Assessing Capacity for Sustainability of Effective Programs and Policies in Local Health Departments

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Context: Sustainability has been defined as the existence of structures and processes that allow a program to leverage resources to effectively implement and maintain evidence-based public health and is important in local health departments (LHDs) to retain the benefits of effective programs. Objective: Explore the applicability of the Program Sustainability Framework in high- and low-capacity LHDs as defined by national performance standards. Design: Case study interviews from June to July 2013. Standard qualitative methodology was used to code transcripts; codes were developed inductively and deductively. Setting: Six geographically diverse LHD’s (selected from 3 of high and 3 of low capacity) Participants: 35 LHD practitioners. Main Outcome Measures: Thematic reports explored the 8 domains (Organizational Capacity, Program Adaptation, Program Evaluation, Communications, Strategic Planning, Funding Stability, Environmental Support, and Partnerships) of the Program Sustainability Framework. Results: High-capacity LHDs described having environmental support, while low-capacity LHDs reported this was lacking. Both high- and low-capacity LHDs described limited funding; however, high-capacity LHDs reported greater funding flexibility. Partnerships were important to high- and low-capacity LHDs, and both described building partnerships to sustain programming. Regarding organizational capacity, high-capacity LHDs reported better access to and support for adequate staff and staff training when compared with low-capacity LHDs. While high-capacity LHDs described integration of program evaluation into implementation and sustainability, low-capacity LHDs reported limited capacity for measurement specifically and evaluation generally. When high-capacity LHDs described program adoption, they discussed an opportunity to adapt and evaluate. Low-capacity LHDs struggled with programs requiring adaptation. High-capacity LHDs described higher quality communication than low-capacity LHDs. High- and low-capacity LHDs described strategic planning, but high-capacity LHDs reported efforts to integrate evidence-based public health. Conclusions: Investments in leadership support for improving organizational capacity, improvements in communication from the top of the organization, integrating program evaluation into implementation, and greater funding flexibility may enhance sustainability of evidence-based public health in LHDs.

KEY WORDS: evidence-based public health, local health departments, program sustainability

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Today, there is substantial evidence regarding effective public health interventions, programs, and policies. Evidence-based decision making (EBDM) in local health departments (LHDs), and other public health settings, is the process of translating the best available scientific data about effective programs and policies while considering the local needs and resources of the community. The Public Health Accreditation Board has included EBDM in the standards for LHDs pursuing or maintaining voluntary accreditation status. Use of evidence-based programs and policies as part of EBDM involves implementation of programs and policies that have been shown to be effective, for example, in the Community Guide. An evidence-based process is related less to the actual programs and policies, and more to the processes within the LHD, for example, leadership, organizational climate and culture, and relationships and partnerships.

Barriers to EBDM have been well defined and include such things as lack of relevant research, leadership characteristics, and current political environment. In addition, ineffective dissemination of evidence-based programs and policies is a barrier to adoption in LHDs. Less is known about what contributes to the sustained use of evidence-based programs and policies after they have been adopted in LHDs, and it is an understudied area in dissemination and implementation science.

Sustainability has been defined as “the existence of structures and processes that allow a program to leverage resources to effectively implement and maintain evidence-based policies and activities.” This concept is complex and has varying terminology; in this definition, the structures could also include resources such as strong organizational infrastructure and leadership. Luke et al developed the Program Sustainability Framework to assess public health program capacity for sustainability, which includes 8 domains. Five domains (Organizational Capacity, Program Adaptation, Program Evaluation, Communications, and Strategic Planning) are thought to fall in the internal locus of control and involve activities that primarily occur or are managed within the program itself. The remaining 3 domains (Funding Stability, Environmental Support, and Partnerships) are grouped into external control as they are more greatly influenced by factors external to the program. The purpose of this study is to explore differences in high- and low-capacity LHDs in the sustainability framework domains.

