2023 Job Analysis Report of NBPHE Certified in Public Health (CPH) Examination

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Prepared for

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Contents

Abstract

Title: Job Task Analysis for the Certified Public Health Professional Examination

This abstract presents the findings of a job task analysis study conducted by the National Board of Public Health Examiners (NBPHE) to establish the knowledge and skills required for entry-level certified public health professionals. The study aimed to develop a content outline and examination blueprint for the Certified in Public Health (CPH) examination.

Through the collaboration of expert panels and a validation survey, ten major content areas encompassing 103 tasks were established. The criticality and frequency of each task were determined, ensuring their accuracy, relevance, and comprehensiveness. The survey, distributed to current and former public health professionals, generated 2,091 responses out of 4,768, which met the inclusion criteria and were included in the analysis. These findings provide a comprehensive understanding of the essential domains and tasks necessary for competent practice in the field of public health.

The study employed a top-down approach, using survey responses to allocate domain-level percentages and distributed across task statements. Following a rigorous review process, 95 task statements were included in the final content outline.

Reliability analysis yielded a coefficient of 0.98 for both frequency and criticality ratings, demonstrating internal consistency. Survey results validated the job analysis meeting, confirming the accuracy of the defined domains and tasks for entry-level certified in public health professional. The task ratings were measured on 5- and 6-point scales with higher ratings indicating higher criticality or frequency. The average frequency ratings ranged from 2.38 to 5.58 while the average criticality ratings ranged from 2.47 to 4.65.

These findings have implications for developing new examination forms aligned with the test specifications. By reclassifying items with updated domains and tasks the examination can effectively assess the competence of certified in public health professional.

Introduction

In April 2022, the National Board of Public Health Examiners (NBPHE) assembled a group of public health experts to identify the key roles and responsibilities of entry-level certified public health professionals. The results of this process, known as a job analysis study, are used to guide the development of the certification exam.

The development of a high-quality credentialing or licensing program must follow certain logically sound and legally defensible procedures for developing examinations. In developing examinations for credentialing programs, Meazure Learning adheres to these standards, which are outlined in federal regulation (*Uniform Guidelines on Employee Selection Procedures*) and manuals such as *Standards for Educational and Psychological Testing* (published by the American Educational Research Association, 2014).

Before a content-valid examination is developed, the knowledge and skills necessary for competent practice in the profession must be determined. The process for identifying these knowledge areas is a job analysis study, which serves as a blueprint for examination development. The job analysis also helps to determine the type of examination, such as written or practical, to be developed to assess competence.

The primary reason for conducting a job analysis study is to ensure that an examination is content valid. Content validity is the most commonly applied and accepted validation strategy used in establishing certification programs today. In psychometric terms, validation is the way a test developer documents that the competence to be inferred from a test score is measured by the examination. A content-valid examination, then, evaluates knowledge required to function as a competent practitioner in the field.

Thus, a job analysis study is an integral part of ensuring that an examination is content-valid and that the aspects of the profession covered on the examination reflect the tasks performed in practice settings. For each knowledge area, the study identifies the importance and frequency of the knowledge and skill area. These ratings play an important role in determining the content of the examination.

NBPHE's job analysis study consisted of the following three phases, which are the focus of this report:

I. <u>Initial Development and Validation.</u> The job analysis panel identified the knowledge and skill areas essential to the performance of an entry-level certified public health professional.

II. <u>Validation Study</u>. Current certified public health professionals reviewed and validated the work of the job analysis panel.

III. <u>Test Specifications</u>. Based on the ratings gathered from the sample of professionals, the test specifications for the examination were developed.

Phase I: Initial Development and Validation

The job analysis meetings took place on April 20–21, 2022, in Washington, DC. Meazure Learning and NBPHE staff facilitated the meetings. A panel of 18 experts assembled by NBPHE in person with facilitators from Meazure Learning to delineate the role of the entry-level certified public health professional. The major function of the public health certificate program is to ensure competence and safety for individuals who are responsible for implementing and managing public health initiatives and interventions. The results of this job analysis study were used to create the test specifications to ensure that the knowledge areas measured by the examination reflect current practice in the field.

