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Effectiveness and Challenges for Implementing Quality Improvement Activities in Nebraska's Local Health Departments

Li-Wu Chen
University of Nebraska Medical Center, liwuchen@unmc.edu

Anh Nguyen
University of Nebraska Medical Center, anguyen@unmc.edu

Janelle J. Jacobson
University of Nebraska Medical Center, jjacobso@unmc.edu

Diptee Ojha
University of Nebraska Medical Center, diptee.ojha@unmc.edu

David Palm
Nebraska Department of Health and Human Services, david.palm@unmc.edu

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Effectiveness and Challenges for Implementing Quality Improvement Activities in Nebraska's Local Health Departments

Abstract

What is already known on this topic? Although the implementation strategies and effectiveness of quality improvement (QI) activities have been examined extensively for many industries, including the health care sector, very few studies have focused on QI activities in the public health context.

What is added by this report? The study results indicated that Nebraska's LHDs still face significant barriers for QI implementation, including low capacity, knowledge gaps, inadequate resources, and low institutional QI maturity.

What are the implications for public health practice/policy/research? Policy makers and LHDs should provide QI training and external QI expertise to LHD staff and better integrate QI strategies into LHDs' organizational culture and structure. Given the great complexity of QI methodologies, it may be helpful for LHDs to start their QI efforts by adopting and implementing relatively simple QI techniques and strategies, such as the PDSA approach, which some Nebraska LHDs (i.e., early adopters) have found to be effective, based on our qualitative research results.

Keywords

phssr, public health services and systems research, local health departments, quality improvement, capacity, strategy

Cover Page Footnote

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Introduction*

Although the implementation strategies and effectiveness of quality improvement (QI) activities have been examined extensively for many industries, including the health care sector, very few studies have focused on QI activities in the public health context. Seventeen of Nebraska's 21 local health departments (LHDs) serve multiple counties. Although this regional approach has advantages, such as scale economies for public health programs and coordinated preparedness for public health emergencies, regional LHDs' lack of knowledge about effective QI strategies has made it difficult for them to capitalize on these advantages. Using survey and qualitative research methods, this study examined the LHDs' current status, effectiveness, and challenges in implementing QI initiatives. The results indicated that Nebraska's LHDs still face significant barriers for QI implementation, including low capacity, knowledge gaps, inadequate resources, and low institutional QI maturity. Policy makers and LHDs should provide QI training and external QI expertise to LHD staff and better integrate QI strategies into LHDs' organizational culture and structure.

Methods

An online survey was conducted among Nebraska LHD directors from May to August 2011. The design of the survey instrument was guided by the QI taxonomy developed by Riley and Lownik as well as by continuous input from the Nebraska Public Health Practice-Based Research Network Steering Committee.[1] The survey also included questions adapted from the Multi-State Learning Collaborative 2011 Annual Survey designed by the University of Southern Maine as well as from the National Association of County and City Health Officials' 2010 National Profile of LHDs Survey.[2-3] The questionnaire was designed to collect information on the capacity, culture, strategies, activities, and effectiveness of LHD QI implementation. Twenty-one LHDs (17 regional and 4 single-county) covering all 93 Nebraska counties were included in the survey. A total of 19 (90.5% of the sample) LHD directors responded to the survey.

In addition, a facilitated discussion with directors and QI staff from Nebraska LHDs was organized in October 2011. During the meeting, about 30 attendees participated in a review of QI strategies and techniques in the LHD setting. Each participant was first asked to rate the importance of items from a meta-set of identified QI models, strategies, tools, and techniques in relation to QI planning and implementation in the LHD setting. Participants were then given a summary of the aggregated ratings and the survey results, which were used to facilitate a discussion on the effectiveness and challenges of QI implementation within the LHDs. The facilitated discussion was then transcribed and open-coded for emerging themes and content using QSR's NVivo 9 Data Analysis Program.

