Published in final edited form as:
Am J Prev Med. 2012 September ; 43(3): 309–319. doi:10.1016/j.amepre.2012.06.006.

Fostering More-Effective Public Health by Identifying Administrative Evidence-Based Practices:

A Review of the Literature

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Abstract

Context—The aim of evidence-based decision-making in public health involves the integration of science-based interventions with community preferences to improve population health. Although considerable literature is available on the development and adoption of evidence-based guidelines and barriers to their implementation, the evidence base specific to public health administration is less developed. This article reviews the literature from public health and related disciplines to identify administrative evidence-based practices (A-EBPs; i.e., agency-level structures and activities that are positively associated with performance measures).

Evidence acquisition—A "review of reviews" was carried out to assess the evidence for the effectiveness of A-EBPs covering the time frame January 2000 through March 2012. The following steps were used: (1) select databases; (2) determine search parameters and conduct the search; (3) screen titles and abstracts; (4) obtain selected documents; (5) perform initial synthesis; (6) abstract data; and (7) synthesize evidence.

Evidence synthesis—In both the reviews and original empiric studies, the most common outcome reported was performance of the local health department or local public health system. On the basis of a synthesis of data from 20 reviews, a total of 11 high-priority A-EBPs were identified (i.e., practices that local public health systems potentially can modify within a few years). The A-EBPs covered five major domains of workforce development, leadership, organizational climate and culture, relationships and partnerships, and financial processes.

Conclusions—As the body of practice-based research continues to grow and the ability to measure administrative evidence-based practices improves, this initial list can be further developed and improved.

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No financial disclosures were reported by the authors of this paper.

Context

Evidence-based decision-making (EBDM) in public health has been defined as the integration of science-based interventions with community preferences to improve population health.[1] The scientific evidence for effective population-level interventions has grown rapidly over the past few decades, as summarized in systematic reviews such as the Cochrane Collaboration[2] and the Community Guide.[3] In addition, there is a growing body of literature on dissemination and implementation (D&I) research,[4] which seeks to understand the processes and factors associated with widespread use of an evidence-based practice or the successful integration of evidence-based interventions within a particular setting (e.g., schools, clinics).[5] The need for greater emphasis on EBDM is highlighted in the Public Health Accreditation Board Standards that seek to "contribute to and apply the evidence base of public health."[6] This standard highlights the importance of using the best available evidence and also the role of health departments in adding to the body of evidence for promising approaches.

Numerous studies have examined the barriers to EBDM in state and local health departments (LHDs). The most commonly identified barriers include lack of time/competing demands, inadequate funding/high cost, the absence of organizational support, and the chasm between researchers and practitioners.[7-12] In a national survey[9] of public health practitioners, absence of incentives within the organization was the largest barrier to EBDM. In another study[13] of EBDM in Kansas and Mississippi, participants identified communication with policymakers, use of economic evaluation, and translation of research to practice as top competency gaps limiting the movement of evidence to practice in state and LHDs.

Other research[8,14] has shown a strong correlation between the perception of institutional priority for EBDM and actual use of research to inform program adoption and implementation. Another related body of inquiry has focused on the barriers to uptake of effective intervention strategies such as those identified in the Community Guide. Based on this growing body of D&I research,[4,15-18] several lessons are now apparent: (1) dissemination of an evidence-based practice generally does not occur spontaneously; (2) passive approaches to dissemination largely are ineffective; and (3) single-source prevention messages generally are less effective than comprehensive approaches.

