Leading the way: Qualities of leaders in preventing mis-implementation of public health programs

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Abstract

Background

Public health agencies are increasingly concerned with ensuring they are maximizing limited resources by delivering effective programs to enhance population-level health outcomes. Preventing mis-implementation is necessary to sustain public health efforts and resources needed to improve health and well-being. Because executive management is responsible for making decisions such as approving or disapproving the continuance of a program, it is important to understand the attributes of public health leaders in preventing program mis-implementation. The purpose of this paper is to identify the important qualities of leadership in preventing the mis-implementation of public health programs.

Methods

In Spring 2019, we selected eight state health departments (SHD) to participate in qualitative interviews on decision making around ending or continuing programs. Forty-four SHD chronic disease employees were interviewed via phone, audio-recorded, and the conversations transcribed verbatim. All transcripts were consensus coded, and themes were identified and summarized. This analysis focused on themes related to leadership.

Results

Participants were program managers or section directors who had on average worked 11 years at their agency and 15 years in public health. The following themes emerged from their interviews regarding the important leadership attributes to prevent mis-implementation: (1) engagement, use of quality improvement, and being adaptive; (2) transparent and bidirectional communication; and (3) ability to navigate political influences.

Conclusion

This first of its kind study showed the close inter-relationship between mis-implementation and leadership. Increased attention to public health leader attributes can help to reduce mis-implementation in public health practice and lead to more effective and efficient use of limited resources. A better understanding of those attributes can provide further direction to future areas of attention and capacity building among current and future public health practitioners. Future research should incorporate a mixed-methods approach to more comprehensively understand the relationships of leaders and practitioners.

Contributions To The Literature
This is the first study to document the relationship between leadership and mis-implmentation of public health programs.

This paper outlines the effective qualities of leaders for maximizing limited resources and delivering effective programs to enhance population-level health outcomes.

This study provides further direction to future areas of attention and capacity building for public health leadership.

Background

Achieving quality health and well-being has long been a primary focus of public health. However, responding to population healthcare needs in the 21st century has become a daunting task. In the United States, local health departments (LHDs) and state health departments (SHDs) are the primary public health agents responsible for providing essential services (1–2). Governmental public health agencies may vary considerably on the planning, delivery, and financing of their services. These agencies, though different in structure and approach, often face similar internal and external barriers that make it increasingly difficult to adequately address complex health issues. To this effect, rising healthcare costs coupled with social and political polarization, have added impetus to research modern-day public health leadership with high priority (3–5).

Developing, implementing, and sustaining public health programs involves a myriad of decision-making often guided by leadership qualities (6–7). Leaders in public health must be able to organize, manage, and maintain efforts aimed at enabling individuals, families, and groups to realize the human right of health and longevity (8). As a governmental authority, SHDs are tasked with the unique role to set public health policies and priorities and to lead their agencies in developing effective programs.

While there are many definitions of leadership, common leadership attributes include the ability to influence, inspire confidence, guide, set a vision, and promote change through strategic planning (9). Leaders also make important decisions that determine the direction of program implementation. A rich body of literature demonstrates the importance of leadership attributes, including the use of quality improvement, strong communication, and transparency, advocacy, openness to change, results-driven, ability to navigate political influence and the appropriate use of evidence-based interventions and decisions, which are a prerequisite to achieving better health outcomes (7, 10–16). Given financial constraints and limitations with reference to funding availability or flexibility, public health leaders are tasked with the unique responsibility to determine whether implementing programs and services are feasible, sustainable, and, more importantly, whether these programs have the potential to yield the intended results.

Preventing program mis-implementation is, therefore, necessary to sustain public health efforts and resources needed to improve health and well-being. In this context, mis-implementation refers to the inappropriate continuation of ineffective programs (17). Because executive management is responsible
for making decisions such as approving or disapproving the continuance of a program, it is important to understand the attributes of public health leaders in preventing program mis-implementation.