Methods

Case study guide development

The interview guide was developed based on previous literature, prior work by members of the project team, and project team input to explore LHD use of EBDM. The guide included the following interview topics: (1) biographical information; (2) awareness of the existence of evidence-based programs and policies and an evidence-based process; (3) administrative support for an evidence-based process; (4) knowledge of the LHD accreditation process; (5) political climate and support for evidence-based programs and policies; (6) dissemination strategies that would further evidence-based programs and policies; and (7) key networks and partnerships to support EBDM. The interview guide was also based, in part, on findings from a national survey conducted by the research team, which examined use of administrative and management evidence-based practices in LHDs. Interview guide questions were developed to qualitatively supplement the data gaps from the national survey. In May 2013, our case study guide underwent cognitive response testing to elicit questions that were either unclear or potentially difficult to answer. Cognitive response testing is routinely used in refining questionnaires to improve the quality of data collection. These 45- to 60-minute phone interviews were conducted with directors of LHDs in Missouri and Tennessee by the project manager. The cognitive response testing sample (n = 6) was self-selected by members of the research team and included both urban and rural LHDs. Upon verification of consent, all interviews were audio recorded and field notes were taken during testing. Participants were instructed to provide feedback on questions lacking clarity and items that could be viewed as potentially difficult to answer. After the tester verbalized each question, the participant was allowed time to provide relevant feedback on each item. Information from these interviews was used to modify items for the interview guide. The final interview guide included 37 questions in the 7 interview topics previously listed.

Case study sample selection

The case study sample was selected using an administrative evidence-based process score from the national survey (described elsewhere) and was linked to secondary data from the National Public Health Performance Standards Program (NPHPSP). The sample included LHDs falling in the top and bottom quartiles of each survey’s respective scoring system. Seventy-one (14%) LHDs from the national administrative evidence-based processes sample had overall performance score data from NPHPSP. In concordance with NPHPSP scoring methodology, an overall performance score was computed as a simple average of the 10 Essential Public Health Services scores and then ranked into quartiles. We defined “high-capacity” as NPHPSP scores in the top quartile (n = 17) and “low-capacity” as scores in...
the bottom quartile (n = 17). Of the 16 LHDs in the final sample, 3 that scored high and 3 that scored low on both measures were selected as case study sites. On the basis of this selection, the high-capacity LHDs were more likely to have leadership and organizational culture and climate supportive of evidence-based practice (as evidenced by their administrative evidence-based process score), providing an environment that supports ongoing evidence-based practices and policies.

**Case study interviews**

Interviews were conducted with 35 practitioners from 6 LHDs (3 of low and 3 of high capacity) in June-July of 2013. The participants included the LHD director or deputy director who then self-selected key members of their LHD’s management team responsible for overseeing a division or work unit of the department. An average of 5 to 6 interviews were conducted at each of the 6 LHDs. Each interview was between 30 minutes and an hour depending on the length of answers and knowledge of the practitioner and was conducted by 2 members of the research team. All participants provided informed consent before the interview began. This study was approved by the Human Research Protection office at Washington University in St. Louis.

**Case study analysis**

The interviews were tape recorded with the respondent’s permission and transcribed verbatim. Standard qualitative methodology was used for data coding using NVivo software. Four team members were trained on coding to ensure reliability among raters. Coders were assigned transcripts to code independently, developing the codebook to capture new themes and subcategories. Updated codebooks were distributed after each coding session. Coding pairs systematically coded 3 interviews using NVivo noting any discrepancies and alternate coding. Once these transcripts were coded and the codebook refined, interrater reliability was evaluated using NVivo with a final percent agreement among coders of 98%. Node reports were generated to explore common themes in the high-capacity and low-capacity LHD’s. These reports were then summarized into thematic reports for each questionnaire item in all of the 8 domains of the sustainability framework.

**Summary table**

From the thematic reports, a table was generated to compare similarities and differences of high-capacity and low-capacity LHDs using the 8 sustainability framework domains defined by Luke et al: environmental support, funding stability, partnerships, organizational capacity, program evaluation, program adaptation, communications, and strategic planning. High- and low-capacity LHDs were compared on the basis of their responses to similar themes. This information was based primarily on the thematic report on sustainability but was drawn from other thematic reports as well. On the sustainability table, specific themes and patterns were identified and explored.

**Results**

Table 1 shows the characteristics of the 6 LHDs included in the final sample, and Table 2 summarizes the themes identified for each of the sustainability domains separated for high- and low-capacity LHDs; illustrative quotes are provided. Except where it is noted that the responses were similar, respondents from high- and low-capacity LHDs had different responses to the same themes, as illustrated by the quotations. Though the quotes represent 1 respondent, they illustrate the perspective from the type of LHD where they work.