Results

Figures 1 and 2 show the key survey results. Although 100.0% of the responding directors indicated that leaders within their LHD are receptive to new ideas for improving programs, services, and outcomes, only 33.3% indicated that their LHD has a pervasive culture of continuous QI. In practice, 63.0% of responding directors indicated that QI is well integrated into the way many individuals responsible for programs and services work in their LHD, but only 31.6% indicated that their LHD's job descriptions for individuals responsible for programs and

services include responsibilities related to measuring and improving quality. In addition, only 26.3% of responding LHDs have a designated QI officer, and only 21.1% have a QI council, committee, or team. Few (15.8%) LHDs have a QI plan. Consistent with the above results, only 16.7% of responding directors indicated that their LHD has a high level of capacity to engage in QI efforts. Furthermore, only 31.6% of responding directors indicated that their LHD is aware of external QI expertise to help measure and improve quality. Although the majority (79.0%) of responding directors indicated that their LHD has implemented a formal process to improve the performance of a specific service, program, process, or outcome, less than one-half indicated that their LHD has used a QI model (47.4%), a QI technique (47.1%), or QI measures or metrics (44.4%). Overall, 31.6% of LHD directors felt that the QI strategies employed are appropriate for the QI programs or interventions in their LHD, and 33% felt that their QI activities are typically effective.

During the facilitated discussion, specific QI techniques were mentioned as being effective upon implementation. Specifically, participants noted improvements made within their public health practice by the use of Plan-Do-Study-Act (PDSA) cycles and controls charts. Among the challenges in implementing QI models, strategies, tools, and techniques, four major themes emerged from the facilitated discussion: (1) QI knowledge gap, (2) agency culture, (3) capacity, and (4) resources. In general, these results are consistent with our survey findings. Several LHD representatives indicated that there is an information gap or lack of knowledge of QI methodologies or terminology within their health districts. They also indicated a need for additional training in QI methodologies for public health; a need to change the culture within the health departments in order to make QI a priority and acceptable to the staff; a lack of QI initiatives due to the lack of capacity, including staff time; and a lack of funding available for QI activities within LHD budgets.

Implications

Our study results suggest that most LHDs in Nebraska generally still have a low capacity and inadequate resources (including funding and staff time) available for implementing QI activities. The results also indicate that many staff in LHDs lack not only knowledge of QI methodology and terminology, but also information on the availability of external QI expertise. Such expertise could help LHDs compensate for their current low QI capacity. The existence of these problems is not surprising given that most Nebraska LHDs were formed only after 2002. These problems will certainly be tackled when Nebraska LHDs start seeking national accreditation. Nebraska's LHDs need to address issues related to organizational culture and an information/knowledge gap in order to facilitate QI implementation. In addition to providing LHD staff with more training opportunities in QI methodology, state policy makers and LHD administrators should also provide more external QI expertise to LHD staff as well as systematically disseminate that information to LHD staff. Nebraska's LHDs also need structural and institutional change so that a pervasive QI culture and effective QI strategies can be integrated into the daily work of program managers and staff. Given the great complexity of QI methodologies, it may be helpful for LHDs to start their QI efforts by adopting and implementing relatively simple QI techniques and strategies, such as the PDSA approach, which some Nebraska LHDs (i.e., early adopters) have found to be effective, based on our qualitative research results. These types of QI strategies would be less costly and easier to learn and implement than more complex strategies, yet would still be effective in improving programs and services. More important, the successful experiences

from implementing these QI strategies would increase LHDs' incentive to build a more pervasive organization-wide QI culture as well as to engage in more QI-oriented institutional change.

Summary Box

- What is already known on this topic? Although the implementation strategies and effectiveness of quality improvement (QI) activities have been examined extensively for many industries, including the health care sector, very few studies have focused on QI activities in the public health context.
- What is added by this report? The study results indicated that Nebraska's LHDs still face significant barriers for QI implementation, including low capacity, knowledge gaps, inadequate resources, and low institutional QI maturity.
- What are the implications for public health practice/policy/research? Policy makers and LHDs should provide QI training and external QI expertise to LHD staff and better integrate QI strategies into LHDs' organizational culture and structure. Given the great complexity of QI methodologies, it may be helpful for LHDs to start their QI efforts by adopting and implementing relatively simple QI techniques and strategies, such as the PDSA approach, which some Nebraska LHDs (i.e., early adopters) have found to be effective, based on our qualitative research results.

