Research Brief

THE NORTH CAROLINA Institute *for* Public Health

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Quality Improvement Training and Culture in LHDs: What Have We Learned?

Quality improvement (QI) can improve the performance and functioning of local health departments (LHDs). In the last five years, there has been a growing momentum for LHDs to implement quality improvement projects. According to results from the 2010 National Association of County and City Health Officials (NACCHO) profile survey, 84% of LHDs reported implementing some form of QI efforts; 30% report formal QI in specific program areas and 15% of LHDs conduct agency-wide QI. A key question currently under study is: What factors lead LHDs to implement QI in specific program areas and to conduct it agency-wide? Researchers at the North Carolina Institute for Public Health (NCIPH) and other institutions, along with NACCHO staff, conducted a two phase research project to explore this question.

Quality Improvement Training: What type is most effective?

Starting with examining QI training effectiveness, NCIPH, in collaboration with NACCHO, surveyed LHD staff who had participated in NACCHO-sponsored QI trainings (webinars, one-day face-to-face workshops, and applied demonstration-site projects). Two hundred eighty-four participants from 143 LHDs responded (59% response rate). The survey questions assessed participant QI knowledge, skill, ability to successfully participate in a QI project post-training, and receptivity to learning more about QI.

QI Training and Culture Observations

- Quality improvement training models that include opportunities to *apply and synthesize* material had greatest effect on participant ability to conduct quality improvement projects.
- Start with webinars: QI webinar participants had highest receptivity to learn more about quality improvement.
- The LHD administrator plays a crucial role in determining whether QI efforts advance in the LHD.
- LHDs with a QI culture view barriers as opportunities and believe that QI helps them to work smarter and make their jobs easier and more efficient.

Demonstration site respondents reported significantly greater gains in QI knowledge and skills, skill application, and ability to successfully participate in a QI project than participants in the other types of QI training. Respondents who participated in both webcast and demonstration site trainings had even greater gains. Webcast training participants had significantly higher QI receptivity to learn more about QI. These results suggest that effective QI training should include opportunities for QI application in addition to lectures or webinars.

Uptake of QI in Local Health Departments: How do LHDs progress from QI training to a QI culture?

In the second phase of the research, NCIPH staff interviewed administrators and key QI personnel at 16 LHDs across the U.S. to examine how participation in QI training and other key factors affected uptake and spread of QI at the agencies. Selected LHDs were chosen from the previous phase's survey pool to represent a mix of size, governance, and participation in other QI initiatives such as the Multi-State Learning Collaborative and National Public Health Performance Standards Program. In addition, selected sites had successfully completed a NACCHO demonstration site project and at least one QI project with multiple staff involved since then. The first six LHDs completed phone interviews which then informed more in-depth case study visits with a further 10 LHDs.

The researchers classified the 10 case study LHDs into three categories adapted from NACCHO's "Roadmap to a Culture of Quality Improvement": **Informal QI** (sporadic, program-focused efforts); **Formal QI** (multiple projects; QI planning, infrastructure and process LHD wide); and **Creating a QI Culture** (evidence-based decision-making and QI data collection systems department wide). Table 1 presents the factors that differentiated agencies at the "Informal QI" level from agencies with "Formal QI" and ones "Creating a QI Culture." Table 2 presents the features that were unique to agencies in the "Creating a QI Culture" stage.

Table 1. Differences between "Informal QI" and "Formal QI "/ "Creating a QI Culture"