The purpose of this paper is to identify the important qualities of leadership in preventing the mis-implementation of public health programs. We employed qualitative interviewing and thematic analysis to identify the main themes that outline leadership attributes that affect mis-implementation. The findings from this paper are helpful in informing the development of public health leadership and content of future leadership training to prevent mis-implementation of public health programs within state and local public health departments.

**Methods**

This study involved qualitative interviews with 44 public health professionals across eight states. This study and the reporting of methods and results follows the CORE-Q guidelines for reporting. Interviews were conducted over the phone by four members of the research team during a five-month period (February-June 2019). Three of the interviewers were graduate research assistants and the fourth was a project manager. The interviews were audio-recorded and lasted an average of 43 minutes. Verbal consent was obtained prior to each interview, and respondents were offered a $40 amazon gift card or a $40 donation to a public health charity of their choice. Ethical approval for this study was provided by the Washington University in St Louis Institutional Review Board (IRB# 201812062).

**Study participants**

The participant states (n = 8) were selected based on the level of mis-implementation (high and low) and for geographic representation. Mis-implementation levels were determined based on previous data collected as part of a national survey (18). The team first contacted chronic disease directors from each of the selected states to inform them we would contact their employees and ask for additional suggestions of contacts. A few state directors requested that we not contact their employees and the study team complied, and further communication was halted. We then selected additional states to replace those who declined participation. Per our IRB approval, consent from state directors was not a requirement to enroll participants but rather a courtesy to their departments and a way to enhance engagement in these interviews.

Once the “heads-up” emails were sent to department heads, we invited state health department employees working in chronic disease programs with knowledge of how decisions about evidence-based interventions were made at their agencies to participate in our interviews. We initially reached out to over 200 individuals who fit these criteria in our selected states and also asked initial respondents for recommendations of additional contacts. Up to three emails and two phone calls were made to potential participants, inviting them to schedule an interview. A total of 44 interviews were conducted in the end. The team believed we reached saturation at this point after reviewing transcript content.

**Interview Guide Development**
The interview guide questions focused on the relationship between perceived mis-implementation and organizational, individual, and external factors. The final interview guide included a description of the purpose of our research, to learn about decision-making processes, facilitators, and barriers for continuing chronic disease programs. The interview guide included broad, open-ended questions followed by more specific questions to gain a more detailed response from participants. The main themes of the interview guide were developed from the results of the national quantitative survey from phase one of this project (18, 19). Questions were refined with input from the research team and stakeholder advisory board. The guide also stated that the interviewer was affiliated with the Washington University Prevention Research Center in St. Louis and that the project was funded by the National Institutes of Health. The interview guide questions were provided to the respondents prior to the interview. The guide was pilot tested with a study advisor who was a recently retired state health department practitioner.

Data Analysis

Thematic analysis of the qualitative responses was conducted using a deductive approach, in which the authors referenced their codebook to guide the process. The codebook consisted of nine parent codes and a number of sub-codes developed from the interview guide. These were used to inform emerging themes. The interviews were transcribed through transcription service Rev.com [cite website], de-identified by the authors, and uploaded to NVivo 12. The transcripts were randomly assigned and distributed to five research team members for coding. Thereafter, the team members conducted consensus coding in pairs for all transcripts, and differences between coders were discussed. When coders were unable to reach consensus, a third team member facilitated the process to achieve consensus. During the coding process, the codebook was revised, and the authors adapted the codes and sub-codes accordingly. Upon completing consensus coding, five team members identified and summarized sub-themes. Once these were completed, a comparison was conducted to identify overlapping themes. For the purposes of this paper, we focus on the primary codes regarding the role of leadership in the mis-implementation of chronic disease programs.

Results

As previously stated, 44 state health department employees from eight states were interviewed. On average, the interviews took 43 minutes. All but one participant was female. The average time in their agency was 11 years, with 15 years of experience working in public health. The majority of respondents were at the Program Manager or Section Director level within their organization. The following themes emerged from their interviews regarding the important leadership attributes to prevent mis-implementation: (1) engagement, use of quality improvement, and being adaptive; (2) transparent and bidirectional communication; and (3) ability to navigate political influences.

