



Why Competency Standardization Matters for Improvement: An Assessment of the Healthcare Quality Workforce

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ABSTRACT

Healthcare transformation requires a healthcare quality workforce with the requisite expertise to lead, oversee, and implement positive change within healthcare organizations. The National Association for Healthcare Quality (NAHQ) Competency Framework, which spans 29 competencies across 8 domains of healthcare quality, outlines the specific knowledge and skills needed to advance personal and organizational quality goals. This study describes 1,671 responses to the NAHQ Professional Assessment survey from a diverse group of healthcare quality professionals representative of NAHQ's professional community. Results show that two-thirds of respondents indicated they are working in 4 or more competency domains, with 85% reporting working in Performance and Process Improvement. Results also indicate that individuals who hold the Certified Professional in Healthcare Quality (CPHQ) certification perform work at more advanced levels across all eight domains of the competency framework. This was statistically significant for 13 of the 29 competencies including all three competency statements within the Performance and Process Improvement domain. Healthcare organizations need a workforce with specialized quality and safety expertise to advance quality goals, and this study suggests that those who invest in continued professional development by attaining the CPHQ certification may be better positioned to contribute meaningfully to advance these goals and improve organizational outcomes.

Keywords: healthcare quality, certification, CPHQ, competency framework, workforce development

Introduction

In 2001, the Institute of Medicine (IOM) expressed the need for healthcare to be safe, effective, patient-centered, timely, efficient, and equitable to address what they described as a system in need of major restructuring.¹ Twenty years later, healthcare has made significant gains especially in reducing hospital acquired conditions such as falls and infections,² but the COVID-19 pandemic exposed key flaws including serious gaps in patient and worker safety, a

disproportionate burden on minority and lower-income populations and inadequate health system integration.³ Improving quality and safety is a key driver for healthcare organizations,⁴ but transformational change requires a workforce with the skills and expertise to do this work.

Federal and state regulatory standards generally speak to organizational processes and goals for quality and safety, not the infrastructure or competencies needed to do the work accurately and efficiently. Quality oversight requires attention to a wide range of issues including regulatory and reporting compliance, data management, creating and supporting a culture that prevents harm, driving continual improvement, and improving processes that advance the health of populations.⁴ Organizations must employ people with dedicated expertise who can lead, oversee, and implement efforts to improve quality and safety, but in the absence of a national standard there is significant variation in both workforce competencies and organizational structures for doing healthcare quality work.

Workforce competencies represent “the capability to apply or use a set of related knowledge, skills, and

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This work was completed by the NAHQ Research Team which consists of NAHQ employees, contractors, and NAHQ members who engaged in this work as volunteers. As a professional organization, NAHQ is responsible for setting the overall strategic direction of the association, including the activities surrounding its certification. NAHQ created the Healthcare Quality Certification Commission (HQCC) which is responsible for all essential certification decisions and ensuring the integrity of the CPHQ exam. No data was altered in the retrieval process from NAHQ's survey database. In addition, NAHQ engaged an external PhD researcher at DePaul University to verify the included analyses for statistical accuracy.

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abilities required to successfully perform ‘critical work functions’ or tasks in a defined work setting.”⁵ The IOM recognized the need for healthcare professionals to have basic quality and safety knowledge and skills by identifying five key competencies that all healthcare professionals should possess: providing patient-centered care, working in interdisciplinary teams, using evidence-based practice, applying quality improvement, and using informatics.⁶ In the last decades, physicians, nurses, and others have also addressed the need for these skills by building quality and safety competency frameworks to inform their professional academic curricula and personal practices.⁷⁻¹¹ These frameworks support competency-based quality and safety education across all health disciplines. Some progress has been made to embed basic quality and safety competencies in health professions education, but this does not address the need for a workforce with specific expertise in healthcare quality methods and techniques.

The National Association for Healthcare Quality (NAHQ) is an organization dedicated to reducing variability in healthcare delivery by reducing variability in healthcare quality competencies. National Association for Healthcare Quality created the Healthcare Quality Competency Framework, which addresses the scope of work and specialization needed for individuals and healthcare organizations to achieve their quality and safety goals.¹² The purpose of this study is to describe the self-reported job functions and proficiency levels in healthcare quality competencies for a broad sample of healthcare quality professionals.