The panel assembled by the NPBHE was comprised of employees of a variety of types of public health organizations, such as health departments, federal agencies, NGOs, and universities. Additional panelists were selected to represent institutions outside the U.S. The panelists themselves had expertise in different areas of public health, representing the range of domains in the content outline.

Review of Eligibility Requirements and Target Audience

After reviewing the purpose of the meeting and clarifying panelist roles and responsibilities, the panel discussed the mission of the NBPHE CPH program, current trends in the industry, and relevant characteristics of certified public health professionals. To aid these discussions, panelists were asked to review the exam's eligibility requirements and past content outline. Following the group discussion and review of the materials, the panelists revised the previous target audience statement to the following:

> *A person Certified in Public Health (CPH) demonstrates a foundational understanding of public health and applies an evidence-based approach to improve the health of the public. A CPH has direct involvement in identifying, designing, implementing, and evaluating public health interventions in collaboration with a community. Public health professionals practice in governmental health agencies, community-based non-profit or private sector organizations, academic settings, or research institutes.*

Education Requirements

To earn the NBPHE certification, individuals must:

- Students – be currently attending a CEPH-accredited graduate school or program
- Alumni – have completed all degree requirements at a CEPH-accredited graduate school or program
- Work Experience –
  1. have at least a bachelor's degree and at least five years' public health work experience

     OR

  2. have at least a master's degree and at least three years' public health work experience

Domain Development

The first step to develop a new content outline was to review the major responsibilities or duties that characterize the practice of a certified public health professional (i.e., performance domains) that were developed in previous job analysis studies. Panelists were asked to assess the currency and relevancy of the domains and add, edit, or remove domains as needed. The panel determined that the profession could be divided into the following ten major content areas:

1. Data and Informatics
2. Communication
3. Leadership
4. Law and Ethics
5. Disease Prevention and Injury Reduction
6. Community Engagement
7. Program Planning and Evaluation
8. Program and Resource Management
9. Policy and Advocacy
10. Health Equity and Social Justice

Task and Knowledge Statement Development

Panelists received instruction about developing high-quality task statements. Documentation regarding task statement development was also provided in the meeting workbook. The panel was asked to review and revise the existing task statements from previous job analysis studies or develop new statements. Tasks underwent revision to varying degrees. Some tasks were reworded, removed, or moved to more appropriate domains based on the domain revision. The panel's work resulted in a final set of 103 tasks, which can be seen in Table 2 of this report.

Phase II: Validation Study

Following the completion of the job analysis meeting, a validation survey was conducted to validate the domains and tasks identified by the panel using a larger sample of public health professionals. Meazure Learning, in collaboration with NBPHE, facilitated the development of the survey. The survey tool underwent further review by the JTA panel, which resulted in a consensus to utilize a frequency scale ranging from 1 to 6 and a criticality scale ranging from 1 to 5. For a copy of the online survey, please refer to Appendix B.

Survey Design

Using the domains, and task statements identified by the job analysis panel, Meazure Learning developed a three-part survey. The first section of the survey asked respondents to evaluate each task using the two scales revised by the job analysis panel: frequency and criticality. The scale anchors are listed below as a reference.

> **Frequency:** How often do you perform this task?
>> 1 = Never
>> 2 = Every few years
>> 3 = Every few months to yearly
>> 4 = Every few weeks to monthly
>> 5 = Every few days to weekly
>> 6 = Daily

> **Criticality:** How important is this task to your job?
>> 1 = Not important
>> 2 = Minimally important
>> 3 = Moderately important
>> 4 = Substantially important
>> 5 = Critically important

The second section of the survey asked respondents to consider the ten domains and provide the percentage of the examination that should be devoted to each domain, given that the goal is to develop an exam in which the domains that are most important to the role are weighted the most heavily. The final part of the survey asked for demographic information from the respondents to ensure a representative response and completion by appropriately qualified individuals.