Although considerable literature exists on the development of evidence-based guidelines, barriers to their adoption, and methods for enhancing the uptake of evidence-based practices, the evidence base specific to public health administration is less developed. Public health services and systems research (PHSSR) is particularly situated to inform the development of guidance for effective public health administration, providing the evidence base for what is and should be implemented at the state and local levels. In PHSSR, investigators explore the association between the investment of resources in public health, agency and systems performance, and the impact such inputs may have on the health of communities served—*how* such interactions take place is tied directly to administrative practices.[19] The National Public Health Performance Standards Program, Public Health Accreditation Board, and local quality-improvement and accreditation processes are drawing

increasing attention to administrative practices.[20-23] However, the majority of PHSSR studies to date are cross-sectional and descriptive, which often do not reach the level of evidence required for EBDM. Only recently has the body of PHSSR research begun to produce findings that can be translated to practice and policy.[19,24,25]

One important challenge relates to how to build capacity, allowing practitioners to identify such research and then incorporate it into their practices. A notable need exists to identify and act on administrative evidence-based practices (A-EBPs), which are 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). This article reviews the literature from public health and related disciplines to identify a set of A-EBPs that might be acted on to improve practice.

Evidence Acquisition

Combining methods from rapid review[26,27] and snowball sampling,[28,29] a secondary search of the literature, focusing on representative existing evidence reviews from peer-reviewed journals, was conducted to identify A-EBPs. This "review of reviews" was carried out to assess the current level of evidence for the effectiveness of A-EBPs. The review followed seven steps.

Step 1: Select Database(s) Most Likely to Yield the Desired Document Types

To begin the process, the following databases were searched: PubMed, Web of Science (Social Science Citation and all fields), Academic Search Premier, EconLit, Business Source Complete, PsycINFO, Social Work Abstracts, and ERIC. Because it is likely the largest source of articles on this topic and keyword searching can be imprecise, a manual search was conducted of the *Journal of Public Health Management and Practice* for January 2009 through March 2012 to capture original research studies too recent for inclusion in most reviews. Additionally, an author search was conducted in PubMed for January 2000–January 2012 publications by selected PHSSR authors (Erwin, Halverson, Handler, Mays, Scutchfield, Turnock). One indicator that a sufficient number of databases had been searched was that new searches did not identify additional articles.

Step 2: Determine Search Parameters and Conduct the Search

The evidence resources reviewed and abstracted were limited to those published between January 2000 and March 2012 plus articles accepted for publication in English-language peer-reviewed journals. Search terms included ("performance" or "health") AND "local"; "public health performance"; "public health administration"; "public health practice"; "evidence-based"; "public health professional"; "capacity building";"work force development";"staff development";"employee training"; "public health workforce"; "employees—training" and "public health"; "organization"; "partnership"; "interorganization"; "collaboration"; or "relationship." The study team focused on identifying relevant reviews of studies that had quantitatively tested relationships of A-EBP with performance or health. The team used the Washington University library system to conduct the search.

Step 3: Screen the Titles and Abstracts to Determine Potential Relevance

One reviewer examined the databases and included all reviews plus key original quantitative empiric studies that met the inclusion criteria, and those for which the applicability of the inclusion criteria cannot be determined. The entire team was polled to find useful sources of reviews. In addition, the initial list of articles was cross-referenced with the database on PHSSR housed at the University of Kentucky.[30]

Step 4: Obtain Selected Documents

The team worked with the Washington University library system to obtain documents. Most documents were available online.

Step 5: Perform an Initial Synthesis to Determine Inclusion

The goal in this stage was to determine if each selected document met the inclusion criteria: was the source of an A-EBP, had relevance to local public health practice, and included an outcome linked to EBDM (e.g., increased performance of a LHD, higher trainee knowledge).

Step 6: Abstract Selected Documents and Summarize

When a set of reviews was identified, the type of review (systematic, narrative) was summarized, along with review methods, number of included studies, publication years, study populations and settings, A-EBP independent variables, dependent variables, and findings related to A-EBP (overall and by EBP domain). For original research, articles were summarized according to study year, study design, study population and setting, independent variables, dependent variables, and results. The team also noted potential survey items and additional articles mentioned by the authors. Detailed evidence tables were created to summarize the reviews (using a spreadsheet with 20 column headings) and original articles (using a spreadsheet with nine column headings). (Detailed tables are available from the first author on request.)

