials (ASTHO) Profile, the average number of research studies that state health agencies engaged in over a two-year period rose from 46 in 2012 to 52 in 2016. The most common research activities include collecting, exchanging or reporting data for a study (88%), disseminating research findings to key stakeholders (88%), and analyzing and interpreting study data and findings (88%). In terms of using evidence, state health agencies report using the Community Guide for program planning (78%), grant writing (68%), and policy development (50%).⁴

Evidence-based decision-making (EBDM)

Evidence-based decision-making, according to Kohatsu et al, is “the integration of science-based interventions with community preferences to improve the health of populations”⁵ and per Brownson, Fielding, and Maylahn, involves “summarizing the findings from the best available peer-reviewed evidence, using data and information systems, applying program planning frameworks, engaging the community in assessment and decision-making, conducting sound evaluation, and synthesizing science and communication skills with common sense and political acumen for dissemination to other stakeholders and decision makers.”⁶

One component of EBDM is administrative evidence-based practices (A-EBPs), which are “agency level structures and activities positively associated with performance measures....There are five broad domains of A-EBPs: leadership, workforce development, partnerships, financial processes, and organizational culture and climate.”⁷

Benefits of EBDM

EBDM benefits include:

- “foster[ing] a targeted use of limited resources and that it improves services to the community”⁸
- “adopt[ing]...the most effective and cost-efficient interventions, minimized harm to people and communities, and better health outcomes for individuals and communities,”⁹ and
- Using the best evidence while understanding the community context.¹

EBDM facilitators & barriers

Five key factors related to EBDM have been identified:

- “capacity to conduct evaluation,
- expectations and incentives for using EBDM,
- access to evidence and resources to support EBDM,
- participatory decision-making, and
- leadership support and commitment.”¹⁰

Leadership support and commitment to EBDM is often cited as one of the most important factors to EBDM adoption and implementation,^{7,8,9,11,12,13,14} as is training and regular practice using EBDM^{7,15,16} and a supportive organizational climate focused on improvement and innovation.^{2,11,15} Other ways to support EBDM include expecting the use of EBDM in employee performance plans,¹⁵ specifically stating EBDM as a priority with accountability measures,^{14,13,17} and providing access to literature.^{13,15} However, a study by Fields et al found that use of scientific journals to inform programming was relatively low compared to other factors like funding and legislative mandates, and that many health departments reported cost of subscriptions and time as barriers to accessing and reviewing scientific journals.¹⁸

Some of the biggest gaps in EBDM competencies include economic evaluation, communicating research to policymakers, evaluation designs, and adapting interventions.¹⁹ One strategy for increasing EBDM may be through knowledge brokering – specific training on translating evidence into action.^{14,18} Health departments with greater implementation of EBDM also tend to have strong relationships with academic institutions that may assist with access to resources.⁷

EBDM and accreditation

A study of LHDs found that health departments accredited by PHAB were more likely to report higher EBDM capacity, EBDM resource availability, and evaluation capacity, compared to local health departments that were not preparing for accreditation.²⁰

Academic Health Departments

An academic health department (AHD) "is meant to provide collaborative opportunities across academia and practice, involving practice-based research, field practice experience for students, and public health practice workforce development, leading to practice-informed teaching and academic-informed practice"²¹ and operates as a mutually beneficial partnership between an academic institution and governmental health agency and includes resource-sharing.²²

Academic partnerships can help HDs access journal articles.¹⁸ and LHDs engaged in AHD partnerships are more likely to report support for implementing EBDM and evidence-based interventions.²¹ Clear communication on information sharing, feedback, mission and goals can lead to strengthened relationships.²

Accreditation and AHDs

One survey of LHDs found that a higher proportion of agencies with formal AHD partnerships are accredited, compared to the percentage of LHDs with an informal AHD partnership that are accredited.²¹

The AHD research agenda includes a question about PHAB: Are health departments that participate in AHD partnerships more successful in achieving accreditation through Public Health Accreditation Board than health departments that do not participate in AHD partnerships?²³

