Marching on the Road to Quality: Army Public Health Experience Adopting NACCHO's Roadmap to a Culture of Quality Framework

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ABSTRACT

The US Army Public Health Center (APHC) adopted the National Association of County and City Health Officials' (NACCHO) Roadmap to a Culture of Quality (CoQ) Improvement framework to define its current culture and adapted the NACCHO's Organizational CoQ Self-Assessment Tool for applicability to a federal agency and workforce. More than 500 Civilian and Military personnel completed the self-assessment in October 2017. The results indicated that the APHC was categorized in the third of six total phases of the NACCHO's Roadmap to a CoQ (Phase 3: Informal or Ad Hoc QI Activities), which generated 13 transitional strategies to advance the APHC toward a CoQ. The APHC demonstrated that a federal public health organization can use and apply results from currently available self-assessment tools and frameworks related to a CoQ. By doing so, the APHC is optimizing its ability to ensure America's Soldiers and the Army Family receive essential and effective public health services.

KEY WORDS: Army, culture, quality improvement

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The US Army Public Health Center (APHC; also the Center) takes great pride in protecting America's Soldiers, their Family Members, and working animals to ensure Force readiness. The APHC is a subordinate agency of the US Army Medical Command, which is commanded by the Surgeon General of the Army. With 9 technical directorates and more than 500 Civilian and 100 Military personnel, the APHC is a large public health agency with a global presence to enhance Army mission readiness by identifying and assessing current and emerging health threats, developing and communicating public health solutions, and assuring the quality and effectiveness of the Army's Public Health Enterprise.

An organization's culture is defined by its core values, guiding principles, behaviors, and attitudes that represent the organization's regular business practices.[1] The need for local, state, and federal public health organizations to establish and sustain a Culture of Quality (CoQ) has been well established,[2,3] particularly in light of emergent public health threats and constrained resources. According to the National Association of County and City Health Officials'

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(NACCHO) Roadmap to a CoQ, a CoQ is where leadership and personnel are committed to integrating 6 foundational elements (ie, leadership commitment to quality improvement [QI], infrastructure to support QI, employee empowerment to integrate QI into daily work, customer focus to meet customer needs, teamwork and collaboration among employees, and continuous process improvement) into the organization's process strategy.[1] Given the APHC's focus on assuring the quality and effectiveness of the Army's Public Health Enterprise, the Center strives to achieve and sustain a CoQ.

To this end, APHC leaders formed a Council for Organizational Excellence (CFOE; also the Council) to establish policy, procedures, and plans to improve the CoQ driven by a Quality Management System. The Council drew on experience from local health departments and agencies[2,4,5] by adopting the NACCHO's Roadmap to a CoQ.[1] The roadmap comprises 6 continuous phases ranging from Phase 1 (No Knowledge of QI) to Phase 6 (QI Culture) to describe an organization's progress to achieving and sustaining a CoQ across each of the 6 foundational elements described earlier; its compatibility with public health systems and overlap with the APHC's mission make it an ideal framework to guide and monitor the Center's progress. This practice brief report summarizes how the APHC adopted the NACCHO's Roadmap to a CoQ framework to define its current culture, explains how it used an adapted version of the NACCHO's Organizational CoQ Self-Assessment Tool (SAT) for applicability to a federal agency and workforce, and describes how the assessment results generated key transition strategies to advance the QI commitment within the APHC. To the best of the authors' knowledge, this practice brief report is the first documentation to summarize how the NACCHO's Roadmap to a CoQ framework was applied beyond a local health department to a federal public health organization.

Methods

The APHC used a cross-sectional design to collect and analyze the data for the APHC CoQ SAT. The APHC Public Health Review Board reviewed and approved this project as Public Health Practice on October 2, 2017 (Project Plan No 17-557), not requiring full Institutional Review Board approval.

Population and sampling

The APHC CFOE Chair sent an e-mail to all APHC Civilian and Military personnel with a hyperlink to administer the CoQ SAT electronically via Verint (version 15.1) online survey software from October 3 through 20, 2017. Eighty-nine percent (n = 452) of Department of the Army (DA) Civilians (or nonappropriated funds employees) and 78% (n = 87) of Service Members (Active Duty, Activated Reservist) volunteered to complete the SAT. Because of the greater response rate from DA Civilians, the Civilian perspective may be slightly overrepresented relative to the Military perspective. Consistent with the demographics at the APHC, the majority of personnel who completed the SAT (80.3%) reported their tenure at the APHC was at least 2 years. Responses were anonymous; leadership incentivized participation by rewarding a 59-minute early dismissal to all directorates achieving a self-reported response rate of 80% or higher.