Factor Affecting QI	Informal QI	Formal QI	Creating a QI Culture
LHD Director/Administrator	QI team leaders tend to organize and drive QI efforts instead of administrator	Viewed as "coach" or "quarterback" of LHD QI; often part of state or national QI initiatives; strong vision and passionate about QI	
Senior Management Commitment	A minority of senior managers are committed to QI	Majority of senior management is committed and has training and support to lead QI efforts	
Organizational Culture	The agency culture is not a strong facilitator of QI work	Strong team orientation and shared vision/goals, culture of no-blame accountability enforced by peers as well as leaders, embrace change and initiative, strong commitment to workforce development training	
QI Training	More training needed for all staff	Majority of staff have participated in QI training	
QI Infrastructure	QI sporadically practiced; QI meetings infrequent; may not have established data collection system	Designated QI team and regular meetings with representation across all divisions; likely to have strategic plan informing QI activities and data collection/ analysis infrastructure	
Relationship with Board of Health and city/county governance	May not be strongly involved or supportive of LHD QI activities	Likely to be key supporters of QI initiatives and well informed by LHD staff	
Influence of Accreditation	Likely to be a strong driver of QI work	QI activities tend to be driven by a belief in the importance of QI rather than by the external influence of accreditation	
External QI Resources (such as MLC, NACCHO, grants)	Not able to gather QI momentum from use of outside resources	Resources are key parts of building QI; creative about finding/using resources; some agencies gained expertise and support by working with state or national initiatives	
Authority	Staff have limited input	Staff are incorporated into QI decision-making processes	

Table 2. Features that differentiated agencies in the "Creating a QI Culture" stage

Factor Affecting QI	Informal QI	Formal QI	Creating a QI Culture
Barriers (time, funding, staff, budget cuts, emergencies etc.)	Barriers tend to stall QI activities	Able to withstand some barriers	Barriers are used as motivators for QI
Evidence-based decision making/performance measurement	Less likely to have a tradition of performance monitoring in place with established data collection systems		Commitment to evidence-based decision making and performance monitoring, which translated well to QI
Emerging Issues (such as H1N1 or budget cuts)	Emerging issues tended to stall QI work	Emerging issues slowed QI work, which is getting back underway	Emerging issues impacted QI work but these LHDs tended to use them as a platform to help manage the event with QI
Sustainability	QI work currently is not seen as sustainable unless done in a limited way	Sustainability is more likely but may not withstand loss of key personnel	Likely because of staff and leadership commitment; QI is not viewed as a burden but as a key agency function to work smarter and more efficiently

Note that LHDs conducting "Formal QI" exhibited some of the features and LHDs "Creating a QI Culture" exhibited most, but not all, of the features of an agency with fully integrated QI culture. For example, not all frontline and lower level staff "bought in" to QI. There is still work to be done to fully integrate QI into these agencies' cultures.

Why is this research important?

This is among the first studies to examine the circumstances under which LHDs develop a QI culture, while also validating previous literature about QI culture facilitators. The findings of factors that distinguish agencies at various points along the QI integration spectrum are similar to and complement the organizational QI characteristics and strategies illustrated in NACCHO's "Roadmap to a Culture of Quality Improvement." NACCHO based the Roadmap on the practical experiences of NACCHO's QI Leaders Learning Community.

Emerging themes in this research and among the practice community indicate that there are tangible steps LHDs can take to fully integrate QI into agency culture. LHDs can use the QI Roadmap for guidance on progressing through six phases, or levels of QI integration, until a culture of QI has been reached and can be continuously sustained. Whether a novice or advanced in QI, any health department can use the information from this research and the Roadmap to understand their current QI state and identify next steps for advancement to the next stage of quality. This research will inform evolving iterations of the Roadmap, which is available on NACCHO's web site.

Resources

Davis MV, Vincus A, Eggers M, Mahanna E, Riley W, Joly B, Fisher JS, Bowling MJ. Effectiveness of Public Health Quality Improvement Training Approaches: Application, Application, Application. *Journal of Public Health Management and Practice.* 2012;18(1):E1-E7

Roadmap to a Culture of Quality Improvement. In *National Organization of County and City Health Officials: Quality Improvement Culture*. http://www.naccho.org/topics/infrastructure/accreditation/qi-culture.cfm

This project would not have been possible without the collaboration with and support of NACCHO staff. In addition, expertise from members of NACCHO's QI Leaders Learning Community, a group of LHD staff responsible for leading QI and other performance improvement efforts in their agencies, informed this work. For more information, contact NACCHO at 202-783-5550 or info@naccho.org.

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