**Environmental support**

The need for environmental support and its importance as an underlying part of the way LHDs operate was recognized by both high- and low-capacity LHDs, because, as one participant described, “Public health is whatever the legislature says it is.” However, the staff from the high-capacity LHDs interviewed described having this support, while low-capacity LHD staff reported this support was lacking. In some cases,

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Sampling Frame Characteristics of LHDs for Case Studies (n = 6)</th>
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<tbody>
<tr>
<td>LHD Characteristics</td>
<td>n (%)</td>
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<tr>
<td>Governance Structure</td>
<td></td>
</tr>
<tr>
<td>Local</td>
<td>2 (33.3)</td>
</tr>
<tr>
<td>Shared</td>
<td>2 (33.3)</td>
</tr>
<tr>
<td>State</td>
<td>2 (33.3)</td>
</tr>
<tr>
<td>Geographic Region</td>
<td></td>
</tr>
<tr>
<td>Northeast</td>
<td>1 (16.6)</td>
</tr>
<tr>
<td>Midwest</td>
<td>2 (33.3)</td>
</tr>
<tr>
<td>South</td>
<td>2 (33.3)</td>
</tr>
<tr>
<td>West</td>
<td>1 (16.6)</td>
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<tr>
<td>Jurisdiction Size</td>
<td></td>
</tr>
<tr>
<td>&lt;25,000</td>
<td>0 (0)</td>
</tr>
<tr>
<td>25K-49,999</td>
<td>2 (33.3)</td>
</tr>
<tr>
<td>50K-99,999</td>
<td>2 (33.3)</td>
</tr>
<tr>
<td>100K-499,999</td>
<td>1 (16.6)</td>
</tr>
<tr>
<td>≥500,000</td>
<td>1 (16.6)</td>
</tr>
<tr>
<td>Sustainability Domain</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Environmental support</td>
<td>Having a supportive internal and external climate for your program</td>
</tr>
<tr>
<td>Funding stability</td>
<td>Establishing a consistent financial base for your program (meeting long-term needs, adjusting to changing trends, having a plan)</td>
</tr>
<tr>
<td>Partnerships</td>
<td>Cultivating connections between your program and its stakeholders (connecting to greater resources/expertise, taking over providing services, advocating for the cause)</td>
</tr>
<tr>
<td>Organizational capacity</td>
<td>Having the internal support and resources needed to effectively manage your program</td>
</tr>
<tr>
<td>Program evaluation</td>
<td>Assessing your program to inform planning and document results (staying on track with goals/outcomes, collecting data about successes/impact to gain support and funding)</td>
</tr>
<tr>
<td>Program adaptation</td>
<td>Taking actions that adapt your program to ensure its ongoing effectiveness</td>
</tr>
</tbody>
</table>
low-capacity LHDs reported that elected officials and/or health boards were not supportive of programs and even denied the evidence showing the need for programs. Although respondents did not discuss other environmental or economic supports, internal politics (ie, organizational culture and climate) relates to the environment and were reoccurring themes throughout our interviews. The differences between high- and low-capacity LHDs are discussed under Organizational Capacity, later.

**Funding stability**

Although both high- and low-capacity LHDs described limited funding and limited length of funding, which limited sustainability, high-capacity LHDs reported greater flexibility of funding. Thus funding limitations were reported as much greater problems by staff at low-capacity LHDs. Local health departments did report that programs with one-time expenses were more easily sustained when resources were limited. Low-capacity LHDs were also more likely to see financial constraints as limiting problems, rather than as barriers to overcome. They described very little latitude in how funds are used; this was seen as a major barrier to sustaining evidence-based programs and policies. Furthermore, low-capacity LHDs were limited in their ability to fully implement mandated programming due to funding constraints.

**Partnerships**

Partnerships were seen as very important to both high- and low-capacity LHDs, and both groups described building partnerships to sustain programming and the necessity of these partnerships to the success of their work. Among high-capacity LHDs, buy-in from partners, particularly by helping the partners see the program benefits, was seen as a way for programming to be built into the partner’s budget. This was similar among low-capacity LHDs who saw partnerships as a way to help increase sustainability and build community buy-in. They also saw programming success as when a partner organization began to “own” a program and as an important way to share resources and expertise. High- and low-capacity LHDs recognized the effort required to sustain partnerships over time or once a particular program or assessment activity was completed and that these struggles related to staff and funding.

