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Evidence-Based Decision Making in Local Health Departments

ABSTRACT

Evidence-based decision making (EBDM) represents an important strategy to increase efficacy and efficiency of public health programs and practice. There is insufficient information on the application of EBDM among local health departments (LHDs). This qualitative study examined use of EBDM in New York State (NYS) LHDs and factors facilitating and impeding its adoption through interviews and focus groups with 47 LHD commissioners, health directors, and other upper-level staff. Findings suggest variability in application of EBDM in NYS LHDs. A number of internal factors (*e.g.*, staff capacity, organizational culture) and external factors (*e.g.*, policy environment, appropriate and replicable evidence-based models) contribute to its uneven use, even within a single LHD.

Keywords

phssr, public health services and systems research, Evidence-based decision making, local health departments, facilitators, barriers

Cover Page Footnote

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Introduction

The public health field has become increasingly interested in evidence-based decision making (EBDM) as a strategy to increase efficacy and efficiency of programs and practice. EBDM is a process that involves making decisions on the basis of the best-available scientific evidence, using data and information systems systematically, applying program-planning frameworks, engaging the community in decision-making, conducting sound evaluation, and disseminating what is learned.¹ While there is a significant body of literature at the conceptual level, notably the work of Brownson and colleagues,^{1,2} less is known about how EBDM is applied in everyday practice. This mixed-method study, which represents a collaborative effort by members of the New York Public Health Practice-Based Research Network (NY-PHPBRN), sought to examine the decision-making processes used by leadership in local health departments (LHD) across New York State (NYS), and to identify facilitators and barriers to the use of EBDM at the local level. This paper reports on the qualitative component of the study, which included interviews and focus groups with 47 LHD commissioners, health directors, and other upper-level staff in 2011. Overall, participants supported the application of EBDM and expressed a desire to increase its use. EBDM is being utilized in a number of LHDs and strong leadership was identified as the greatest EBDM facilitator. However, findings suggest that a range of internal factors (e.g. staff capacity, organizational culture) and external factors (e.g. policy environment, appropriate and replicable evidence-based models) may result in its uneven use, even within a single LHD.

Methods

We conducted 25 individual and small-group interviews (n=31) and 2 focus groups (n=16) with commissioners, health directors, and other upper-level staff from 31 LHDs (55.4% of all LHDs in NYS). Focus group participants were a convenience sample of LHD leadership attending a statewide professional meeting. Interview participants represented a stratified sample of "key informants" (n=12) and individuals who represented a broader cross-section of counties (n = 19). Key informants were identified based on their reputation as dynamic leaders, their knowledge of and interest in EBDM, or unique characteristics such as a shorter length of tenure (and perhaps less bound by tradition), and working in LHDs with the smallest and largest LHD budgets in the state. The cross-sectional sample was selected for variability in county socioeconomic and geographic characteristics (see *Table 1* for a description of the LHD structure in NYS). These complementary methods—and samples—were utilized to elicit diverse viewpoints and a rich discussion of factors important to LHD decision-making.

Written guides with open-ended questions were used for the interviews and focus groups. Questions focused on the participant's decision-making responsibilities, how decisions are made in his/her department, knowledge and experience with EBDM, and barriers and facilitators to its implementation. QSR NVivo (version 8) software was used to manage and analyze interview and focus group notes. A coding scheme was developed that included themes identified from the literature, as well as themes emerging from the data themselves. Detailed notes from each interview and focus group were coded and reviewed by a research assistant (CS), under supervision from a NY-PHPBRN member with expertise in qualitative research (LW). Analysis of the data was conducted as an iterative process involving all study staff.

Results

The adoption of EBDM in LHDs was linked to both internal and external factors. All participants described having some familiarity with the concept, although perceived level of expertise and the extent to which EBDM is practiced varied. Many responded that they ‘hoped’ or ‘thought’ they used EBDM, although not for every decision that could be informed by evidence and, as one participant described, “It’s a process that takes time to yield results.” Staff whose responsibilities required use of EBDM, including preparing grant applications and/or working in program areas that implemented evidence-based interventions were likely to be more familiar with it than were others. Leadership that championed EBDM and a culture supportive of innovation represented major driving forces for its application. Nearly all participants mentioned that funding mandating the use of evidence-based practices served as an important influence in the use of EBDM. In contrast, staff that were unfamiliar with EBDM and were resistant to change, as well as lack of buy-in from local legislators—who may be more concerned with business than health interests—were considered significant barriers to EBDM in some LHDs.

At the ground level, a number of factors influenced adoption of component parts of EBDM, including research and evaluation. Community-level health indicator data, such as morbidity, mortality and immunization rates, were readily available, as was information about performance and sustainability of some current programming. Obtaining more comprehensive information, including peer-reviewed journal articles and data from multiple sources, presented challenges because of the limited availability and inadequate knowledge of sources, as well as time constraints. Many participants noted weaknesses with respect to evaluation. In some instances, systematic methods of evaluation were not well developed (*e.g.*, for the use of hike-and-bike trails); in other instances, resources (*e.g.*, time and funding) were unavailable. Finally, the lack of evidence-based models that fit community characteristics (*e.g.*, rural) and limited resources were barriers without obvious solutions.