Survey Distribution

NBPHE distributed a survey link to current and former public health professionals, seeking their evaluation, validation, and feedback on the domain and task list identified by the job analysis panel. Recipients were also requested to forward the survey to relevant individuals within their respective organizations and academic institutions. The survey data for this study were collected utilizing the SurveyMonkey platform, a widely used online survey tool. Out of the 4,768 recipients who responded, a total of 2,091 responses were included in the data analysis, meeting the criteria of having answered 180 or more of the survey questions. It is important to note that not all individuals responded to every question, resulting in varying response counts for each specific question.

Characteristics of the Sample

The survey respondents were asked to provide information on different demographic variables, including gender, level of education, and employment status. All percentages are based on the number of respondents who answered the question. Additional tables of demographic information can be found in Appendix C.

The majority of respondents work in the United States (86.42%) and are currently employed in public health (87.10%). Close to half (40.91%) of respondents reported that they are or have been Certified in Public Health (CPH). Table 1 provides information on the gender respondents identify with as well as current public health employment level. The table presents a summary of gender distribution and current employment levels within the public health field based on survey responses. Among male respondents, the majority were found in mid-level (9.04%) and senior-level (8.13%) positions, followed by entry-level (2.74%) and consultant (2.64%) roles. For women respondents, the highest representation was observed in mid-level positions (33.42%), followed by senior-level (14.78%), entry-level (10.56%), and consultant (4.52%) positions. Respondents with other gender identities had smaller representation across all employment levels (ranging from 0.20% to 0.76%). A small percentage of respondents preferred not to disclose their gender or fell into the student or other categories. Overall, the mid-level position had the highest representation (43.52%), followed by senior-level (23.26%), entry-level (13.81%), and consultant (7.41%) positions. The clinical, student, and other categories had lower overall representation (5.74%, 3.45%, and 2.79% respectively). Overall, the table shows that many of the respondents identify as a woman and almost half of respondents currently work a mid-level public health job.

Table 1. Characteristics of Sample

Gender	Current public health employment level						
	Entry-level	Mid-level	Senior-level	Consultant	Clinical	Student	Other
Man	2.74%	9.04%	8.13%	2.64%	1.83%	1.02%	0.56%
Woman	10.56%	33.42%	14.78%	4.52%	3.81%	2.34%	2.13%
Some other gender identity	0.36%	0.76%	0.20%	0.10%	0.00%	0.10%	0.10%
Prefer not to answer	0.15%	0.30%	0.15%	0.15%	0.10%	0.00%	0.00%
Total	13.81%	43.52%	23.26%	7.41%	5.74%	3.45%	2.79%

Analysis of Ratings

Reliability Analysis

The reliability of the scales was assessed to determine how consistently the survey questions covered the content area of interest. Reliability was measured by internal consistency (Cronbach's alpha) using the respondents' ratings of frequency and criticality for each task. Reliability coefficients range from 0 to 1 and should be above 0.70 to be judged as adequate. Reliability values below 0.70 might indicate an unacceptable amount of measurement error.

The reliability of the frequency and criticality ratings were 0.98 and 0.98, respectively. These values exceeded the critical value of 0.70, indicating that the measurement error is sufficiently small to use these ratings in the computation of the domain and task weights. The reliability values obtained for both the frequency and criticality ratings, 0.98 each, demonstrate an exceptional level of reliability. These values indicate a near-perfect agreement among respondents, which is unusual to observe.

Task Ratings

A six-point scale (1 to 6) was used for the frequency ratings with a "6" representing the highest rating and a five-point scale (1-5) was used for the criticality ratings, with a "5" representing the highest rating. The frequency of the task refers to the time that the entry-level certified public health professional spends performing the task. Respondents were asked to estimate the amount of time spent performing duties associated with each area by selecting the response that best exemplifies the rating for each task. Average frequency ratings ranged from 2.38 to 5.58. This indicates that task ratings ranged from being performed every few years to daily.

Participants were also asked to rate each task on a rating of criticality, or the degree of harm that would result if an entry-level certified public health professional was unable to competently perform the task. Average criticality ratings ranged from 2.47 to 4.65. This indicates that tasks ratings ranged from being minimally important to critically important.