Step 7: Evidence Synthesis

In the final step, evidence was synthesized. Two sets of A-EBPs were created. High priority A-EBPs were those that were (1) associated with a dependent variable of interest in numerous original research articles; (2) associated with a dependent variable of interest in at least one review article; (3) focused on micro-level administrative or management changes; and (4) deemed modifiable by the research team. For high-priority A-EBPs, the study team estimated the time frame for modification of a given practice. Moderate-priority A-EBPs were those that had been associated with a dependent variable of interest in at least one original research article but have either not yet been part of a narrative or systematic review or were thought to take longer to modify.

Evidence Synthesis

Study Characteristics

After screening for relevance, articles were categorized as reviews (*n*=30); original empirical articles (*n*=65); and conceptual articles (*n*=49; i.e., articles that did not meet the inclusion criterion in Step 7 but were nonetheless helpful in framing the review). Most reviews were from the PHSSR, EBDM, or other public health literature, but several reviews of administrative practices came from evidence-based medicine,[31-34] public administration,[35,36] or the broader organizational literature.[37,38] Although the present review focused on local-level organizations, a few relevant studies of state health departments also were included.

Most reviews were of studies conducted in the U.S. Several reviews focused on U.S. studies but also included relevant studies from Canada, the United Kingdom, Australia, or Europe.[12,34,35,39] Three reviews[32,40,41] included United Kingdom studies exclusively, and two[42,43] reviewed Australian research. Of the 65 original studies, 63 originated in the U.S., whereas two were conducted in Canada and one in Australia. Most original articles were published in 2009–2012.

In both the reviews and original empiric studies, the most common outcome reported was performance of the LHD or local public health system as measured in the National Public Health Performance Standards Program or from earlier survey instruments.[44] Adoption of evidence-based medicine or healthcare best practices was the next most common outcome, including best practices in mental health and drug addiction treatment services. In several recent reviews and original studies, researchers tested relationships of A-EBPs with health outcomes. Some studies focused on local collaborative service-delivery or policy advocacy efforts. A few studies tested LHD workforce capacity outcomes. Performance of recommended topic-specific practices was reported in several studies. These included meeting program or service-delivery objectives in immunization, maternal and child health, chronic disease prevention, and mental health. Organizational literature outcomes commonly involved the implementation of innovations.

Macro-Level Administrative Evidence-Based Practices

Although the focus of the present review is high-priority, locally modifiable A-EBPs, macro (system)–level elements are presented as background information (Table 1). These largely are derived from the PHSSR literature and relate to the infrastructure for local public health practice. The elements in Table 1 were associated with performance or health outcomes across multiple reviews and original studies.

Among the A-EBPs listed in Table 1, the strongest evidence for predicting performance has been shown for allocation and expenditure of resources. The number of LHD staff full-time equivalents, LHD jurisdiction population size, and presence of a local health board also were tested frequently and were positively associated with performance or health. Centralization of authority within the state health department or shared state and local authority was associated with performance in some but not all studies. To affect the elements in Table 1,

system changes may be needed in LHD governance; federal, state, and local funding streams; or how schools train professionals that make up the public health workforce.

High-Priority Administrative Evidence-Based Practices

The present review prioritizes A-EBPs that local public health systems potentially can modify within a few years at relatively low cost within any type of LHD governance, jurisdiction, and funding infrastructure. A total of 11 high-priority A-EBPs were identified on the basis of 20 reviews[12,24,31,34,35,37,42-55] (Table 2). The A-EBPs covered five major domains of workforce development, leadership, organizational climate and culture, relationships and partnerships, and financial processes.