Leadership engagement, use of quality improvement, and being adaptive

Many respondents reported important qualities in leaders that deterred the mis-implementation of programs. The leadership qualities that were cited as most important in maintaining evidence-based
programs included engagement, use of quality improvement, and being adaptive.

**Engagement and recognition of other’s expertise**

Engagement was described by respondents both in terms of engagement with internal staff on a regular basis and also engagement with external partners.

*As a result of our leadership here and just on a more micro-level, within our team, it's a fairly small team but it helps that everybody really likes their job and gets along with one another and we are supported by management.*

*I think that's really helpful with having the consistency of, for example, staff meetings or one on ones [with upper management]. All of those opportunities to share really make it then more comfortable and then easy for addressing circumstances that arise.*

*I think that there's lots of leadership support to maintaining excellent relations with our communities and the programs that we're administering.*

Leaders who were collaborative and set up working units that allowed for and were engaged in cross-collaboration and learning were also cited as important in deterring mis-implementation.

*We're organized into teams and into structures that continue and promote effective work and building off each other*

*I think what's really happened because of our leadership that we have now is programs have moved away from really working in silos to trying to work more collaboratively.*

Finally, respondents reported that leaders who respect and listen to experts within the community and who provide their staff autonomy to use their own expertise were most effective.

*There was a lot of support from very high-level leadership to say, well the community knows best*

*When we decided that we were going to switch to this way, we wrote up what our intentions were, and they [management] supported it. I feel like, at least our program, has had the option to be creative and innovative and do things a little bit different in how we manage, and we've been supported in doing that.*

**Quality Improvement and Being Adaptive**

In our review of themes related to quality improvement, respondents shared that they frequently incorporated several important continuous quality improvement and other evaluative measures to help them identify ineffective programs and prevent mis-implementation. Respondents also reported that those programs with leaders who valued quality improvement and required staff to set goals for improving processes were less likely to have continued an effective program.
The health department as a whole and each bureau in it, including us, would [set] our analytic goals for the year...including, what we’re trying to achieve, some of those will surface up to the governor’s office. We have a CQI process, continuous quality improvement, where we propose specific things to go through this more formal process of CQI. So if we will target something and then go through a whole process it will take say, three four months to go through and come out with a product aimed at improving processes and that kind of thing.

We have an office of public health and performance management, and one of their tasks is quality improvement, so they do participate in our program and the plan new study act, and they have a quality improvement coordinator who implements rapid improvement events in different departments within our agency.

Respondents reported that in some cases, evaluation results pointed to the need to adapt a program to ensure that mis-implementation would not occur. When respondents reported that they needed to make changes or adaptations in response to evaluation results, those respondents that had leaders who implemented shared decision making and involved all staff to ensure buy-in were more likely to be supportive of the change.

We try to have a very collaborative decision-making process. I don’t know the last time that I personally came forward and said, "As your manager, you will no longer do X, Y, Z."

I think again it really comes down to “Does everybody buy into the change?” If they believe in it or they buy into it or they understand the reasons for the change, they’re more likely to embrace it and do it.

In addition, respondents reported that leaders who coordinated rigorous planning efforts both with internal and external partners and who considered the diversity in capacity among partners were most effective in implementing changes to programs.

I would say [changes are managed most effectively when] it’s well thought out and we really consider the process and how we’re going to roll it out.

We have to flex [our changes] to that diversity [or partners]. If we don’t, then we’re defeated from the get go. ‘Cause we’re gonna ask counties to do things they just can’t get to unless we really work with them.

Finally, respondents felt leaders who were most effective in adapting programs to prevent mis-implementation effectively communicated changes and actually included communication as part of planning efforts.

