



APPLIED MEASUREMENT PROFESSIONALS, INC.

A Practice Analysis of the Professional in Healthcare Quality *Executive Summary*

The purpose of this study was to identify the responsibilities of professionals in healthcare quality as the next iteration of research to establish ongoing validity of a practice-related certification examination results. The Healthcare Quality Certification Board (HQCB) and the National Association of Healthcare Quality (NAHQ) requested the services of Applied Measurement Professionals, Inc. (AMP) to design and conduct a study that would provide the support necessary to develop specifications upon which the next generation of a content valid certification examination could be built. The HQCB identified the need to ensure that the examination specifications would be representative of professionals in healthcare quality.

The HQCB appointed the Practice Analysis Committee (PAC) to conduct the activities necessary to identify healthcare quality professionals' responsibilities and develop examination specifications. The diversity of this group was reflective of the areas within healthcare quality management practiced internationally, and all PAC members had demonstrated expertise in their respective areas of specialization.

The study involved development of a web-based version of a practice analysis survey, distribution of that survey to professionals, and an analysis of the responses. Test specifications for the healthcare quality professional were developed on the basis of these data.

The PAC met during March 2010 to initiate the following six tasks:

1. Develop a sampling plan
2. Identify tasks for the survey instrument
3. Identify classifications of core tasks
4. Determine the rating scales
5. Determine the relevant demographic variables of interest
6. Integrate demographics, rating scales, and tasks into a survey instrument

A total of 7,028 invitations were emailed for the web survey. Additionally the invitation was sent to the council members of the European Society for Quality and Safety in Healthcare (ESQH) who were encouraged to share the invitation with other European healthcare quality professionals. Additionally, the web address of the online survey was published in the May 2010 newsletter of the National Association of Healthcare Quality (NAHQ) and on the website of the International Society for Quality (ISQua). After reducing the sample size for undeliverable addresses ($n=383$), it was determined that approximately thirty percent of the sample responded ($n=2,166$). However, due to the public availability of the link to the online survey it is impossible to calculate an exact response rate. The responses to the demographic questions indicated that there were sufficient numbers of respondents in relevant groups for subsequent analysis. Approximately 94 percent of the respondents felt that the practice analysis survey at least adequately addressed the responsibilities of the healthcare quality professional. In addition, respondents used all rating scales with an acceptable level of reliability.

During a second meeting in November 2010, the PAC concluded that the demographic characteristics of the respondent group were generally as expected. A description of the typical respondent may be of interest, and this individual could generally be described as follows:

The typical respondent is a female in a quality management unit, who works full-time in a private, not for profit hospital with over 1,000 employees. She works in middle management, has twenty years of experience, and spends about 30% of her time assuring compliance with governmental regulations. She holds a Master's degree, holds the CPHQ credential, is a member of NAHQ, and is a licensed RN. She is familiar with ICD-10, and *Standards* provided by the Center for Medicare/Medicaid Service (CMS), The Joint Commission, and the Centers for Disease Control and Prevention (CDC). She is involved in Compliance/Accreditation, Patient Safety, and Quality Management. She practices in the United States, and primarily speaks English.

During the meeting, decision rules were adopted and used to determine which tasks were appropriate for assessment, and therefore for inclusion in the final Detailed Content Outline (DCO). Two decision rules helped to ensure that the tasks that were retained were clearly a part of practice and significant to practice to the overall respondent group. In addition, analysis of various subgroups of healthcare quality professionals helped ensure the appropriateness of the resulting DCO regardless of where they practice (i.e., within the United States or various other regions of the world), their type of employer, educational background, years of experience, certification status as a CPHQ, or membership in NAHQ. Application of the decision rules resulted in deletion of 21 tasks and retention of 74 tasks. It was determined that a total of 125 multiple-choice items would be sufficient to assess the tasks. The number of items in each major category (e.g., Management and Leadership, Information Management) was determined through an iterative process, during which the PAC considered information obtained from the survey respondents (e.g., the recommended number of items in each area, and their mean ratings of tasks within each area) as well as the PAC members judgments about the breadth of content and the number of items needed to sample candidates' knowledge of the domain.

The DCO was used to create Examination Specifications, which identifies the number of items within each major and minor content area, as well as a specified number of items at each of three cognitive levels. Items are written and classified according to whether they are expected to require only *recall* of information, *application* of knowledge, or *analysis* of the situation on the part of the candidate. Across the 125 items, 33 will be classified as recall, 67 application, and 25 analysis. In addition to the 125 items used to compute candidate scores, each examination will include 15 unscored pretest items. The HQCB will use the resulting Examination Specifications in building the next generation of the Certified Professional in Healthcare Quality (CPHQ) examination, and all items appearing on the examination will be linked to the specifications based on the unanimous agreement of the committee. In addition, the DCO will be made available to candidates and education providers for use in preparing to attempt certification. The DCO appears on the following pages.