Because most workers in public health practice lack formal training in key disciplines,[56,57] most workforce-related A-EBPs emphasized on-the-job training across a range of topics to improve EBDM. These include analytic decision-making and specific public health topics (e.g., preparedness, cancer control). Increasingly, these training programs are focusing on competency-based education.[10,58-61]

Within the leadership domain, A-EBPs included the skills and backgrounds of public health leaders, their values and expectations, and their use of participatory decision-making. Three A-EBPs were identified within the domain of organizational climate and culture: the free flow of information, support for innovation, and an orientation toward learning within the health department. A considerable number of studies focused on relationships and partnerships, resulting in two A-EBPs: the presence of inter organizational relationships and having a clear collaborative vision and mission among partnering organizations. Finally, within the financial domain, the high-priority A-EBP focused on funding allocation and fiscal policies and priorities (e.g., outcomes-based contracting, a foundation of diverse funding sources).

Moderate-Priority Administrative Evidence-Based Practices

A set of moderate-priority A-EBPs also was identified (Table 3).[9,13,32,44,62-75] For these practices, the evidence base came from only a small number of studies. There were several domains for these moderate-priority A-EBPs: workforce size and composition, health department oversight and infrastructure, organization relationships, and financial characteristics.

Discussion

The need for a greater emphasis on use of EBDM to improve public health practice is well recognized by practitioners and researchers.[76-80] There is now a rich knowledge base regarding *what* to implement (i.e., an array of effective interventions), yet an understanding of *how to* implement (e.g., the needed management practices in a health department) is lagging. A similar lag in addressing evidence-based management practices in healthcare delivery has been noted.[81] The high-priority A-EBPs identified in this review get at the "how" issue and warrant consideration for more systematic use by health departments, funders, and applied researchers.

Across the five A-EBP domains (workforce development, leadership, organizational climate and culture, relationships and partnerships, financial processes), there are numerous opportunities to build on ongoing movements in public health. Performance and quality-improvement initiatives belong in the spectrum of organization-level strategies that have the potential to influence implementation of A-EBPs.[20,21,82-84] A related set of activities relates to wide-spread efforts to promote systems change through health department accreditation (i.e., a process of credentialing to mark attainment of a set of standards, a process to measure health department performance against those standards, and recognition for those health departments who meet the standards).[6,22,85,86]

Administration and management capacity is one of 12 accreditation domains established by the Public Health Administration Board.[22] The A-EBPs identified in the current review can be linked with these quality-improvement and accreditation processes. As these A-EBPs are addressed, it will be important to recognize the potential interaction of macro-level elements in Table 1 with the A-EBPs (e.g., lack of resources is likely to hinder the ability to conduct workforce development).

Much of the future success in attaining these A-EBPs will involve capacity building in state and local health departments, often through workforce training. An inadequate commitment to workforce training has been noted for decades.[87] Much of the focus of earlier public health training has been on finding and appraising evidence,[55,78,88] with less emphasis on A-EBPs. More recently, there have been calls to take a more evidence-based approach to workforce training.[89,90]

Crawford and colleagues[89] have defined a framework for public health workforce research across six areas: definitions and standards, data, methods, evaluation, policy, and dissemination/translation. This final area crosses over with D&I science that has been expanded on by Scharff et al.,[59] where 24 competencies were identified for moving research to public health practice.[59] Parallel concepts for capacity building and training have been proposed in Australia[91] and Canada.[92]

As reflected in the current A-EBPs, numerous studies[7,13,65,74] also show the linkage between health department leadership and EBDM (e.g., leaders who foster a climate supportive of EBDM). There are now well-established leadership training programs to develop the culture for EBDM.[93,94] It is also likely that even in the presence of committed leadership, a “critical mass” and a social network in support of EBDM are needed.[95,96]

An early step in documenting and applying these A-EBPs requires improvements in measurement. A public health adage is “what gets measured, gets done.”[97] Progress in defining and changing A-EBPs will require the development of practical measures that are reliable and valid. For use in practice-based research and evaluation of A-EBPs, survey tools need to be user-friendly (i.e., brief, understandable to a broad audience, easy to administer, and easy to analyze). Data can be collected anew from practitioners in health departments, capturing knowledge, attitudes, and perceptions related to A-EBP.