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Figure 1. Quality Improvement Culture, Capacity, Strategies, and Effectiveness within Nebraska Local Health Departments, 2011

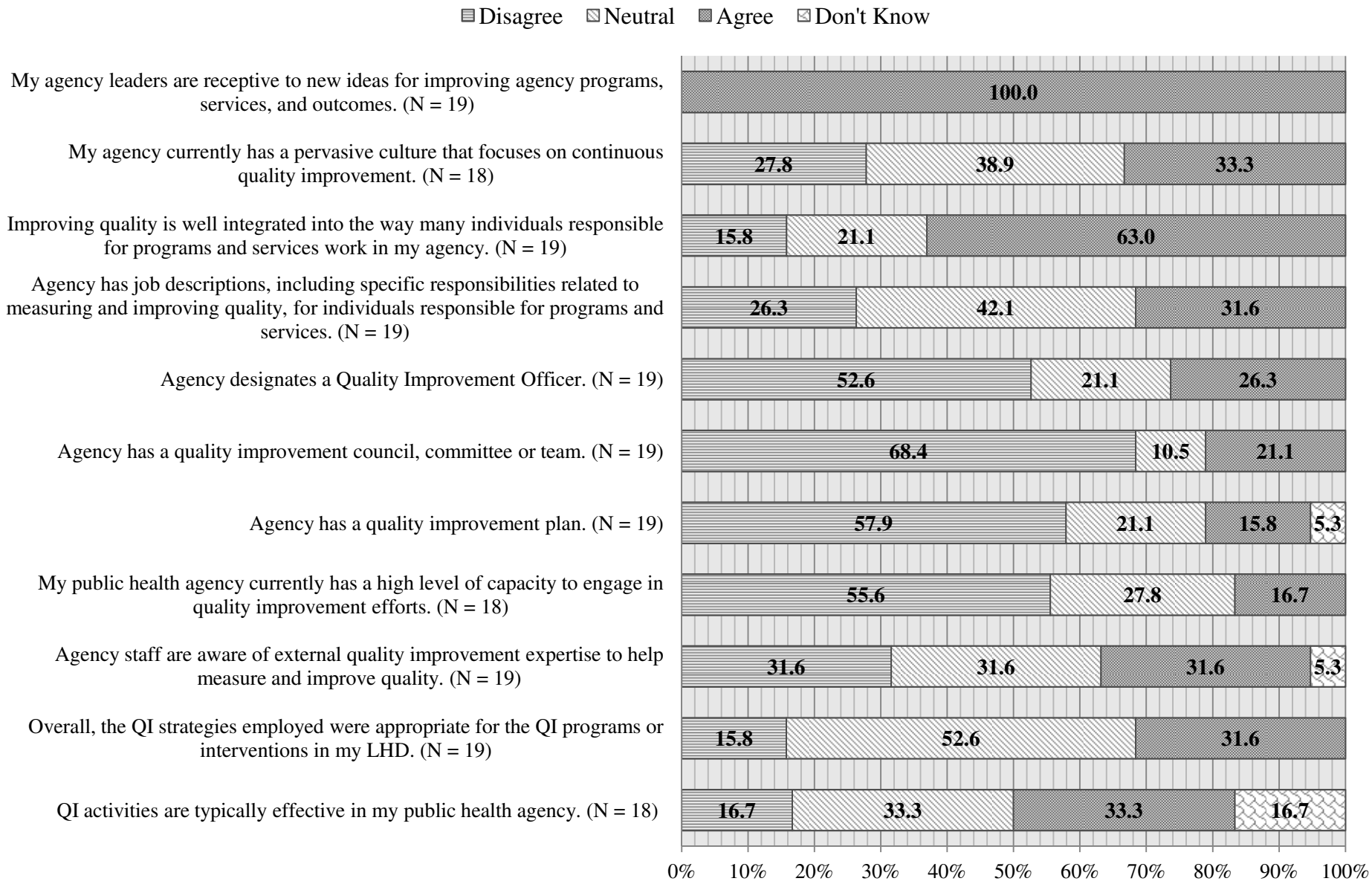

Figure 2. Quality Improvement (QI) Implementation and the Use of QI Models, Techniques, and Measures/Metrics within Nebraska Local Health Departments, 2011