Methods

Professional Assessment Survey Development and Validation

This study was evaluated by an institutional review board and determined Not Human Subjects Research and is based on analysis of secondary response data from the NAHQ Professional Assessment survey database. The Professional Assessment was developed during a three-phase process to create and validate the Healthcare Quality Competency Framework.¹² National Association for Healthcare Quality engaged survey experts to design the Professional Assessment originally as a method to evaluate the consistency of the competency framework relative to quality practice. The competency framework was first validated based on an extensive literature review and expert opinion and has

been subsequently validated using data from the Professional Assessment in August 2020.

The Professional Assessment provides a standardized way for healthcare quality professionals to engage with the Healthcare Quality Competency Framework and translate it to their own career progression. This tool allows professionals to self-assess the level of work they most often perform across eight healthcare quality domains: Professional Engagement, Quality Leadership and Integration, Performance and Process Improvement, Population Health and Care Transitions, Health Data Analytics, Patient Safety, Regulatory and Accreditation, and Quality Review and Accountability.¹² Within these 8 domains, NAHQ identified 29 competency statements and 486 skill statements stratified across three proficiency levels: foundational, proficient, and advanced (Table 1). The domains and competency statements have been made available to the public, whereas the 486 skill statements remain proprietary to NAHQ. An example list of skill statements associated with each proficiency level for the competency statement “Collaborate with stakeholders to analyze patient safety risks and events” within the Patient Safety domain of the competency framework is shown in Table 1.

The Professional Assessment contains three types of questions: demographics, criterion ratings on a seven-point Likert scale related to confidence in their ability to enact competencies (e.g., “I am confident in my ability to...”), and questions asking respondents to self-identify work behaviors that best represent their typical job activities.¹² For each of the 29 competencies statements in the framework, respondents select a grouping of statements, based on the 486 proprietary skill statements in the competency framework, that best aligns with the work they do most often in their current job roles. These groupings of behaviors, although not identified in the assessment, correspond directly to the foundational, proficient, and advanced levels of the competencies in the framework, or allow respondents to indicate that they are *not responsible* for the work behaviors associated with that competency. In addition to selecting their level of work for each competency, respondents are also asked to identify which of seven healthcare quality domains in the competency framework (excluding Professional Engagement) fall within the scope of their current job responsibilities. It is possible for respondents to indicate that a domain is within the scope of their job responsibilities, but also indicate that they are not responsible for a particular competency within that domain.

Table 1. Example Skill Statements From the Healthcare Quality Competency Framework by Proficiency Level

Proficiency level	Example skill statements
<p>Foundational: These professionals have a working knowledge of healthcare quality concepts if reference and/or context is provided. They complete some tasks independently but use rules and references.</p>	<p>Discuss how human, technological, environmental, and organizational factors interact and contribute to behaviors and conditions that can lead to risk or harm.</p> <p>Identify the relevant sources of information to use in investigations (e.g., safety alerts, investigations, risk management/adverse event reports, complaints, and quality and safety metrics).</p> <p>Participate in investigation activities associated with proactive and reactive improvement methodologies and tools (e.g., Failure Mode and Effects Analysis [FMEA], Root Cause Analysis [RCA], Root Cause Analysis and Actions to Prevent Harm [RCA2]).</p> <p>Identify adverse events or occurrences, near misses or unsafe conditions that require analysis.</p>
<p>Proficient: These professionals have a deep understanding of healthcare quality concepts and a holistic approach to problem solving. They complete work independently with deliberate planning, and routinely display a high standard of work. They recognize relevance and variation and connect common attributes and aspects of key issues.</p>	<p>Use proactive and reactive improvement methodologies and tools (e.g., FMEA, RCA, RCA2) to investigate harm events.</p> <p>Facilitate discussions of risks or harm events in a factual and empathetic manner.</p> <p>Conduct context-based fact-finding investigation of patient safety events.</p> <p>Facilitate interprofessional discussions and collaboration regarding patient (resident, customer, member, and client) safety events and opportunities for improvement.</p> <p>Assign and monitor accountability for all immediate and long-term actions in response to safety reports and events.</p> <p>Assist with determining actions for mitigation or management of identified risks, defects, and/or root causes.</p>
<p>Advanced: These professionals have a nuanced understanding of healthcare quality concepts, deal with routine matters and issues intuitively, perform a high standard of work independently, and assess the competence of others. They are flexible and highly proficient; they develop and communicate strategic vision. They adapt to constantly changing work landscapes using tacit knowledge and experience.</p>	<p>Evaluate processes for investigating patient (resident, customer, member, and client) safety events.</p> <p>Collaborate with organizational leaders to deploy patient (resident, customer, member, and client) safety data and analysis policies and procedures in accordance with federal and state laws and regulations.</p> <p>Facilitate proactive patient (resident, customer, member, and client) safety high-risk environment drills/evaluations or simulation exercises (e.g., emergency preparedness, nursery, psychiatric, pharmacy, critical care, operating room, elopement, and abandonment).</p> <p>Facilitate training of staff to conduct event investigations and analysis of safety events.</p>
<p>Domain: patient safety. Competency statement: collaborate with stakeholders to analyze patient safety risks and events.</p>	