Relevant data may come also from ongoing data collection that provides useful benchmarks on several A-EBPs (e.g., the National Profile of Local Health Departments conducted by the

National Association of County & City Health Officials[98]). Efforts to harmonize surveys conducted by NACCHO (of LHDs); ASTHO (of state health departments); and NALBOH (of local boards of health) also should result in researchable databases linking A-EBPs across multiple domains.[99] Over time, it may be useful to improve measurement of A-EPBs via ongoing efforts such as the National Public Health Performance Standards Program.[100] Several analytic tools for EBDM can benefit a health department's attempts to measure progress related to use of these A-EBPs.[101,102] Within implementation science, the development of measures for organizational-level characteristics also should be useful in developing metrics for A-EBPs.[95,103-105]

As these A-EBPs are further elucidated and applied, it may be useful to apply several important concepts from D&I research. Perhaps most importantly, the application of A-EBPs can be informed by Diffusion of Innovations Theory[106] and the RE-AIM framework.[107] As an example, on the basis of diffusion theory, one would posit that A-EBPs with relative advantage (more beneficial than alternatives) and flexibility (practice is still effective after some level of modification) are more likely to be implemented.

Another core concept of diffusion theory addresses the need for change agents in an organization to champion an administrative innovation.[108] A conceptual framework such as RE-AIM can encourage individuals seeking to implement A-EBPs to pay explicit attention to Reach, Efficacy/Effectiveness, Adoption, Implementation, and Maintenance.[107,109] There are opportunities to further validate these five A-EBP domains in natural experiments that explore associations between A-EBPs, agency performance, and community health outcomes through the Practice-Based Research Networks funded by the Robert Wood Johnson Foundation.[110]

Several limitations of the current review should be noted. First, the study team focused on only published literature (i.e., excluded the gray or "fugitive" literature), and because much of the experience in state or local public health practice is not published in peer-reviewed journals, it is likely that the team missed some A-EBPs. Second, the present study did not conduct an assessment of the quality of the studies reviewed, as one would in a systematic review.[111] Such an assessment of quality would take into account study design and study execution. The majority of the studies in this review were cross-sectional, which is a design that ranks low in quality in a systematic review.[112]

Third, the study team did not conduct an exhaustive search of complementary disciplines to public health. For example, in the domain of organizational climate and culture, one might find many useful studies in business, management, or organizational psychology. Fourth, only one reviewer searched and screened the literature. Each study was abstracted by a single reviewer instead of the abstracting team using a consensus process. And finally, although time frames were assigned to the high-priority A-EBPs, these time estimates are affected greatly by local contextual factors (e.g., funding, political climate). Despite the limitations, this review offers local public health systems and researchers a starting point to assess and change administrative and management practices in ways that may improve performance.

It also is worth noting that in this review, the focus was on micro-level A-EBPs (i.e., shorter-term administrative issues that are modifiable within a health department) rather than macro-level A-EBPs (i.e., longer-term policy and budgetary issues that largely are external to an agency). Yet some of these macro-level A-EBPs, including per capita spending in LHDs, presence of a governing Board of Health, and the organizational relationship between local and state health departments, appear to be highly predictive of performance outcomes.[113,114] However, such A-EBPs may be modifiable or translatable only in the long term (if at all).[44] An important area of research may involve how micro- and macro-level A-EBPs interact to predict performance. Ongoing studies that involve multiple practice-based research center sites (in a manner analogous to multisite clinical trials) are exploring the variability in administrative-related practices, service delivery, and performance, using a common set of metrics, which should provide direct evidence of the relationship between micro- and macro-level E-ABPs.[115]