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Table 1. Detailed Content Outline for the CPHQ Examination

	# of Items
1. Management and Leadership	21
A. Strategic	
1. Facilitate development of leadership values and commitment to quality	
2. Facilitate program/project development and evaluation (e.g., risk register, enterprise risk management, patient safety, infection prevention and control, new service lines)	
3. Facilitate assessment, development, and design of the organization's quality culture	
4. Facilitate or participate in organization-wide strategic planning	
5. Link performance/quality improvement activities with strategic goals	
6. Identify customer/supplier relationships (internal and external)	
7. Facilitate or participate in developing an organizational vision and mission statement	
8. Identify performance measures/key performance/quality indicators (e.g., balanced scorecards, dashboards)	
9. Participate in the integration of environmental safety programs within the organization (e.g., air quality, infection control practices, building, Hazardous Waste)	
10. Determine applicability of performance improvement models (e.g., PDCA, Six Sigma, Lean thinking)	
11. Facilitate evaluation and/or selection of appropriate accreditation or recognition program(s)	
12. Demonstrate financial benefits of a quality program	
13. Lead and facilitate change within the organization	
14. Integrate the results of the performance/quality improvement process into strategic planning for the organization	
B. Operational	
1. Facilitate establishment of a performance/quality improvement oversight group (e.g., Quality Council, Steering Council, QM Committee, Patient Safety Committee, Clinical Governance Committee)	
2. Identify champions (e.g., stakeholders, process owners, quality, patient safety)	
3. Communicate organizational values and commitment to staff	
4. Interact with external quality consultants (i.e., subject matter experts)	
5. Coordinate survey processes (i.e., accreditation, licensure, or equivalent)	
2. Information Management	31
A. Design and Data Collection	
1. Maintain confidentiality of performance/quality improvement records and reports	
2. Organize information for committee meetings (e.g., agendas, reports, minutes)	
3. Use epidemiological principles in data collection and analysis	
4. Assess customer needs/expectations (e.g., surveys, focus groups, teams) to ensure the voice of the customer is heard	
5. Perform or coordinate data inventory listing activities (i.e., availability of data from various sources)	
6. Perform or coordinate data definition activities	
7. Perform or coordinate data collection methodology (e.g., qualitative, quantitative)	

B. Measurement and Analysis

1. Facilitate the use of process analysis tools to display data (e.g., fishbone, Pareto chart, run chart, scattergram, control chart)
2. Use basic statistical techniques to present data (e.g., mean, standard deviation)
3. Use or coordinate the use of statistical process control components (e.g., common and special cause variation, random variation, trend analysis)
4. Interpret data to support decision making (e.g., benchmarking, outcome data)

C. Communication

1. Interact with staff regarding quality issues (e.g., patient issues, service delivery, human resources)
2. Compile and write performance/quality improvement reports
3. Coordinate and promote the dissemination of performance/quality improvement information within the organization
4. Participate in public reporting activities (e.g., organizational transparency, website content, ensuring accuracy)
5. Facilitate communication with accrediting and regulatory bodies

3. Performance/Quality Measurement and Improvement

45

A. Planning

1. Facilitate establishment of priorities for performance/quality improvement activities
2. Facilitate development of performance/quality improvement action plans and projects
3. Facilitate program development evaluation planning, projects, and activities
4. Facilitate development or selection of process and outcome measures
5. Facilitate evaluation/selection of evidence-based practice guidelines (e.g., for standing orders or as guidelines for physician ordering practice)
6. Facilitate or participate in the development of clinical/critical pathways or guidelines
7. Aid in evaluating the readiness to apply for external quality awards

B. Implementation and Evaluation

1. Participate on performance/quality improvement teams (i.e., as a coordinator or team member/leader/facilitator)
2. Evaluate team performance
3. Facilitate or participate in the credentialing and privileging process
4. Coordinate or participate in quality improvement projects
5. Participate in the process of organizational reviews or audits for:
 - a. safe medicine practices (medication usage evaluation)
 - b. medical records
 - c. mortality and morbidity review
 - d. infection prevention and control processes
 - e. peer review
 - f. patient advocacy (e.g., patient rights, ethics)
 - g. service quality (e.g., satisfaction results, complaints, employees)
6. Facilitate or participate in the process of departmental reviews (e.g., pathology, radiology, pharmacy, nursing)
7. Perform or coordinate risk management:
 - a. risk identification
 - b. risk analysis and evaluation
 - c. risk prevention

C. Education and Training

1. Design organizational performance/quality improvement training (e.g., quality, patient safety)
2. Provide training on performance/quality improvement, program development, and evaluation concepts
3. Evaluate effectiveness of performance/quality improvement training
4. Develop/provide survey preparation training (e.g., accreditation, licensure, or equivalent)

4. Patient Safety

28

A. Strategic

1. Facilitate assessment and development of the organization's patient safety culture
2. Identify applicability of external patient safety initiatives (e.g., regulatory, accreditation, WHO)
3. Facilitate the ongoing development and enhancement of a patient safety program
4. Link patient safety activities with strategic goals
5. Integrate patient safety concepts within the organization

B. Operational

1. Contribute to development and revision of a written plan for a patient safety program (e.g., risk register)
2. Determine how technology can enhance the patient safety program (e.g., CPOE, BCMA/barcoding, EMR, abduction/elopement security systems, human factors engineering)
3. Integrate patient safety initiatives into organizational activities
4. Participate in the process of patient safety goals review
5. Perform or coordinate risk management
 - a. incident report review
 - b. sentinel/unexpected event review
 - c. root cause analysis
 - d. failure mode and effects analysis