I like to think that we’re pretty effective when we do make a change and go in a different direction that it affective in the terms of communicating it, of trying to get people on board.

I think part of it is just making sure that they have understanding about the reason for the change and then knowing how to make those changes, for example.
Leadership and transparent and bidirectional communication

Most respondents reported that their leaders promote upward communication about problems or issues that arise and are open to hearing ideas from staff. Respondents who were leaders also reported trying to be transparent with their staff and that they tried to create opportunities for dialogue about issues that program staff was encountering.

Many respondents indicated that their leaders relied on feedback from their staff to make decisions about programs. Respondents also reported that issues with programs were generally identified at lower organizational levels and communicated upward to leaders. Respondents reported that they often had back and forth conversations or brainstormed with leaders to find solutions to issues.

*Our leadership would generally rely on the programmatic folks and the division directors to sort of research and understand what other alternatives would be and to come up with a recommendation.*

*I think they [leaders] are very supportive. They're very welcoming to new ideas or new approaches for how we're doing this work.*

Other respondents indicated that their leadership had an open-door policy. Respondents expressed that these open-door policies made it easier to communicate with leadership and allowed them to more quickly address concerns they had with programs.

*Our leadership is very supportive, specifically up the commissioner's level. We have an open-door policy with our commissioner so that's the way. If we see something, we can always go discuss it.*

Several respondents reported that using data to communicate concerns about programs with leaders was effective. They expressed that leaders were most receptive to hearing about issues when it was backed up with data collected from the program.

*I also think that data speaks volumes too (when communicating with leaders), so if enough data can be shown that something needs to change, or what we're doing isn't working.*

Leaders reported being in constant and transparent communication with their staff about the status of programs and their issues. They achieved this contact through regularly scheduled meetings and reports. Leaders also expressed a desire to be transparent about programs and about their expectations for their staff.

*There are monthly and quarterly reports and just ongoing communications. So we pretty much know on a monthly basis what kind of traffic any particular program might be having and what the issues might be, challenges, the good things, the success stories, all that. So I think we do a good job of just staying in constant contact. – CD Director*
I will continue to give the authority to the division directors to run their programs as they see fit. And allowing for a review of how things go is what I'm looking at. So they know what they're doing and they know what my expectations are.

Respondents also reported issues with communications from leaders. Some respondents reported frustrations with how leaders received their feedback and with a lack of transparency in leadership communication.

Respondents reported that staff sometimes had to spend lots of time communicating with leadership without much response or attention paid to an issue. Respondents reported frustration at having to spend so much time to spend communicating with leaders.

*There was an interim public health commissioner who we met with twice a week for; I don't know how long. They basically thought the program was horrible. And so we had to keep bringing data and bringing data to show him that, every objection he came to, we were able to find data to show... It was very painstaking and it was frustrating to have to do that because Meanwhile again, we could have been, doing something else with those funds.*

Other respondents reported unclear and non-transparent communications with leadership. Some respondents reported that leadership was unclear with the direction that they wanted to take with a program. Other participants reported that how decisions were made by leadership was not communicated clearly to them.

*There could be someone who above you who can kind of make a push on a higher level and they make the decision, but when it gets to you as a program manager it may come across as coming from someone else you know. You will not really know who made the decision.*

**Skills to navigate political influences**

The ability for leaders to navigate political influences was another critical aspect of preventing mis-implementation. Several attributes, specifically interpersonal skills, the ability to build partnerships and connect with and understand partners, and a strategic approach, were cited as important in preventing mis-implementation.

**Interpersonal skills**

Interpersonal skills include the ability to influence other’s thinking and behaviors, even in the absence of formal authority. Respondents perceived a leader with strong interpersonal skills to positively influence policy proposals and improvements in specific areas of programs or changes in the target population.

*I think it really takes diligent and observant program directors or even the leaders of the DPPs, if they think about how... and they're evaluating their program itself, and who they're targeting and who they're reaching. I think it would take those types of people to go to the decision maker and say, I think that this*
program isn't as effective as it could be, or that we could try to reach a different population in a different way.