Participatory Research

Definition and value

"Community-based participatory research (CBPR) seeks to facilitate relevant, sustainable research tailored to the needs of the communities with which it is engaged. CBPR emphasizes the importance of equitable collaboration between community representatives and professional researchers, while encouraging coeducation and mitigation of power imbalances between community representatives, researchers, and research participants."²⁴ CBPR emerges from "the context of power dynamics in the production of scientific knowledge that has, at best, historically excluded and, at worst, exploited or violated the human rights of members of politically disadvantaged and indigenous communities in the name of science"²⁵ and has the "potential to empower marginalized communities, effectively address local health concerns, and serve as translational science."²⁴

Participatory research often falls into two general (though not consistently labelled) categories:

- Collaborative: using each other's skills and expertise for relatively discrete sections of the research process
- Co-productive: engaging in a whole process of equal control and decision-making²⁶

At its fullest, participatory research engages communities in all aspects of the research process and translating data to action. Activities can range from data collection (e.g., crowdsourcing), problem definition and data collection, to extreme citizen science.²⁵ Participatory research may also lead to improved cost-effectiveness in an era of reduced resources and emerging health threats.²⁷

"When research projects are constructed from the ground up with resources to build capacity in community groups, the mutual collaboration and trust are more likely to take root, and the long-term sustainability of a project will be enhanced."²⁵

Considerations

There are some considerations to be aware of in implementing CBPR.

- Ensuring that rigor is maintained both by accurately representing the community²⁴ and by utilizing the appropriate approach (experiential learning vs. rigorous, randomized control trials).²⁶
- Being aware of who within the community is being engaged and “deeply engaging the local practice community in interpreting data to clarify the meaning of data.”²⁷ Cairney et al warn that engagement of community members who “already are privileged and engaged...may ultimately undermine the very principles that distinguish community-based participatory research as an approach.”²⁶
- CBPR can be used for policymaking that addresses inequities/social determinants of health (SDOH) but must be high quality and conducted in a way that raises awareness of SDOH with both the public and policymakers, engages local leaders and residents, is timely in terms of both data translation and policy suggestions based on that data.²⁸
- CBPR benefits from the establishment of a community advisory/steering group, providing a voice for the community in all aspects of the study, including study design, and communication of results in culturally relevant ways.²⁵
- Israel et al identified 9 basic principles of community participation in research:
 1. “recognize community as a unit of identity
 2. build on strength and resources within the community
 3. facilitate collaborative, equitable involvement of all partners in all phases of the research
 4. integrate knowledge and action for mutual benefit of all partners
 5. promote a colearning and empowering process that attends to social inequalities
 6. involve a cyclical and iterative process
 7. address health from both positive and ecological perspectives
 8. disseminate findings and knowledge to all partners; and
 9. involve a long-term commitment to all partners.”²⁹

Research and American Indians

Special care should be taken with regard to research involving American Indian and Alaska Native (AI/AN) communities as they may “harbor understandable mistrust of research.” James et al suggest that CBPR may be a helpful approach as it “offers strategies to ensure that studies reflect health priorities and community oversight” at all phases, starting with project conception and moving throughout the process to dissemination of results.³⁰

Policy and Legal Research

“Public Health Law Research (PHLR) is defined as “the scientific study of the relation of law and legal practices to population health.”³¹

Policy surveillance is defined as “ongoing systematic collection, analysis, interpretation, and dissemination of information about a given body of public health law and policy.”³² This collection of data allows for rigorous evaluation.³³

Within legal research, three broad areas of inquiry that deserve closer attention have been identified:

1. The structural role of law in shaping the organization, powers, prerogatives, duties, and limitations of public health agencies and thereby their functioning and ultimately their impact on public health (“infrastructure”).

2. The way that public health system characteristics influence the implementation of interventional public health laws ("implementation").
3. The individual and system characteristics that influence the ability of public health systems and their community partners to develop and secure the enactment of legal initiatives to advance public health ("innovation").³⁴

¹ Lifsey S, Cash A, Anthony J, Mathis S, Silva S. Building the evidence base for population-level interventions: barriers and opportunities. *Health Educ Behav.* 2015;42(1S):133S-140S.