APHC CoQ self-assessment

The NACCHO has not formally published an abridged CoQ SAT, so the APHC referred to an example provided at the 2017 Public Health Improvement Training[6] and adapted the SAT for applicability and relevancy to the Center. The revisions to the SAT included replacing specific words (eg, replacing *agency* with the *APHC*) and often tailoring items (eg, *APHC leadership sets a clear vision for a culture of quality*) for specificity. The APHC CoQ SAT included 20 closed-ended items that were completed on a 6-point Likert-type scale (1 = *strongly disagree*; 2 = *disagree*; 3 = *somewhat disagree*; 4 = *somewhat agree*; 5 = *agree*; 6 = *strongly agree*) and organized according to the 6 foundational elements that aligned with the different phases within the NACCHO's Roadmap to a CoQ:

- Leadership Commitment (5 items)
- Quality Infrastructure (3 items)
- Employee Empowerment (3 items)
- Customer Focus (3 items)
- Teamwork and Collaboration (3 items)
- Continuous Process Improvement (3 items)

Data analysis and interpretation

Data were cleaned in Microsoft Excel (version 2010) and exported to SPSS (version 21) for descriptive analyses. The responses for each of the 6 foundational elements within the APHC CoQ SAT were averaged to compute a score for each element. These average scores were then aggregated to compute an overall score for the Center, which was then used to categorize the APHC within one of the 6 phases in the NACCHO's Roadmap to a CoQ.

The score for each of the 6 foundational elements and the overall score for the APHC were interpreted according to the sample characteristics provided by the NACCHO.[1] The APHC CFOE adapted the sample characteristics to describe the results for the Center; the APHC Director and CFOE Chair referred to the NACCHO's transition strategies to identify

actionable strategies that could help advance the APHC to the next phase within the NACCHO's Roadmap to a CoQ.

Results

Overall, the average score for the APHC was 3.4 (SD = 1.2), and the Center was categorized in the third of the 6 total phases of the NACCHO's Roadmap to a CoQ (Phase 3: Informal or Ad Hoc QI Activities). The average scores for each of the 6 foundational elements were relatively consistent, indicating that each element is incorporated in an informal or ad hoc capacity at the APHC (Table). The average score for Leadership Commitment was highest ($M = 3.9$, SD = 1.2), and the average score for Continuous Process Improvement was lowest ($M = 3.0$, SD = 1.5). As shown in the Table, the APHC identified select characteristics that describe the Center's current culture at Phase 3 of the NACCHO's Roadmap to a

TABLE
APHC CoQ Self-Assessment Scores, Characteristics, and Key Transitional Strategies by Foundational Element

Foundational Element	Mean Score as Assessed by APHC Employees in 2017[a]	Select Characteristics of APHC at Phase 3 (Informal or Ad Hoc QI Activities) Needing Improvement[b]	Key Transition Strategies to Advance APHC Along the Roadmap to a CoQ
Leadership Commitment	3.9	Executive leaders understand QI and its value; middle managers may demonstrate resistance	Establish a CFOE Publish Web site to provide QI guidance
		Executive leaders inconsistently communicate the agency's QI goals to employees	Conduct annual self-assessment to measure progress and report results to personnel
Quality Infrastructure	3.6	Some performance data exist but are inconsistently used for decision making, performance monitoring, and quality project identification	Establish Quality Management System (eg, quality policy, CFOE charter, incentivize/reward and replicate best practices)
		One or 2 staff members are responsible for leading QI-related activities	Establish integrated governance process to submit, prioritize, monitor, and report all improvement initiatives
Employee Empowerment	3.4	Basic QI training/resources are available, but opportunities for application are limited	Provide focused training and education based on the 6 foundational elements
		Employees remain resistant to QI and may view it as a passing phase or added responsibility	Create opportunities for all employees to participate in QI initiatives; measure participation via annual performance appraisals
Customer Focus	3.4	Customer satisfaction data are inconsistently used to develop performance standards and measures or to implement improvements	Create systematic tool/process to assess APHC clients' needs and identify expectations Revise the APHC Client Satisfaction Survey to measure performance improvements
Teamwork and Collaboration	3.1	Groups of employees may meet on an ad hoc basis to problem solve or innovate	Build APHC Strategic Planning methodology using intradirectorate planning teams and work groups
		Formal methods for peer sharing and collaboration do not exist within the center	Create multidisciplinary functional teams to implement key strategic QI projects across the Center
Continuous Process Improvement	3.0	QI projects may not result in significant improvements or are very lengthy to complete	Identify and sponsor "winnable" improvement initiatives linked to strategic priorities
		Process improvements are not documented or monitored for sustained success	Streamline business processes throughout the Center to reduce cost and inefficiency