**Organizational capacity**

Both high- and low-capacity LHDs recognized the importance of having adequate staff and staff training. High-capacity LHDs reported presence of

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**TABLE 2** Themes and Illustrative Quotes Identified From Each of the 8 Domains From the Program Sustainability Framework (Continued)

<table>
<thead>
<tr>
<th>Sustainability Domain</th>
<th>Description</th>
<th>High-Capacity LHDs</th>
<th>Low-Capacity LHDs</th>
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<tbody>
<tr>
<td>Communication</td>
<td>Strategic communication with stakeholders and the public about your program (internal and external)</td>
<td>“Usually people are pretty enthusiastic when it comes to something new. And this is kind of our reputation at this particular public health [department?], try it, if it doesn’t work, move on.”</td>
<td>“The evidence-based programs that exist out there may or may not always be the perfect fit for your program and success in it and trying to put everybody into a mold is . . . we’re all different.” <em>(4.0 EBI Barriers)</em></td>
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<tr>
<td></td>
<td></td>
<td>“There is formal monthly meetings and then there is the dissemination via e-mails and policies that are posted. I don’t think we ever will just post a policy and say, ‘here’s a new policy.’ No. So we’ll at least send the changes by e-mail and talk about them.”</td>
<td>“You’ve just got to show it locally that those things are important and that they matter, they work.”</td>
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<td></td>
<td></td>
<td>“Our director and our senior management team [. . .] have to be of a mind to where we prioritize the evidence-based needs above other pet projects or other types of needs.”</td>
<td>“Our culture is pretty clear that wasted energy on non-evidence-based practices and programs is just that, wasted energy, and really not fitting in with our vision and mission.”</td>
</tr>
<tr>
<td>Strategic planning</td>
<td>Using processes that guide your program’s direction, goals, and strategies</td>
<td>“We are very forward thinking and have a vision of where we want this department to go and what we want it to be, I think those are very strong factors in continuing to sustain evidence-based interventions”</td>
<td>“I don’t think we’ve got a systematic way of doing it. I think unfortunately, I have to admit, that it’s oftentimes simply forced on us by way of grant opportunities.”</td>
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</table>
adequate staff and better access to staff training than low-capacity LHDs. Low-capacity LHDs reported that adequate staffing was often a barrier, and that recruiting staff was difficult due to salary constraints. In addition, staff at low-capacity LHDs described a disconnect in support from the top to bottom levels of leadership, where upper level management may not be supportive even when the director is. However, some high-capacity LHDs communicated the importance of EBDM by providing their staff with more opportunities for growth and involving staff at all levels in decision making.

Program evaluation
While high-capacity LHDs described integration of evaluation into program implementation and sustainability, low-capacity LHDs reported much more limited capacity for measurement specifically and evaluation more generally. The measurement capabilities described by high-capacity LHDs stemmed from better training for department staff and a culture of prioritizing measurement and evaluation, whereas low-capacity LHDs reported being hampered in evaluation efforts by lack of staff capacity and funding priorities. The differences in measurement capacity were described in the context of program evaluation and quality improvement (QI), whereas high-capacity LHDs leveraged measurement capabilities for these processes as well. Furthermore, high-capacity LHDs saw program success and results showing improved health as key factors for sustainability.

Program adaptation
The major difference that emerged between high- and low-capacity LHDs regarding program adaption is that when high-capacity LHDs described programs that may not fit, they viewed this an opportunity to evaluate and to adapt. Low-capacity LHDs had more difficulty getting past the lack of fit and trying new programs. They described needing proof that the program works locally. In addition, several low-capacity LHDs reported that innovation and new ideas were not always welcome. These challenges were due, in part, to limited funding flexibility and environmental support.

Communication
The presence of open communication occurred more frequently among high-capacity LHDs than among low-capacity LHDs. Much of this difference seemed to come from the top down. This is particularly relevant to communicating the importance of EBDM to the organization, and changing perceptions within the LHD about EBDM as part of their culture. In high-capacity LHDs, this consistent message was reported to come from the top down, including all levels of the organization. Among low-capacity LHDs, there was a perception of poor communication about the importance of programs and about why EBDM matters as well as a lack of consistency from the managerial level.

Strategic planning
High- and low-capacity LHDs both described strategic planning, but high-capacity LHDs reported a greater effort to integrate EBDM into their strategic plans. High-capacity LHDs also described more progress in such planning, and ensuring from the outset that anything implemented would be lasting. On the contrary, low-capacity LHDs seemed to be just starting to incorporate EBDM into their strategic planning, if at all and this process was less systematic. These LHDs, however, did report having begun health assessments and/or improvement plans as well as recognition of the need to look at whether there were programing needs or if others in the community were already filling those needs.