Relative Importance

To quantify each task's relative importance to the certified public health professional, the relative importance was first calculated for each person by multiplying each person's frequency rating by criticality rating (Equation 1). Relative importance was then calculated by taking the average of the person level relative importance scores (Equation 2). Tasks with lower frequency and criticality ratings had lower relative importance scores than tasks with higher frequency and criticality ratings, which is consistent with the belief that tasks that are both critical and performed frequently are more important to the job and should be weighted more heavily on the exam. In addition to serving as an evaluative measure, the relative importance scores were also used in the development of the test specifications (Phase III). For the number of respondents selecting each response, see Appendix D.

Person Relative Importance Score = Person Frequency Rating * Person Criticality Rating (1)

Relative Importance Score = Mean (Person Relative Importance Score) (2)

Table 2 contains the average frequency, criticality, and relative importance ratings for each of the 103 tasks. In addition, Tables 3 and 4 contain the three highest-rated and three lowest-rated tasks, respectively, according to their relative importance scores. The tasks are categorized into different areas such as data analysis, communication, resource management, ethics, public health knowledge, partnership, evaluation, program management, and financial management. Each task is assigned a mean score and standard deviation (SD) for criticality and frequency, which indicates their importance and occurrence. The relative importance score reflects the overall significance of each task. For example, task 10100, "Differentiate between primary data and secondary data and their applications," has a mean criticality of 3.18, mean frequency of 3.64, and a relative importance score of 12.97.

Table 2. Descriptive Statistics of Frequency, Criticality, and Relative Importance Ratings

Task	Statement	Criticality Mean	SD	Frequency Mean	SD	Relative Importance
10100	Differentiate between primary data and secondary data and their applications	3.18	1.24	3.64	1.52	12.97
10200	Identify existing secondary data sources	3.27	1.20	3.69	1.41	13.35
10300	Identify validated instruments or methods for data collection	3.32	1.25	3.45	1.42	12.74
10400	Design data collection tools/surveys	3.45	1.21	3.36	1.31	12.61
10500	Recognize when and which statistical packages/software are needed to analyze data (e.g., GIS, Stata, SPSS, Tableau, NVivo)	2.89	1.41	2.94	1.64	10.33
10600	Conduct descriptive statistics commonly used to summarize data	3.41	1.32	3.58	1.52	13.77

Task	Statement	Criticality Mean	SD	Frequency Mean	SD	Relative Importance
10700	Interpret mortality, morbidity, prevalence, incidence, and risk data	3.35	1.35	3.53	1.57	13.47
10800	Interpret quantitative and qualitative results in public health studies or reports	3.57	1.25	3.89	1.47	15.27
10900	Identify the strengths and limitations of data collected from population health surveillance systems and registries	3.16	1.33	3.35	1.54	12.15
11000	Synthesize information from different sources or studies	3.65	1.18	4.01	1.42	15.88
11100	Create and interpret data visualizations (e.g., graphs, charts)	3.67	1.13	4.00	1.32	15.74
11200	Identify evidence-based models	3.27	1.22	3.43	1.40	12.48
11300	Use informatics principles and methods in the design and implementation of data systems	2.68	1.34	2.74	1.57	8.98
20100	Communicate in a responsive, responsible, and professional manner	4.65	0.70	5.58	0.94	26.40
20200	Identify communication needs and gaps	4.17	0.96	4.81	1.18	20.83
20300	Assess health literacy of populations served and apply health literacy concepts	3.51	1.26	3.71	1.55	14.47
20400	Develop and implement communication plans	3.51	1.22	3.64	1.48	14.06
20500	Incorporate culturally appropriate approaches into communications	3.96	1.15	4.32	1.51	18.32
20600	Use risk communication models/principles to address public health issues, emergencies, crises, and disasters	3.16	1.39	3.27	1.64	12.13
20700	Identify and utilize social, digital, and traditional media in public health communication	3.37	1.30	3.73	1.64	14.20
20800	Assess communications for effectiveness	3.55	1.24	3.82	1.58	15.00
20900	Apply ethical principles and analysis in developing communication plans and promotional initiatives	3.39	1.32	3.58	1.64	13.77
21000	Apply facilitation skills in interactions with individuals and groups	3.88	1.15	4.37	1.45	18.28
30100	Prioritize and justify allocation of resources	3.55	1.33	3.79	1.61	15.03
30200	Apply appropriate organizational change management concepts and skills	3.26	1.36	3.49	1.67	13.18
30300	Apply conflict management skills	3.65	1.19	4.00	1.48	15.88
30400	Implement team building skills and strategies to support and improve team performance	3.65	1.24	3.99	1.55	16.02
30500	Apply negotiation skills	3.35	1.30	3.70	1.61	14.01
30600	Establish and demonstrate standards of performance and accountability	3.80	1.17	4.25	1.51	17.42
30700	Utilize evidence or data to inform decision making and planning	4.12	1.02	4.62	1.29	19.95
30800	Prepare professional development plans for self or others	3.42	1.16	3.50	1.32	12.91