² Cilenti D, Brownson RC, Umble K, Erwin PC, Summers R. Information-seeking behaviors and other factors contributing to successful implementation of evidence-based practices in local health departments. *J Public Health Manag Pract.* 2012;18(6):571-576.

³ National Association of County & City Health Officials. National profile of local health departments. http://nacchoprofilestudy.org/wp-content/uploads/2017/10/ProfileReport_Aug2017_final.pdf. Published August 2017.

⁴ Association of State and Territorial Health Officials. ASTHO profile of state and territorial public health, volume 4. <http://www.astho.org/Profile/Volume-Four/2016-ASTHO-Profile-of-State-and-Territorial-Public-Health/>. Published 2017.

⁵ Kohatsu ND, Robinson JG, Torner JC. Evidence-based public health : an evolving concept. *Am J Prev Med.* 2004; 27(5): 182-189. Cited by Erwin PC, Parks RG, Mazzucca S, Allen P, Baker EA, Hu H, Davis-Joyce J, Brownson RC. Evidence-based public health provided through local health departments: importance of academic–practice partnerships. *Am J Public Health.* 2019; 109(5):739-747.

⁶ Brownson RC, Fielding JE, Maylahn CM. Evidence-based decision making to improve public health practice. *Frontiers in Public Health Services and Systems Research.* 2013;2(2):2. Cited by Stamatakis KA, Hino AA, Allen P, McQueen A, Jacob RR, Baker EA, Brownson RC. Results from a psychometric assessment of a new tool for measuring evidence-based decision making in public health organizations. *Eval Program Plann.* 2017;60:17–23.

⁷ Duggan K, Aisaka K, Tabak RG, Smith C, Erwin P, Brownson RC. Implementing administrative evidence based practices: lessons from the field in six local health departments across the United States. *BMC Health Serv Res.* 2015;15:221.

⁸ Hardy A, Nevin WC, Proud S, Brownson R. Promoting evidence-based decision making in a local health department, Pueblo City-County, Colorado. *Prev Chronic Dis.* 2015;12:140507.

⁹ Armstrong R, Waters E, Dobbins M, et al. Anderson L, Moore L, Petticrew M, Clark R, Pettman TL, Burns C, Moodie M. Knowledge translation strategies to improve the use of evidence in public health decision making in local government: intervention design and implementation plan. *Implement Sci.* 2013;8:121.

¹⁰ Stamatakis KA, Hino AA, Allen P, McQueen A, Jacob RR, Baker EA, Brownson RC. Results from a psychometric assessment of a new tool for measuring evidence-based decision making in public health organizations. *Eval Program Plann.* 2017;60:17–23.

¹¹ Harris JK, Erwin PC, Smith C, Brownson RC. The diffusion of evidence-based decision making among local health department practitioners in the United States. *J Public Health Manag Pract.* 2015;21(2):134-140

¹² Allen P, Mazzucca S, Parks RG, Robinson M, Tabak RG, Brownson R. Local health department accreditation is associated with organizational supports for evidence-based decision making. *Front Public Health.* 2019;7(374).

¹³ Hu H, Allen P, Yan Y, Reis RS, Jacob RR, Brownson RC. Organizational supports for research evidence use in state public health agencies: a latent class analysis. *J Public Health Manag Pract.* 2019;25(4):373-381.

¹⁴ Dobbins M, Traynor RL, Workentine S, Yousefi-Nooraie R, Yost J. Impact of an organization-wide knowledge translation strategy to support evidence-informed public health decision making. *BMC Public Health.* 2018;18(1):1412.

¹⁵ Allen P, Jacob R, Lakshman M, Best L, Bass K, Brownson R. Lessons learned in promoting evidence-based public health: perspectives from managers in state public health departments. *J Community Health.* 2018;43(5):856-863.

¹⁶ Lovelace KA, Aronson RE, Rulison KL, Labban JD, Shah GH, Smith M. Laying the groundwork for evidence-based public health: why some local health departments use more evidence-based decision-making practices than others. *Am J Public Health.* 2015;105(suppl 2):S189-S197.