In August 2020, NAHQ validated the Professional Assessment and Healthcare Quality Competency Framework based on 1,238 responses to the Professional Assessment.¹³ A confirmatory factor analysis was used to validate the extent to which each of the 29 behavioral competency ratings correlated with pertinent criterion ratings. This analysis evaluated how well the proposed measurement model fit the 1,238 observations on the 29 behavioral competencies

using a set of commonly reported fit statistics including chi-square goodness of fit, RMSEA, and the Tucker–Lewis index. Given the established psychometric standards for these fit statistics, the values indicated an acceptable-to-good fit of the measurement model to the observed data, demonstrating the validity of the Professional Assessment as a tool to measure the healthcare quality competencies represented in the framework.

Professional Assessment Data Collection and Analysis

Between July 2019 and February 2021, NAHQ collected more than 1,600 responses to the Professional Assessment from a diverse range of professionals working in healthcare quality. An analysis of respondent demographics related to professional and educational backgrounds confirmed that the respondent sample is representative of NAHQ's overall database of members and holders of the Certified Professional in Healthcare Quality (CPHQ) credential, the only accredited certification in healthcare quality.

The researchers performed a series of descriptive analyses on this database to better understand respondent profiles and proficiency levels in healthcare quality competencies. First, we analyzed respondent demographics including, job level, years working in healthcare quality, highest level of education, CPHQ certification status, and quality domains within the scope of respondents' job responsibilities. Second, we calculated the percentage of respondents that selected either the proficient or advanced groupings of behaviors for each of the 29 competency statements in the framework. We then compared rates of proficient/advanced levels for each competency statement between respondents with different demographic attributes, such as those with and without the CPHQ credential. Finally, we analyzed the frequencies of the four possible proficiency levels (advanced, proficient, foundational, and not responsible) and various demographic categories (e.g., CPHQ holder vs. non-CPHQ) for each of the 29 competency statements. We then performed a series of Pearson chi-square tests on the frequency data for each competency statement, which is a commonly used metric to determine whether there is a statistically significant relationship between two categorical variables. Respondents were only included in these calculations if they indicated that the healthcare quality domain corresponding to the competency statement fell within the scope of their current job responsibilities. Although the researchers found correlations between competency proficiency levels and demographics apart from CPHQ certification status, including education and years of experience, CPHQ status was selected as a key demographic point of comparison for this study, because it represents a standardized credential indicating expertise in healthcare quality.

Results

Of the 1,671 responses to the Professional Assessment survey that were collected between July 2019

and February 2021, 60% of respondents hold the CPHQ credential. Fifty-six percent of respondents occupy middle to upper-management roles: Manager/Supervisor (23%), Director/Executive Director (26%), and VP and Above (7%). Sixty-seven percent of respondents have a master's or doctoral/professional degree, and 37% of respondents have more than 10 years of experience working in healthcare quality. Fifty-nine percent of respondents primarily perform nonclinical work as healthcare quality professionals. Nineteen percent of respondents reported spending less than 60% of their work time in a healthcare quality role (Table 2).

The healthcare quality domain most frequently reported as within the scope of respondents' job responsibilities was Performance and Process Improvement (85%), followed by Quality Review and Accountability (70%), Patient Safety (64%), Regulatory and Accreditation (60%), Quality Leadership and Integration (58%), and Health Data Analytics (58%) (Table 3). Only 28% of respondents indicated that Population Health and Care Transitions was within the scope of their current role. Certified Professional in Healthcare Quality (CPHQ) and non-CPHQ respondents showed similar rates of responsibility for work in Quality Review and Accountability and Patient Safety, whereas more CPHQ respondents reported doing work in Health Data Analytics (65%) compared to non-CPHQ respondents (47%). Sixty-seven percent of respondents are doing work in 4 or more domains, and 30% of respondents are doing work in 6–7 domains (Table 4). Thirty-four percent of CPHQ respondents are doing work in 6–7 domains, compared with 22% of non-CPHQ respondents (Table 4).