Depending upon the makeup of your legislature determines which policies are passed and which ones are promoted. So, fortunately here in [name of the State redacted] we've had leadership that has been more in tune with health related topics.

And I think that you have some commissioners that are a strong and can advocate and are willing to advocate for programing and there's other that just want to do budget cuts

Reading people and situations

The ability to think about the dynamics among stakeholders within a social system is one of the attributes that help leaders navigate different political situations. Some respondents shared some examples that represent their capacity to assess and respond to the political environment. When doing so, they consider the impact of those dynamics on programs and how they will respond to address potential issues.

There are factors like overall we have a very conservative legislature, so we have to have a sense of receptivity to issues we work on. Probably most dramatically we've encountered those issues because we do a lot of public campaigning. A lot of social marketing. A lot of social media work and TV ads and that kind of thing so we have to make sure to write up to the governor's office before anything gets aired that they're okay with it.

And we did try to have different perspectives from the different parties that were engaged in the work to determine what that best approach would be.

Facing a situation with divisive opinions among the stakeholders, one respondent was considering the possibility of a potential push back on a program due to many factors:

So you have the school board that has to have a role, and you know city council you got to warn them about it, when a new program, the news station actually came out, there was a kid who was kind of being forced or perceived to be forced to participate in some, of the program activities you know. And the parents were upset and brought the media in, you know.

Building alignment and alliances

Building alignments and alliances seem to be an essential attribute when dealing with the challenges of mis-implementation, especially within those programs that require political support. When facing challenges to address specific health-related topics or reaching out to target-audiences of a program, the respondents reported alternative strategies relying on their partners and stakeholders to proceed with ways to continue with their work and potentially impact the program continuation.
We can work with heart, lung and cancer that can work with legislators and propose legislation but we would be limited in the fact of never being able to publicly print out our support of that. But it doesn’t stop us from working with those who can advocate.

We had actually more funded partners at the time and I think as it would sound, the community-based coalitions would focus on just a broad strategy to reach any tobacco users in the community that were interested in seeking out cessation classes and then the minority-based coalitions were tasked with serving minority communities specifically.

**Strategic planning and communication**

A common thing mentioned by the respondents in terms of program mis-implementation was the importance of a leader having a clear vision and purpose of their work with a strategic approach to establish the needs and direction of a program and communicate that approach to policymakers.

*I think that particular program, we had a change in the leadership and the oversight of that, and then the person that started is very focused on scalability, sustainability, and outcomes, and the program clearly had no outcomes. She was able to really gain a support of the bureau chief to kind of identify that as an issue, and they were able to shut that down.*

**Discussion**

This paper identifies the roles of leaders in preventing the mis-implementation of chronic disease programs. Using qualitative interviewing and thematic analysis, we identified three main leadership attributes that affect mis-implementation: (1) engagement, use of quality improvement, and being adaptive; (2) transparent and bidirectional communication; and (3) ability to navigate political influences.

Other research, conducted both about public health departments and among other organizations, has identified similar outcomes. Jadhav et al. discuss the importance of using quality improvement processes in State Health Departments (SHDs) to ensure program success (11). Similar to our findings, studies have also shown that transparency and bidirectional communication enhances employee commitment (14, 16). Employees’ “upward voice,” self-efficacy, and high work satisfaction, which is a by-product of bidirectional communication, has also been linked to leadership engagement (16, 20). Finally, a positive working environment and culture have been shown to be strongly associated with strong leaders and effective implementation of evidence-based public health (6, 21).