¹⁷ Sarkies MN, Bowles KA, Skinner EH, Haas R, Lane H, Haines TP. The effectiveness of research implementation strategies for promoting evidence-informed policy and management decisions in healthcare: a systematic review. *Implement Sci.* 2017;12(1):132.

- ¹⁸ Fields RP, Stamatakis KA, Duggan K, Brownson RC. Importance of scientific resources among local public health practitioners. *Am J Public Health*. 2015;105(suppl 2):S288-S294.
- ¹⁹ Jacob RR, Baker EA, Allen P, et al. Training needs and supports for evidence-based decision making among the public health workforce in the United States. *BMC Health Serv Res*. 2014;14:564.
- ²⁰ Allen P, Mazzucca S, Parks RG, Robinson M, Tabak RG, Brownson R. Local health department accreditation is associated with organizational supports for evidence-based decision making. *Front Public Health*. 2019;7(374).
- ²¹ Erwin PC, Parks RG, Mazzucca S, Allen P, Baker EA, Hu H, Davis-Joyce J, Brownson RC. Evidence-based public health provided through local health departments: importance of academic–practice partnerships. *Am J Public Health*. 2019; 109(5):739-747.
- ²² Erwin PC, Brownson RC. The academic health department: aging gracefully?. *J Public Health Manag Pract*. 2019;25(1):32-33.
- ²³ Erwin PC, Brownson RC, Livingood WC, Keck CS, Amos K. Development of a research agenda focused on academic health departments. *Am J Public Health*. 2017;107(9):1369-1375.
- ²⁴ Spears Johnson CR, Kraemer Diaz AE, Arcury TA. What does it mean for something to be "scientific"? Community understanding of science, educational attainment, and community representation among a sample of CBPR projects. *Health Educ Behav*. 2017;44(2):271-277.
- ²⁵ English PB, Richardson MJ, Garzón-Galvis C. From crowdsourcing to extreme citizen science: participatory research for environmental health. *Annu Rev Public Health*. 2018;39:335-350.
- ²⁶ Cairney P, Oliver K. Evidence-based policymaking is not like evidence-based medicine, so how far should you go to bridge the divide between evidence and policy? *Health Res Policy Syst*. 2017;15(1):35.
- ²⁷ Livingood WC, Bilello LA, Choe U, Lukens-Bull K. Enhancing the science of discovery in public health systems and services research through participatory research methods. *Popul Health Manag*. 2018;21(2):155-162.
- ²⁸ Cacari-Stone L, Wallerstein N, Garcia AP, Minkler M. The promise of community-based participatory research for health equity: a conceptual model for bridging evidence with policy. *Am J Public Health*. 2014;104(9):1615-1622.
- ²⁹ Israel BA, Schulz AJ, Parker EA, Becker AB. Community-based participatory research: policy recommendations for promoting a partnership approach in health research. *Educ Health (Abingdon)*. 2001;14(2):182–197. Cited by Lichtveld M, Kennedy S, Krouse RZ, et al. From design to dissemination: implementing community-based participatory research in postdisaster communities. *Am J Public Health*. 2016;106(7):1235-1242.
- ³⁰ James RD, West KM, Claw KG, et al. Responsible research with urban American Indians and Alaska Natives. *Am J Public Health*. 2018;108(12):1613-1616.
- ³¹ Burris S, Wagenaar AC, Swanson J, Ibrahim JK, Wood J, Mello MM. Making the case for laws that improve health: a framework for public health law research. *Milbank Q*. 2010;88(2):169-210.
- ³² Chriqui JF, O'Connor JC, Chaloupka FJ. What gets measures, gets changed: evaluating law and policy for maximum impact. *Journal of Law, Medicine and Ethics*. 2011;39(suppl 1):s21-s26.
- ³³ Burris S, Hitchcock L, Ibrahim J, Penn M, Ramanathan T. Policy surveillance: a vital public health practice comes of age. *J Health Polit Policy Law*. 2016;41(6):1151–1173.
- ³⁴ Burris S, Mays GP, Scutchfield DF, Ibrahim JK. Moving from intersection to integration: public health law research and public health systems and services research. *Milbank Q*. 2012;90(2):375-408.