The three competency statements with the highest overall proficiency rates are part of the Quality Leadership and Integration domain: "Direct the quality infrastructure to achieve organizational objectives" (81%), "Communicate effectively with different audiences to achieve quality goals" (79%), and "Implement processes to promote stakeholder engagement and inter-professional teamwork" (79%). The lowest proficiency rates belong to competency statements within the Quality Review and Accountability domain: "Implement processes to facilitate practitioner performance review activities" (38%) and "Relate current and emerging payment models to healthcare quality work" (34%). A higher proportion of CPHQ respondents indicated that they work at proficient or advanced levels compared with non-CPHQ respondents for 28 of 29 competency statements. At least one competency statement in

Table 2. Professional Assessment Respondent Demographics

Job level	CPHQs n = 1,009	Non-CPHQs n = 662	All respondents n = 1,671
VP and above	8%	6%	7%
Director/executive director	28%	21%	26%
Manager/supervisor	22%	25%	23%
Coordinator	8%	12%	10%
Specialist/analyst	18%	19%	18%
Consultant/advisor	12%	7%	10%
Clinical staff	2%	5%	3%
Retired/not employed	2%	1%	1%
Unknown	0%	4%	2%
Years working in healthcare quality	CPHQs n = 1,009	Non-CPHQs n = 662	All respondents n = 1,671
More than 20 years	18%	7%	14%
11–20 years	28%	15%	23%
6–10 years	23%	19%	21%
5 years or less	23%	44%	31%
Unknown	8%	15%	11%
Highest level of education	CPHQs n = 1,009	Non-CPHQs n = 662	All respondents n = 1,671
Doctoral or professional degree (e.g., JD, MD)	11%	9%	10%
Master's degree	62%	48%	57%
Bachelor's degree	23%	31%	26%
Other (high school, associate's or no degree)	4%	8%	5%
Unknown	0%	4%	2%
Primary type of work as a healthcare quality professional	CPHQs n = 1,009	Non-CPHQs n = 662	All respondents n = 1,671
Clinical	35%	40%	37%
Nonclinical	61%	55%	59%
Not applicable	4%	5%	4%
Unknown	0%	0%	0%
Percent of time spent in quality role	CPHQs n = 1,009	Non-CPHQs n = 662	All respondents n = 1,671
100%	63%	52%	58%

Table 2. Professional Assessment Respondent Demographics (Continued)

Percent of time spent in quality role	CPHQs n = 1,009	Non-CPHQs n = 662	All respondents n = 1,671
80–90%	8%	8%	8%
60–70%	5%	4%	4%
40–50%	8%	9%	9%
20–30%	5%	8%	6%
0–10%	3%	5%	4%
Unknown	8%	15%	11%
Percentages represent proportion of each respondent group (CPHQs, Non-CPHQs, all respondents) that selected the specified demographic value in the leftmost column.			

each of the eight domains had a statistically significant relationship between CPHQ status (CPHQ certified vs. non-CPHQ) and selected work level for that competency statement (advanced, proficient, foundational, and not responsible), based on a Pearson chi-square test (Table 5).

Limitations

The results from this study provide a cross-sectional snapshot of how healthcare quality professionals describe their own work relative to a standardized competency framework. Respondents were primarily self-selected, apart from 123 individuals who participated at the request of their employer as part of a

pilot project sponsored by their organization. Although the demographic profiles of the sample align with NAHQ's broad constituency of more than 22,000 members and CPHQs, the sample may not be representative of the entire population of individuals doing healthcare quality work. In addition, respondents may have broader capabilities and duties outside of the competency framework, and a substantial number of respondents reported that they do other work outside of healthcare quality (Table 2). Furthermore, these data do not determine the sequence of gaining skills in healthcare quality competencies and earning the CPHQ certification. Finally, results from this study depict how individuals have self-identified the tasks they perform, but do not

Table 3. Healthcare Quality Domains Within Current Job Responsibilities

Healthcare quality domains	CPHQs n = 1,009	Non-CPHQs n = 662	All respondents n = 1,671
Performance and process improvement	87%	83%	85%
Quality review and accountability	70%	70%	70%
Patient safety	64%	63%	64%
Regulatory and accreditation	63%	54%	60%
Quality leadership and integration	63%	52%	58%
Health data analytics	65%	47%	58%
Population health and care transitions	30%	24%	28%
For each of the seven domains in the competency framework (excludes Professional Engagement), number of respondents who selected that the domain fell within their current job responsibilities. Percentages represent proportion of each respondent group (CPHQs, Non-CPHQs, All Respondents) that selected the specified domain in the leftmost column.			