The current "review of reviews" builds on ongoing attempts to foster a more evidence-based approach to public health practice,[76,78,116] as well as on recent systematic reviews in selected areas of PHSSR.[45,47,48,117,118] As the body of practice-based research continues to grow and the ability to measure A-EBPs is strengthened, this initial list can be built on and improved. In part, this can be accomplished by conducting similar reviews of reviews as the literature grows. To fully adopt these A-EBPs, new and different approaches are needed, including a focus on these administrative practices among public health leaders across all levels (national to local) and a recognition of the complex systems present in health departments.[119,120] Although implementing these A-EBPs in an era of tight resources will be challenging, there is room for considerable optimism that health departments along with community, professional, and academic partners will be able to adopt and adapt these administrative and management practices, ultimately benefiting the health of the public.

Acknowledgments

This study was initiated by the Robert Wood Johnson Foundation's initiative to support local evidence-based public health efforts. The authors appreciate the article abstracting and input from Lauren Carothers, MPH/MSW, during her graduate studies at Washington University in St. Louis, and the logistic support provided by Mary Adams and Linda Dix at the Prevention Research Center in St. Louis. The authors are also grateful for the support from the National Coordinating Center for Public Health Services and Systems Research at the University of Kentucky.

This study was supported in part by Robert Wood Johnson Foundation's grant no. 69964 and by Cooperative Agreement Number U48/DP001903 from the Prevention Research Centers Program at the CDC.

A synopsized version of this paper and others in the area of PHSSR research can be found at the University of Kentucky's Frontiers in Public Health Services and Systems Research website at uknowledge.uky.edu/frontiersinphssr/.

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Table 1

Macro-level administrative evidence-based practices

Domain and evidence-based practices	Description
Health department oversight and infrastructure	
Jurisdiction	Population size of jurisdictions served Type of jurisdictions served (counties, cities)
Governance and authority	Local health board presence
	Local health board with policy-making role, not just advisory role, at least in large population jurisdictions Centralization of authority at state level or shared state and local control (mixed findings) Statutory authority and responsibilities
Financial	
Allocation and expenditure of resources	Total LHD expenditures per capita LHD expenditures per staff FTE Diversity of funding sources Per capita taxes or allocation percentage of local taxes to public health
Workforce size and composition	
Staff size and composition	Staffing FTEs per capita Pre-service educational background, licensing, and certification Mix of disciplines

FTE, full-time equivalent; LHD, local health department

Table 2

High-priority, locally modifiable, administrative evidence-based practices

Domain and evidence-based practice	Description	Time frame for modification[a]	Supporting evidence reviews
Workforce development			
Training	In-service training in quality improvement or evidence-based decision-making Skills-based training (e.g., organization and systems change) Multidisciplinary in-service training Training aligned with essential services and usual job responsibilities	Short	Adams (2006)[37]; Alsop (2009)[31]; Dilley (2012)[45]; Mays (2009)[24]; Orton (2011)[12]; Potter (2003)[49]; Potter (2010)[50]; Prentice (2007)[51]; Roche (2009)[34]
Access to technical assistance	Access and use of knowledge brokers[b] Use of process-improvement activities (e.g., accreditation, performance assessment) Face-to-face meetings to share lessons, compare experiences, and provide updates	Short	Adams (2006)[37]; Dobbins (2009)[46]
Leadership			
Skills and background of leaders	Leadership skill development Leadership experience Quality of leadership Leadership influence Manager competency to manage change	Short to medium	Bagley (2008)[42]; Hyde (2012)[48]
Values and expectations of leaders	Leadership support of quality improvement, national performance standards, evidence-based decision-making, innovation, accreditation Intend to hire well-educated, experienced staff including specialists (e.g., lab scientists, epidemiologists, environmental health professionals, financial systems experts)	Short to medium	Orton (2011)[12]
Participatory decision-making	Management team Leaders and middle managers seek and incorporate employee input Nonhierarchical decision-making	Medium	Erwin (2008)[44]
Organizational climate and culture			
Access and free flow of information	Communication flow Tailored messaging for evidence-based decision-making 360-degree employee performance reviews geared to evidence-based practices (with extensive feedback) Ready access to high-quality information	Short	Dilley (2012)[45]; Dobbins (2009)[46]; Waters (2003)[55]
Support of innovation and new methods	Leadership/management and employee training in evidence-based decision-making that includes new methods Employees perceiving that management supports innovation Conscious creation of environments conducive to innovation Organizational capacity to be in both business-as-usual state and state of exploration	Short	Adams (2006)[37]; Klein (2005)[38]; Orton (2011)[12]
Learning orientation	Shared employee perceptions Project management teams that encourage communication and collaboration Presence of multidisciplinary, diverse management teams	Short to medium	Boyne (2003)[35]
Relationships and partnerships			