Task	Statement	Criticality Mean	Criticality SD	Frequency Mean	Frequency SD	Relative Importance
30900	Develop strategies for collaborative and inclusive problem solving, decision-making, and evaluation	3.72	1.13	4.09	1.42	16.34
31000	Develop capacity-building strategies at the individual, organizational, or community level	3.25	1.31	3.37	1.53	12.47
31100	Contribute to the development, implementation, and evaluation of a strategic plan for an organization or with a community in conjunction with key stakeholders	3.41	1.27	3.38	1.47	12.78
31200	Communicate an organizations or a community's mission, goals, values, and shared vision to stakeholders	3.43	1.28	3.56	1.52	13.64
31300	Create teams for implementing community health initiatives	2.91	1.42	2.84	1.56	9.96
31400	Develop, implement, and evaluate a continuous quality improvement plan	3.21	1.32	3.24	1.52	11.88
31500	Evaluate organizational performance in relation to strategic and defined goals	3.22	1.33	3.20	1.48	11.73
31600	Motivate others within an organization or community to operate effectively	3.62	1.26	4.11	1.58	16.48
31700	Adapt organizational processes during times of crisis to enable business continuity	3.21	1.39	3.16	1.58	11.69
31800	Encourage innovative solutions to current, persistent, and emerging problems	3.71	1.14	4.09	1.40	16.33
40100	Identify regulations regarding privacy, security, confidentiality (e.g., personal health information)	3.53	1.40	3.59	1.68	14.41
40200	Design and implement strategies to ensure compliance with laws and regulations governing the scope of one's legal authority	3.23	1.48	3.15	1.70	12.09
40300	Apply ethical analysis and principles to public health research, practice, and policy	3.54	1.37	3.76	1.68	15.07
40400	Apply ethical and equitable principles in the collection, maintenance, use, and dissemination of data and information	3.82	1.25	4.08	1.56	17.04
40500	Identify and manage potential, perceived, and actual conflicts of interest	3.28	1.34	3.43	1.56	12.78
40600	Advise on the ethical conduct of public health research, practice, and policy	2.94	1.48	2.91	1.66	10.45
40700	Identify the role of international health regulations in promoting and protecting public health	2.47	1.45	2.49	1.66	8.11
40800	Assess the health impacts of laws, policies, and regulations on public health	3.13	1.40	3.21	1.62	11.79
50100	Identify health hazards and assess their frequency and impact on public health	3.23	1.46	3.43	1.73	13.20
50200	Identify risk and protective factors for modes of transmission for infectious diseases and how they affect public health	3.14	1.54	3.29	1.82	12.69