Table 4. Number of Healthcare Quality Domains Within Current Job Responsibilities

Healthcare quality domains	CPHQs n = 1,009	Non-CPHQs n = 662	All respondents n = 1,671
0–1 domains	9%	15%	12%
2–3 domains	20%	24%	21%
4–5 domains	36%	39%	37%
6–7 domains	34%	22%	30%

Number of domains selected by respondents when asked to indicate which of the seven domains listed in Table 4 fell within their current job responsibilities. Percentages represent proportion of each respondent group (CPHQs, Non-CPHQs, all respondents) that selected the specified number of domains in the leftmost column.

depict the specific job to which they are assigned or the healthcare quality infrastructure within their organization.

Discussion

This study provides an unprecedented view into the scope of work performed by a large group of healthcare quality professionals who represent NAHQ's constituency of members and CPHQs. Two-thirds of respondents indicated they are working in four or more competency domains, with 85% reporting working in Performance and Process Improvement. Certified Professional in Healthcare Quality and non-CPHQ respondents showed similar rates of responsibility for work in Quality Review and Accountability and Patient Safety, while more CPHQ respondents reported doing work in Health Data Analytics (65%) compared with non-CPHQ respondents (47%). Thirty-four percent of CPHQ respondents are doing work in 6–7 domains, compared with 22% of non-CPHQ respondents (Table 4).

It is unsurprising that the Performance and Process Improvement domain is the most common job function for healthcare quality professionals, because improvement methods and techniques have increasingly been part of healthcare operations since the late 1980's to 1990's.^{14,15} All other domains were also reported by most respondents as being within the scope of their responsibilities, except for Population Health and Care Transitions. This is also unsurprising as population health is an emerging area for healthcare organizations, which are just beginning to study quality from a population health perspective and apply improvement methods and techniques to optimize operational processes.^{16,17} Integrating population health management strategies

into quality work and improving processes for care transitions are increasingly important to highly functioning organizations, and results from this study highlight the need for further workforce development in this critical area.

The proficiency rates for each competency statement in the framework point to more specific strengths and skill gaps in the healthcare quality workforce. Respondents demonstrated high proficiency in Quality Leadership and Integration competencies, whereas competencies within the Quality Review and Accountability domain show opportunity for improvement (Table 5). Results also indicate that individuals with CPHQ certification perform work at more advanced levels across all eight domains of the competency framework. This was statistically significant for 13 of the 29 competencies including all three competency statements within the Performance and Process Improvement domain. Respondents are highly educated: 73% of CPHQs and 57% of non-CPHQs reported having a masters or doctoral degree (Table 2). Certified Professional in Healthcare Quality respondents were also more likely to have 11 or more years of experience in quality work (46% vs. 22% of non-CPHQ respondents) (Table 2). These descriptive data suggest higher levels of job performance for CPHQs versus non-CPHQs, but do not demonstrate any association between CPHQ certification and patient or organizational outcomes.

Specialty medical certification began in 1917 with Ophthalmology, as a way to demonstrate that a physician met recognized standards for knowledge and skills.¹⁸ Today, specialty certification is recognized as an established mechanism to indicate expertise in a distinct field.¹⁹ Certification is important for physicians who perform clinical tasks/