Abbreviations: APHC, US Army Public Health Center; CFOE, Council for Organizational Excellence; CoQ, Culture of Quality; QI, quality improvement.

[a] *Based on a 6-point Likert-type scale (1 =* strongly disagree; *6 =* strongly agree*) that aligns with the 6 phases of the Roadmap to a CoQ.*

[b] *The National Association of County and City Health Officials provides characteristics to describe the 6 foundational elements according to the 6 phases on the Roadmap to a CoQ. For illustration purposes, only select characteristics that generated key transition strategies for the APHC are included in this table.*

CoQ. For example, the lower average score for Continuous Process Improvement can be explained by QI projects at the APHC not resulting in significant improvements or being too lengthy to complete. The APHC may address this specific Continuous Process Improvement challenge by identifying and sponsoring "winnable" improvement initiatives linked to strategic priorities. Similarly, the listed characteristics in the Table need improvement to advance the APHC along the Roadmap to a CoQ, so the APHC has committed to implementing associated key transition strategies that improve and strengthen how the Center incorporates each of the 6 foundational elements into its organizational process and delivery of public health service.

Discussion and Conclusion

The APHC Director, CFOE Chair, and the lead author presented the SAT results to APHC employees at a town hall meeting in March 2018. The town hall meeting was an information session for leadership to share the transitional strategies they had identified in advance as priorities for the Center with the intent to demonstrate leadership commitment, engage employees in understanding the organization's current state, and explain how the organization plans to achieve and sustain a CoQ. Recommendations to strengthen the organizational culture from APHC employees align with the 6 foundational elements of a CoQ: strengthening leadership buy-in, which is consistent with literature highlighting the importance of leadership in facilitating a culture change,[3,5] having employees work to improve CoQ infrastructure, allocating equal training and promotion opportunities among staff members, streamlining business practices, increasing communication across the Center, and enhancing QI efforts by training all staff members. Similar to the APHC, 35% of local health departments reported Informal or Ad Hoc QI Activities in 2016.[7] By engaging in this organizational self-assessment related to its CoQ and communicating results openly to employees, the APHC successfully executed a key step in affirming its commitment to a cultural shift. Current efforts to continue advancing the APHC CoQ are embedded in the APHC's Strategic Plan development for fiscal year 2019 and beyond. For example, reaching phase 4 on the Roadmap to a CoQ by September 30, 2019, is a primary strategic goal for the Center that is driven by accomplishments of the key transition strategies identified within the Table. As a key objective of the APHC's strategic planning process, the Center will conduct a self-assessment annually to monitor its progress and identify additional transitional strategies to advance the APHC toward a CoQ.

Implications for Policy & Practice

- Public health organizations, to include federal agencies, have an obligation to provide the best possible public health services to target populations. A CoQ framework encourages transparency about how organizations formalize QI efforts, and an SAT can measure personnel's perceived quality of an organization.
- The APHC demonstrated that a public health organization can adopt a national framework for achieving a CoQ and adapt a standardized SAT in order to generate actionable strategies for improvement. By doing so, the APHC improves its ability to deliver quality public health services to prevent, promote, and protect; ensuring America's Soldiers and the Army Family are healthy and mission ready.
- This work provides a strong example about the value of using empirical data to inform strategic planning. Other public health organizations with a wide reach can also adopt a CoQ framework to implement the necessary structures that support QI, empower leadership and employees to incorporate QI in their daily work, strengthen customer service, and enhance the use of data to inform continuous process improvement. These key elements will strengthen these organizations to foster and sustain a culture that ensures the quality and effectiveness of public health services.

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