Task	Statement	Criticality		Frequency		Relative
		Mean	SD	Mean	SD	Importance
50300	Identify risk and protective factors for non-infectious chronic diseases and how they affect public health	3.18	1.45	3.38	1.71	12.82
50400	Identify risk and protective factors for non-infectious environmental hazards and how they affect public health	2.97	1.48	3.11	1.74	11.37
50500	Identify risk and protective factors for mental and substance abuse disorders and how they affect public health	3.04	1.47	3.18	1.71	11.72
50600	Identify risk and protective factors of unintentional and intentional injury and how they affect public health	2.80	1.49	2.89	1.74	10.23
50700	Utilize public health emergency management principles to prepare for and respond to public health emergencies	2.93	1.49	2.92	1.68	10.53
60100	Identify opportunities to partner across sectors and related disciplines	3.66	1.23	3.92	1.48	15.70
60200	Identify and engage key stakeholders in problem solving and policy development	3.51	1.29	3.66	1.52	14.33
60300	Identify and engage key stakeholders for the planning, implementation, and evaluation of health problems, policies, and interventions	3.54	1.32	3.64	1.55	14.40
60400	Access and utilize the broader public health system across all sectors to ensure that policies, programs, and resources improve public health	3.18	1.39	3.26	1.65	12.17
60500	Identify, develop, and manage partnerships with governmental agencies that have the authority over public health responsibilities	3.33	1.41	3.43	1.69	13.29
60600	Implement strategies for collaboration and partnerships among diverse organizations to achieve common public health goals	3.47	1.33	3.59	1.59	14.07
60700	Engage the community in collective actions to improve health	3.30	1.42	3.32	1.65	12.75
60800	Evaluate the effectiveness of coalitions and partnerships in achieving public health objectives	3.05	1.41	3.01	1.59	10.87
70100	Develop and conduct formative, process, and outcome evaluations	3.31	1.33	3.23	1.47	12.10
70200	Determine when to use and apply quantitative, qualitative, and mixed evaluation methods	3.31	1.33	3.35	1.53	12.59
70300	Assess the quality and utility of evaluation reports	3.17	1.33	3.21	1.49	11.67
70400	Utilize evaluation results to enhance activities and program performance	3.39	1.31	3.38	1.43	12.78
70500	Apply project management principles for program planning, implementation, and evaluation	3.50	1.34	3.76	1.65	14.90
70600	Identify challenges of and opportunities for program implementation	3.55	1.26	3.76	1.50	14.75

| Task | Statement | Criticality | | Frequency | | Relative |
		Mean	SD	Mean	SD	Importance
70700	Ensure that program implementation occurs as intended	3.59	1.31	3.79	1.60	15.22
70800	Design and implement context-specific health interventions based upon analysis of community needs and assets	3.11	1.44	3.05	1.61	11.26
70900	Evaluate personnel, financial, and material resources	3.16	1.43	3.22	1.65	12.02
71000	Design public health interventions with a health equity lens (that incorporates such factors as gender, race, socioeconomic status, history, social class, migration, or culture) within public health systems	3.35	1.49	3.21	1.68	12.63
71100	Develop a community health strategy and plan based on needs and resource assessments	2.95	1.48	2.75	1.57	9.84
71200	Identify and engage appropriate partners for program planning, implementation, and evaluation	3.44	1.32	3.42	1.52	13.24
71300	Create SMART objectives and evaluation metrics for program planning, monitoring, and evaluation	3.28	1.37	3.21	1.52	12.00
80100	Develop budgets with justifications	3.04	1.52	2.66	1.42	9.59
80200	Manage operations and programs with current and forecasted resources (financial, personnel, material, etc.)	3.07	1.52	3.07	1.75	11.54
80300	Develop proposals to secure financial support	3.05	1.52	2.65	1.43	9.56
80400	Participate in the development and implementation of contracts or other agreements	3.04	1.42	2.88	1.53	10.28
80500	Identify methods for assuring program sustainability	3.05	1.43	2.89	1.51	10.39
80600	Give constructive feedback to others about their performance	3.32	1.36	3.51	1.57	13.25
80700	Implement a community health assessment and community health improvement plans	2.63	1.48	2.38	1.50	7.90
80800	Coordinate communication across project team members	3.89	1.20	4.42	1.55	18.63
80900	Contribute to the recruitment, management, and retention of appropriate personnel	3.09	1.46	3.01	1.65	11.07
81000	Utilize resources effectively and efficiently	3.98	1.17	4.68	1.54	20.02
90100	Navigate the governmental policy-making process	2.74	1.48	2.69	1.66	9.25
90200	Establish goals, timelines, funding, and partnerships for the implementation of policy initiatives	2.65	1.48	2.53	1.59	8.52
90300	Defend existing health policies, programs, and resources	2.85	1.47	2.83	1.63	9.93
90400	Educate policy and decision makers to improve health, social justice, and health equity	2.93	1.49	2.78	1.58	9.93
90500	Use scientific evidence, best practices, stakeholder input, and public opinion data to inform policy and program decision making	3.26	1.44	3.24	1.65	12.38