Discussion
This analysis shows that while there are some similarities in high- and low-capacity LHDs, there are differences that could explain why some LHDs have more capacity for sustaining programs than others. These differences tended to fall under the sustainability framework domains considered to be within internal, rather than external, control. Organizational capacity, particularly leadership support for building capacity, program evaluation, program adaptation, communication (with important differences from the organization’s hierarchy), and funding stability showed important differences between high- and low-capacity LHDs. Though there were some differences, partnerships, strategic planning, and environmental support showed more similarities between the 2 groups. A previous study found community partnership processes similar in high- versus low-capacity agencies. Several of the sustainability domains identified through earlier research, and the current study have been shown to be modifiable by a combination of training, practice changes, or analytic approaches.

Leadership support is important because leaders have the ability to affect the adoption of EBDM directly, through allocation of resources (human and material), and indirectly, through encouragement, support, and mentorship. Researchers in other health fields have stated that “leadership is critical to build organizational readiness for change.” Our findings reflect the
importance of leadership in that many of the sustainability domains that low-capacity LHDs struggled with—particularly the internal factors, as well as partnerships, to some degree—were influenced by lack of support or leadership disconnect. High-capacity LHDs seemed to have more active, progressive, and supportive leadership when it came to EBDM, whereas low-capacity LHDs reported that some of their upper-level management was not as supportive.

Leaders’ priorities (i.e., program implementation, measurement, and evaluation) can intentionally or unintentionally affect what programs are implemented or how they are measured and evaluated. If EBDM is mentioned, discussed, or emphasized by organizational leaders but not by mid-level management, it creates an inconsistency within the organization that affects how programs are implemented, evaluated, and prioritized. A similar effect occurs when leaders do not allocate resources in a way that supports EBDM, model positive attitudes toward the use of evidence-based programs and policies, or show sufficient knowledge of evidence-based processes. The role of leadership in communication was especially important, as, in the current study, high-capacity LHDs mentioned consistent, constant communication of expectations and information, whereas low-capacity LHDs mentioned poorer communication about the importance of EBDM and a lack of consistency from those in leadership positions. An absence of clarity and consistency among leaders of an organization, even across multiple levels, can influence the implementation and impact of certain initiatives. This can reduce organizational capacity as was observed among several of the low-capacity LHDs in the sample.

Previous research distinguishes between transactional leadership, which is based on practical exchanges and emphasizes specific accomplishments and objectives, and transformational leadership, which aims to reach goals through inspiration and motivation and emphasizes specific values. Although both transformational and transactional leadership can be associated with encouraging attitudes toward EBDM and staff trying new things, transformational leadership specifically makes staff more likely to find new practices appealing, more likely to adopt them, and more likely to perceive fewer gaps between EBDM and their current practices. This may be particularly important for the differences observed between high- and low-capacity LHDs with regard to program adaptation, and the enthusiasm in high-capacity LHDs to adapt programs as opposed to the hesitancy to approach programs requiring adaptation among low-capacity LHDs. Leaders in low-capacity LHDs might seek to adopt this leadership style, which might build a positive attitude toward innovation among their staff.

Improving communication within the LHD, with a focus on the top of the organizational structure, may be important to improving program sustainability. Lack of leadership support, especially from mid-level management, makes it difficult to communicate the importance of EBDM, explain the reasoning behind it, and build enthusiasm and buy-in about its effectiveness. Internal communication should be seen as a dialogic process of engagement, clarification, negotiation, and perspective-taking, rather than as information exchange. This is made even more important by the differences in leaders’ views regarding good communication and those of employees. The best predictors of successful change (according to employees) are the sense that employee input is valued, leadership with a clear vision, and measures in place to reduce resistance to change. A review of administrative and management evidence-based practices to improve local public health identified participatory decision making, involving communication with employees to get their input as an effective way to create an environment conducive to EBDM. Efforts by low-capacity LHDs to improve internal communication might include incorporating participatory decision making.