Domain and evidence-based practice	Description	Time frame for modification[a]	Supporting evidence reviews
Interorganizational relationships	Build and/or enhance partnerships with schools, hospitals, community organizations, social services, private businesses, universities, law enforcement Cooperative agreements with state and/or local health departments; quality improvement	Medium	Bagley (2008)[42]; Provan (2007)[52]; Liberato (2011)[43]; Varda (2012)[54]; Roussos (2000)[53]; Dilley (2012)[45]
Vision and mission of partnerships	Clear vision and aligned mission of partnerships Capacity building over time	Medium	Roussos (2000)[53]
Financial			
Allocation and expenditure of resources	Outcomes-based contracting Resources allocated for quality improvement, evidence-based decision-making, innovation, information access, training and implementation Diverse funding sources	Medium	Dilley (2012)[45]; Harris (2012)[47]

[a] Time frame definitions: short=<1 year; medium=1–3 years; long=>3 years.

[b] A knowledge broker is defined as a master's-trained individual available for technical assistance.

Table 3

Moderate-priority[a] administrative evidence-based practices

Domain and evidence-based practice	Description	Supporting evidence reviews and articles
Workforce development		
Staff composition	Educational level of master's degree or higher	Jacobs (2010)[9]
Staff competencies	Ability to communicate research to policymakers Skill in economic evaluation	Jacobs (2012)[13]
Staff incentives	Use of incentives and rewards	Jacobs (2010)[9]; Kennedy (2003)[68]
Health department oversight and infrastructure		
LHD accreditation	Identification of gaps Participation in accreditation process	Davis (2011)[64]
Information systems	Presence of tools for evidence-based decision-making Use of tools for more-rapid access to evidence	Drabczyk (2012)[66]
Health department characteristics	High job satisfaction and morale Certification of LHD staff Use of common language related to evidence-based decision-making Use of incentives and rewards	Boyne (2003)[35]; Dodson (2010)[65]; Erwin (2008)[44]; Jacobs (2010)[9]; Kennedy (2003)[68]; Ogolla (2007)[72]; Stetler (2003)[74]; Swain (2004)[75]
Organization		
Organization climate	Common language and terminology	Dopson (2002)[32]; Merrill (2010)[71]
Relationships and partnerships		
Interorganizational relationships	Number and diversity of types of collaborating organizations Percentage of local public health services and activities provided by non-LHD organizations Distribution of authority and effort among collaborating organizations	Beatty (2010)[62]; Chen (2010)[63]; Lovelace (2001)[69]; Mays (2010)[70]; Scutchfield (2004)[73]
Financial		
Allocation and expenditure of resources	Program financial risk (program expenditures/ program revenues)	Honoré (2007)[67]
Financial accountability	Financial transparency practices	Honoré (2007)[67]

A-EBP, administrative evidence-based practice; LHD, local health department

[a]These are moderate priority because they are based on original research but have not been part of a narrative or systematic review, or they would take longer to modify than the high-priority A-EBPs.