Task	Statement	Criticality Mean	SD	Frequency Mean	SD	Relative Importance
90600	Analyze political, social, and economic policies for their impact on health outcomes at local through global levels	2.71	1.46	2.68	1.64	9.15
90700	Analyze the feasibility and expected outcomes of policy options (e.g., health, fiscal, administrative, legal, ethical, social, political)	2.65	1.44	2.57	1.60	8.58
90800	Design policies and programs that ensure equitable distribution of health resources with attention to diversity, systemic racism, and discrimination	2.77	1.53	2.53	1.58	8.80
100100	Design and conduct culturally appropriate needs or resource assessments for communities or populations	3.09	1.47	2.86	1.58	10.51
100200	Assess how the values and perspectives of diverse individuals, communities and cultures influence individual and societal health behaviors, choices, and practices	3.32	1.39	3.30	1.61	12.65
100300	Incorporate culturally appropriate concepts and skills to engage, empower, interact, and collaborate with individuals from diverse backgrounds	3.60	1.33	3.79	1.61	15.23
100400	Analyze and address the availability, acceptability, and accessibility of public health services and activities across diverse populations	3.28	1.41	3.29	1.62	12.51
100500	Enable representatives of diverse communities to engage and participate in partnerships	3.27	1.45	3.19	1.61	12.18
100600	Identify and address the causes and effects of structural racism and discrimination on the health of individuals and communities	3.16	1.50	3.02	1.67	11.44
100700	Identify and address the factors that contribute to health disparities	3.48	1.40	3.49	1.63	13.88
100800	Apply environmental justice, social justice and human rights principles when addressing public health and community needs	3.23	1.49	3.24	1.74	12.48

In response to feedback received from the validation survey, the subject matter experts reviewed comments and incorporated new tasks suggested by the panelists that were deemed relevant and valuable. This iterative process ensured that worthwhile tasks identified by survey respondents, but not initially included in the survey, were included in the final assessment. The test specifications with a comprehensive list of tasks are located in Appendix E.

Table 3. Tasks with Highest Relative Importance

Task	Statement	Relative Importance
20100	Communicate in a responsive, responsible, and professional manner	26.40
20200	Identify communication needs and gaps	20.83
81000	Utilize resources effectively and efficiently	20.02

Table 4. Tasks with Lowest Relative Importance

Task	Statement	Relative Importance
80700	Implement a community health assessment and community health improvement plans	7.90
40700	Identify the role of international health regulations in promoting and protecting public health	8.11
90200	Establish goals, timelines, funding, and partnerships for the implementation of policy initiatives	8.52

Domain Weights

Survey respondents indicated the percentage of the examination that they believed should be devoted to assessing each domain. Table 5 summarizes the mean, standard deviation, minimum, and maximum scores for ten different domains. As shown in Table 5, the mean weights ranged from 8.01 (Domain 4) to 12.38 (Domain 1). Based on the results of Table 5, it can be inferred that a profession in public health requires expertise and attention across multiple domains. The results of this analysis were used to determine the potential test specifications for the exam (Phase III).

Table 5. Descriptive Statistics for the Domain Weights

Domain	Statement	Mean	Std	Min.	Max.
10000	Data and Informatics	12.38	8.67	0	94
20000	Communication	11.93	8.04	0	100
30000	Leadership	9.03	4.88	0	60
40000	Law and Ethics	8.01	4.71	0	75
50000	Disease Prevention and Injury Reduction	11.13	6.67	0	75
60000	Community Engagement	10.37	5.32	0	90
70000	Program Planning and Evaluation	10.63	5.36	0	70
80000	Program and Resource Management	8.82	4.51	0	45
90000	Policy and Advocacy	8.13	4.65	0	80
100000	Health Equity and Social Justice	9.58	6.71	0	100

Phase III: Test Specifications

The final phase of a job analysis study is the development of test specifications that identify the proportion of questions from each task that will appear on the examination. The certified public health examination will contain 175 multiple-choice items. To ensure a strong link between the job analysis study and the examination, information collected through the validation survey was used to calculate new test specifications.