Agencies that have created a QI culture are more likely to have a history of EBDM, have data collection systems and methods in place, and see barriers such as budget cuts or health crises as opportunities for improvement. The link between implementation and evidence-based programs and polices is important, as we found that LHDs who had strong QI practices were more likely to have cultures that support evidence based practices. As mentioned earlier, this was observed in our sample—high-capacity LHDs reported adapting programs to fit their department, whereas low-capacity LHDs viewed programs not designed to fit the LHD specifically with skepticism. A QI culture also tends to correspond with a perception of QI as something important to the agency, rather than something required by the accreditation process. In contrast, agencies that have more informal QI processes are more likely to consider QI a part of accreditation and see those barriers as overwhelming or insurmountable. This was reflected in the differing responses between high-capacity and low-capacity LHDs about program evaluation, as well as program adaptation. High-capacity LHDs were more likely to see evaluation as important, and use that evaluation to adapt or adopt new programs, whereas low-capacity LHDs were more likely to report lacking established methods of evaluation and reported a lack of appropriate programs or funding as a significant barrier. Factors needed to facilitate a QI culture include having agency leaders and staff who are committed to using QI processes; aligning QI practices with strategic goals,
having experience in QI or EBDM in the past; having leaders, partners, and boards that hold them accountable for their service quality; and having a supportive infrastructure with sufficient resources to maintain a QI culture.26-28 For many high-capacity LHDs, program evaluation has involved creating a culture of improvement within their agency that makes it an expectation—if they do face barriers, most of the time it is in formalizing the process. While some of the challenges faced by low-capacity LHDs are not modifiable, it might be feasible to begin to shift the culture of the organization toward one more supportive of QI. Similar findings have been observed in high-compared to low-capacity primary care practices with regard to implementation of patient-centered medical homes.29 This adds support to the notion that many factors, such as the way challenges are perceived, which may enhance implementation, differ on the basis of organizational capacity as well as the role of organizational leadership in helping to overcome implementation challenges.29

The differences described in program adaptation and evaluation may be related to funding. This is particularly important given recent trends toward funding and job cuts.30 Though funding was a major issue for all the LHDs interviewed, low-capacity LHDs reported much less flexibility in using available funds and in seeking funds. The challenge of adaptation may be particularly pronounced for low-capacity LHDs given the risk of failure of an adapted program or practice in light of limited resources. Furthermore, this may prevent the use of funds toward efforts to sustain EBDM, such as program adaptation and evaluation, which may in the end lead to more effective uses of resources. Unfortunately, other work has shown that many new programs are not sustained past the first few years after initial funding has ended.29 Therefore, efforts to adapt and evaluate programs may feel wasted in an atmosphere where programs are not sustained, which may further prevent low-capacity LHDs from investing their time in such efforts. Other studies of LHD have noted local sources of funding as important to program effectiveness, suggesting that local sources of revenue may make LHDs more responsive to local needs, thereby improving intervention effectiveness.31,32 This may partially explain the finding by Luke et al12 that funding stability was 1 of the 2 domains most closely associated with perceived program sustainability.

This study had limitations. Only a small sample of LHDs was included, which may limit the generalizability of the findings. However, we sought a representative sample with regard to geography and capacity. Though we interviewed several employees from each LHD, it was not possible to gain perspectives with every employee. In addition, the LHD director identified staff to be interviewed, introducing selection bias. Local health departments may also have tried to present a favorable approach to EBDM in the interview, introducing social desirability bias. However, this study is strengthened by the in-depth nature of the qualitative data collection, allowing a rich picture of the LHDs to emerge. While the sample was selected to identify high- and low-capacity LHDs, this selection was based on several scores to assess capacity, not based on actual implementation and sustainment of evidence-based programs and policies (ie, the lack of an objective method of measuring implementation/maintenance). Therefore, it is possible that those identified as high-capacity, on the basis of the metrics used, were not actually implementing and sustaining evidence-based programs and policies. Finally, this case study does not allow for longitudinal assessment, thus it is not possible to determine the direction of cause and effect.

Organizational capacity, program evaluation, program adaptation, communication, and funding stability seem to be related to whether an LHD is able to sustain programming. Modest investments in leadership support for improving organizational capacity, improvements in communication from the top of the organization down, integrating program evaluation into implementation, and greater flexibility in funding may enhance the sustainability of evidence-based programming in LHDs. Increased top-down communication and program evaluation would help to build an internal agency culture that research suggests would be more resilient to external conflicts, such as funding instability or complicated political environments. Integration of the findings from these case studies may help improve sustainability of evidence-based programming in LHD settings.

REFERENCES

7. Brownson RC, Allen P, Duggan K, Stamatakis KA, Erwin PC. Fostering more-effective public health by identifying