Implications

Increasing the use of EBDM in LHDs in NYS may result from addressing the identified facilitators and barriers. Some factors can be modified with additional (and focused) training, resources and/or supports. Others, such as legislative buy-in and funding restrictions, are more difficult for LHDs to control. For EBDM to become more widespread, it is likely necessary to act upon both sets of factors, which would require increased engagement with policy-makers including those working outside the health realm.

Our findings are limited by several factors. Our sample was restricted to LHDs in NYS, which may be atypical *vis a vis* other states; participants may not represent the perspectives of all those in senior positions. In addition, all data were self-reported and based on relatively brief interviews (approximately 30 minutes to one hour) or focus groups (two hours each). We did not track or observe LHD activities or ask for documentation demonstrating use of EBDM practices. That said, the use of qualitative methods allowed for a more nuanced understanding of daily practice and enables relevant topics to emerge from participants rather than just from researchers.

The next phase of the study, a survey of all NYS LHDs, will expand on the work described here, focusing specifically on how the individual steps of the EBDM process, as outlined by Brownson,¹ are utilized in practice.

These initial findings of how and where EBDM is being applied suggest the need for further research on opportunities for increasing consistency of use. Interventions can focus on enhancing the required competencies through training and support, addressing barriers, and actively promoting the practice of EBDM through leadership.

Summary Box

- **What is already known on this topic?** There is a significant body of information regarding the relevance of organization culture and structure to the adoption of EBDM that demonstrates the significance of strong leadership, effective management, relatively large size, and sufficient funding.^{3, 4, 5}
- **What is added by this report?** This report reinforced the importance of internal factors (such as leadership) while demonstrating the significance of external factors, including legislator buy-in, to EBDM capability. In addition, this report highlighted the variability in EBDM adoption according to components of the model.
- **What are the implications for public health practice/policy/research?** Findings suggest a broader approach to the promotion of EBDM that focuses (1) on individual practices (such as data collection and evaluation) that represent challenges; and (2) attention to factors outside the public health practice setting that may have significant influence on practice decisions.

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Figure 1: Factors Impacting on Adoption of Evidence-based Decision Making

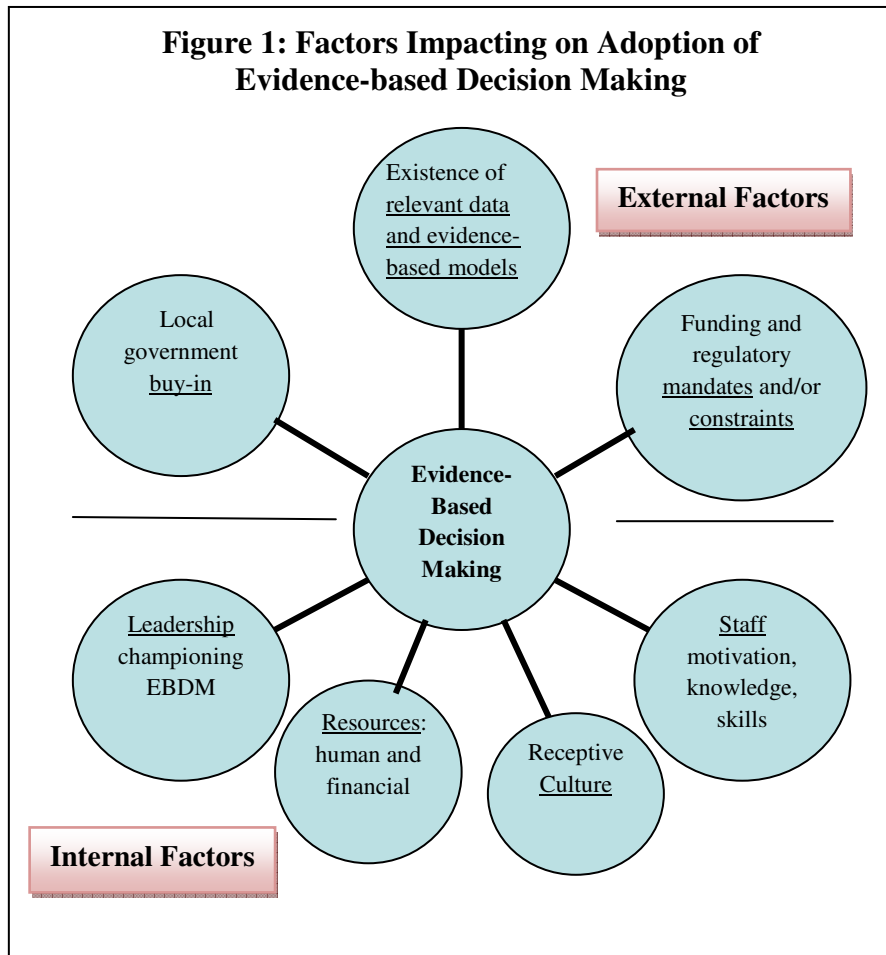


Table 1: Characteristics of local health departments in the sample

Size of county population (2008 data)	# LHDs in NYS	# of LHDs in Sample	% of LHDs in Sample
Small (<140K)	40	19	47.5
Medium (140--250K)	5	3	60.0
Large (>250K)	11	9	81.1
Region			
Western	17	11	64.7
Central	13	4	30.8
Capital	18	10	55.5
Metropolitan Area	10	6	60.0
Services Delivered			
Full service	37	22	59.5
Partial Service	21	9	42.9