The ability to navigate political influences is another essential trait of leaders outlined in the literature. Organizations can be considered as political arenas (22), and individuals with political skills (15) or political astuteness skills (23) may influence people’s behavior, performance, and effectiveness of an organization and within it (24). Political skills and political astuteness skills encompass personal and interpersonal skills and characteristics, including network abilities, coupled with strategic capacities and an understanding of people and social dynamics (15, 25).
Our research is one of the first to specifically study mis-implementation and highlights the important qualities and roles of leaders in preventing the mis-implementation of chronic disease programs. Future research is needed in this area to further understand mis-implementation and the role of leadership in preventing mis-implementation over time. While our use of qualitative methods provided depth and content into the issue of mis-implementation, future research should incorporate a mixed-methods approach to more comprehensively understand the relationships of leadership and mis-implementation.

Limitations

As noted in our methods, our respondents were determined based on responses to our phase one national survey. That survey did not receive equal responses among the states, and its recruitment was only as good as the contact information study team members had access to. Therefore our criteria for state selection for these interviews was limited. We also had two states that requested we either not contact their staff or did not respond to our initial requests for interviews. Therefore these responses are limited in their generalizability.

Given the delicate, political nature that public health funding and administration at state health departments has become, respondents were at times self-censuring in their feedback. Despite following appropriate IRB protocols and reassuring respondents that their responses would remain confidential and states, names and programs would remain as de-identified as possible, often respondents asked to redact certain information during the interview for fear of it appearing to favor certain political officials over others and to downplay any appearance of advocating or lobbying” on their part (which in many states has major restrictions). Despite these limitations in responses, the team was able to garner unique insights into how leadership dynamics affect the way evidence-based public health can be successful.

Conclusion

Increased attention on reducing mis-implementation in public health practice can lead to more effective and efficient use of limited resources (26). This study showed the close inter-relationship between mis-implementation and leadership. In a broader sense, public health leadership has long been recognized as essential for the practice of public health (13, 27, 28, 29). Public health leaders must have the ability and skill to define and assess problems, determine capacity, and effectively implement evidence-based programs (30). Public health leaders need an understanding of the many dimensions of the field and face the challenges of dealing with nonhierarchical structures involving a vast number of stakeholders (31). Training programs and curricula have noted important competencies for training and developing strong leadership armed to tackle the many complexities associated with public health and chronic disease work. The Association of Schools and Programs of Public Health recognizes the key skills of leaders in effectively moving public health programs forward in the Core Competency Model, which outlines communication and leadership skills as priorities for training in public health.

This paper provides insights into the tasks and roles of leaders and adds specific information about the attributes of public health leadership when focusing on preventing the mis-implementation of public
health programs. A better understanding of those attributes can provide further direction to future areas of attention and capacity building among current and future public health practitioners.

**Abbreviations**

- LHD = local health department
- SHD = state health department
- CQI = continuous quality improvement

**Declarations**

- Ethics approval and consent to participate

Ethical approval for this study was provided by the Washington University in St Louis Institutional Review Board (IRB# 201812062). All participants were emailed a copy of the consent form prior to interviews, and verbal consent was obtained from participants.

- Consent for publication

Consent was obtained from participants to use the interviews as part of publications. This is included in our Washington University in St Louis Institutional Review Board (IRB# 201812062) approved consent form.

- Availability of data and materials

The datasets generated and/or analyzed during the current study are not publicly available due to privacy protections but are available from the corresponding author on reasonable request.

- Competing interests

The authors declare that they have no competing interests.

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- Authors’ contributions

SMR guided study design and interview guide development, conducted interviews, coded interview transcripts, analyzed and interpreted interview themes, and led and contributed to writing the manuscript. MPK managed the development of the interview guide, conducted interviews, coded interview transcripts, analyzed and interpreted interview themes, and was a contributor in writing the manuscript. LS analyzed
and interpreted interview themes and was a major contributor in writing the manuscript. RS coded interview transcripts, analyzed and interpreted interview themes, and contributed to writing the manuscript. ERW helped with interview guide development, conducted interviews, analyzed and interpreted interview themes, and contributed to writing the manuscript. RB guided study design and interview guide development and contributed to writing the manuscript. All authors read and approved the final manuscript.

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