Table 5. Proficient/Advanced Responses by Competency Statement

Professional engagement			
Competency statement	CPHQs n = 1,009	Non-CPHQs n = 662	All respondents n = 1,671
Engage in lifelong learning as a healthcare quality professional. ^a	62%	54%	59%
Integrate ethical standards into healthcare quality practice.	47%	47%	47%
Participate in activities that advance the healthcare quality profession. ^a	48%	39%	44%
Performance and process improvement			
Competency statement	CPHQs n = 875	Non-CPHQs n = 547	All respondents n = 1,422
Implement standard performance and process improvement methods. ^a	76%	61%	70%
Apply project management methods. ^a	63%	54%	60%
Use change management principles and tools. ^a	51%	43%	48%
Quality review and accountability			
Competency statement	CPHQs n = 704	Non-CPHQs n = 462	All respondents n = 1,166
Conduct the activities to execute measure requirements. ^a	61%	46%	55%
Implement processes to facilitate practitioner performance review activities.	40%	34%	38%
Relate current and emerging payment models to healthcare quality work. ^a	38%	27%	34%
Patient safety			
Competency statement	CPHQs n = 646	Non-CPHQs n = 416	All respondents n = 1,062
Use organizational procedures to identify and report patient safety risks and events. ^a	71%	59%	66%
Assess the organization's patient safety culture.	67%	61%	65%
Collaborate with stakeholders to analyze patient safety risks and events.	66%	60%	64%
Apply safety science principles and methods in healthcare quality work.	56%	53%	55%

Regulatory and accreditation			
Competency statement	CPHQs n = 638	Non-CPHQs n = 358	All respondents n = 996
Operationalize processes to support compliance with regulations and standards.	74%	66%	71%
Guide the organization through survey processes and findings.	64%	59%	62%
Facilitate continuous survey readiness activities. ^a	63%	59%	62%
Quality leadership and integration			
Competency statement	CPHQs n = 632	Non-CPHQs n = 345	All respondents n = 977
Direct the quality infrastructure to achieve organizational objectives. ^a	83%	77%	81%
Communicate effectively with different audiences to achieve quality goals. ^a	82%	73%	79%
Implement processes to promote stakeholder engagement and interprofessional teamwork.	79%	78%	79%
Create learning opportunities to advance healthcare quality throughout the organization.	73%	65%	70%
Apply procedures to regulate the use of privileged or confidential information.	46%	44%	45%
Health data analytics			
Competency statement	CPHQs n = 656	Non-CPHQs n = 309	All respondents n = 965
Use statistical and visualization methods.	77%	75%	76%
Apply procedures for governance of data assets.	65%	59%	63%
Acquire data from source systems.	61%	60%	61%
Design data collection plans for key metrics and performance indicators. ^a	63%	52%	60%
Integrate data from internal and external electronic data systems.	41%	37%	40%
Population health and care transitions			
Competency statement	CPHQs n = 302	Non-CPHQs n = 161	All respondents n = 463
	69%	58%	65%

Table 5. Proficient/Advanced Responses by Competency Statement (Continued)

Population health and care transitions			
Competency statement	CPHQs n = 302	Non-CPHQs n = 161	All respondents n = 463
Integrate population health strategies into quality work. ^a			
Apply a holistic approach to improvement.	60%	51%	57%
Collaborate with stakeholders to improve care processes and transitions.	56%	58%	57%
<p>Respondents indicating a proficient or advanced work level in each competency. Percentages represent the proportion of proficient/advanced respondents among all those who indicated the domain corresponding to the competency statement fell within the scope of their job role for each respondent group (All Respondents, CPHQs, Non-CPHQs).</p> <p>^a Statistically significant relationship between selected work level for the competency statement and CPHQ status of the respondent based on a Pearson chi-square test.</p>			

procedures, and there is evidence that certification can directly impact patient outcomes for specific procedures.²⁰ For most healthcare disciplines, it is difficult to link certification directly to patient and organizational outcomes, but there are reported positive associations between certification and personal accomplishment, professional growth, and organizational commitment.^{21,22}

This study illustrates the range of responsibilities encompassed by quality professionals, and therefore the range of competencies and skills they must demonstrate to be successful. There are no national standards or guidelines for the structure or personnel needed to support quality work within healthcare organizations, and as a result this work is supported by a variety of professionals with different roles and responsibilities. Nearly half (48%) of respondents reported their *primary* job responsibility was quality management, followed by performance improvement (10%), regulatory and accreditation (7%), health data analytics (5%), and patient safety (5%). Smaller numbers of respondents reported that their primary job focus was in other areas including nursing, medicine, population health, care management, and infection control. Healthcare quality work includes compliance and improvement activities that cut across departments, settings, external payors and stakeholders, but many healthcare organizations do not have adequate infrastructure to support improvement efforts.^{4,24} In addition to poor organizational culture, inadequate infrastructure including quality personnel and systems is a common factor

contributing to an organization's inability to improve healthcare outcomes.²⁴ Expertise and technical capabilities are critical for successful improvement work.^{4,23-25} The Healthcare Quality Competency Framework highlights the complexity and depth of healthcare quality work and can provide a standardized model for building the optimal quality infrastructure within healthcare organizations.

Conclusions

This study provides an unprecedented description of the work being performed by a diverse sample of healthcare quality professionals who are representative of NAHQ's professional community. Respondents to NAHQ's Professional Assessment survey reported a range of job responsibilities across multiple healthcare quality domains, but results suggest a need for further quality workforce development in some areas including population health and quality review and accountability. In addition, respondents with CPHQ certification reported working at higher proficiency levels of healthcare quality competencies compared with respondents without CPHQ certification. Healthcare organizations need a workforce with specialized quality and safety expertise to advance quality goals, and this study suggests that those individuals who invest in continued professional development by attaining the CPHQ certification may be better positioned to contribute meaningfully to advance these goals and improve organizational outcomes.

Implications

The complex work of organizational quality transformation requires supportive leadership and a professional workforce with expertise in the full breadth and depth of healthcare quality work. Future revisions to the CPHQ examination should incorporate the Healthcare Quality Competency Framework and potential emerging quality competencies. This represents the first study about current competency levels within the healthcare quality profession, and more research is needed in this area. For example, further research could explore the relationship between graduate level training and/or certification requirements and organizational performance. In addition, there is a need for future research on the linkage between healthcare quality workforce and improved outcomes. National Association for Healthcare Quality will continue to support standardization and development of a healthcare quality workforce with the requisite expertise to achieve healthcare transformation.

Authors' Biographies

Rebecca Miltner, Ph.D., RN, CNL, NEA-BC, is an associate professor and director of Educationally Focused Partnerships at the University of Alabama at Birmingham (UAB) School of Nursing. She is an associate editor for the Journal for Healthcare Quality. Her current improvement work focuses on interprofessional QI education and creating mechanisms to increase the capacity and capability for improvement work within healthcare organizations.

Lucie Pesch, MUSA, is the Senior Manager of Analytics at the National Association for Healthcare Quality. With expertise in advanced analytics and data visualization, she leads business intelligence, data governance, and research efforts for the association. Her background includes business analysis and data science consulting for Fortune 500 companies, and she is committed to promoting and facilitating a data-driven culture within organizations of all types.

Stephanie Mercado, CAE CPHQ, is the CEO and Executive Director for the National Association for Healthcare Quality. A 20-years healthcare industry veteran, Mercado has dedicated her career to elevating healthcare professions and advancing workforce performance to achieve better health outcomes. She is driven by a passion to improve healthcare with the conviction that reducing variability in healthcare quality competencies will reduce variability in care delivery. She believes that workforce is the biggest lever to impact quality and leads with a desire to leverage human potential to improve healthcare.

Thom Dammrich, DBA, MBA, MSA, CPA, CPHQ, is a Business Strategist for the National Association of Healthcare Quality. His experience spans several manufacturing and service industries where quality is central to performance excellence, customer experience and profitability. His recent work with NAHQ has focused on creating a systematic way to assess the current work of a quality workforce, identify gaps in quality competencies and skills, and prioritize upskilling based on organizational quality goals and priorities.

Terry Stafford, PhD, RN, CPHQ, CHCQM, PCC, is a healthcare consultant with Quality Healthcare Partners. Dr. Stafford's work focuses on quality, performance improvement, regulatory and accreditation compliance, facility education and patient safety. She is also an adjunct faculty member of Jefferson University's School of Population Health, teaching quality, patient safety, tools and methods to graduate students, physicians and other healthcare professionals. She also served as the co-leader of the National Association for Healthcare Quality Competencies Commission Team.

Jaclyn Hunter, MSHI, RN, CPHQ, is the President of Quality informatics Solutions, Inc. Jaclyn's career in healthcare has spanned over 20 years. Her clinical background includes labor and delivery, adolescent psychiatric care, home health and primary care. She has spent over 15 years working in acute care hospitals focusing on healthcare quality. She specializes in organization alignment and technology/workflow optimization to improve quality outcomes and clinician experience.

Glenda Stewart, MSN, RN, CPHQ, CHC, is the Director of Quality Assurance and Compliance for Next Step Care. Glenda has nearly 20 years of experience in healthcare spanning across the continuum to include acute care, medical/surgical nursing, Administration, Quality Management, and Compliance. She holds certifications in both healthcare quality and compliance and leads quality initiatives for her organization which is a home and community-based service provider of case management/care coordination services for over 4,000 elderly and disabled individuals throughout the state of Georgia.

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