Both top-down and bottom-up approaches were used to develop potential weights for the newly established content outline. In the top-down approach, the average of survey respondents' opinions regarding what percentage of the exam should be allocated to testing each domain serves as the domain-level percentage. Within each domain, the percentages for each task are based upon the relative importance ratings, which are used to distribute the total percentage for each domain across the tasks within that domain. Alternatively, the bottom-up approach is based entirely on the relative importance ratings. In this approach, the percentage of items allocated to each task is calculated by taking the average relative importance rating for every task and dividing it by the sum of the relative importance ratings for all tasks. Then, the domain percentages are determined by adding up the percentages associated with each task within that domain.

NBPHE considered the strengths and limitations of both methods. It was determined that the top-down approach was generally more appropriate for the examination.

The top-down and bottom-up approaches, as well as NBPHE's final decision regarding domain weights and resulting item counts, are shown in Table 6. It should be noted that because the task item allocations were not whole numbers, rounding was employed to produce test specifications with whole item number allocations. The final 2023 CPH test specifications can be found in Appendix E.

Table 6. Survey Domain Weights and Final Test Specifications

Statement	Top Down Percent	Top Down Count	Bottom Up Percent	Bottom Up Count	Final # of Items
Data and Informatics	0.12	21.67	0.13	21.98	22
Communication	0.12	20.87	0.12	21.68	21
Leadership	0.09	15.81	0.19	33.37	16
Law and Ethics	0.08	14.02	0.08	13.17	14
Disease Prevention and Injury Reduction	0.11	19.48	0.06	10.69	19
Community Engagement	0.10	18.15	0.08	13.93	18
Program Planning and Evaluation	0.11	18.60	0.12	21.37	19
Program and Resource Management	0.09	15.43	0.09	15.83	15
Policy and Advocacy	0.08	14.22	0.06	9.91	14
Health Equity and Social Justice	0.10	16.76	0.07	13.06	17

Conclusion

The National Board of Public Health Examiners (NBPHE) conducted a comprehensive job task analysis study to identify the key roles, responsibilities, and necessary knowledge and skills for an entry-level certified in public health professional. Through the participation of subject matter experts and a survey distributed to current and former public health professionals, a content outline comprising ten major content areas and 95 specific tasks was developed and validated.

The study employed reliable scales and measures, including internal consistency analysis using Cronbach's alpha, which indicated adequate reliability coefficients for frequency and criticality ratings. The survey data collected from 2,091 respondents provided insights into the relative importance of each task statement.

Based on the survey results, test specifications were developed using a top-down approach, allocating specific percentages of items at the domain level. The validation survey further supported the accuracy and relevance of the identified domains, tasks, and knowledge areas, reinforcing their alignment with the competency expectations of an entry-level certified public health professional.

Moving forward, the finalized test specifications will guide the creation of a new pool of examination items, ensuring the content coverage matches the identified knowledge and skill areas. This process will contribute to the continued enhancement of public health practice and the maintenance of competency among certified public health professionals.

Overall, this job task analysis study serves as a crucial step in identifying the necessary body of knowledge for entry-level certified public health professionals. By aligning examination content with these findings, the study supports the ongoing improvement of public health practice and the protection of population health.

Appendix A: Job Analysis Meeting Presentation

NBPHE 2022 CPH
JTA Presentation.pd

Appendix B: Job Analysis Survey

NBPHE CPH Survey
PDF.pdf

Appendix C: Demographic Statistics for Survey Respondents

What is your gender?	Percent	Count
Man	25.90	516
Woman	71.54	1425
Some other gender identity	1.61	32
Prefer not to answer	0.95	19
answered question		1992
skipped question		99

How do you personally identify yourself?	Percent	Count
American Indian/Alaska Native	1.46	24
Asian	7.58	125
Black or African-American	12.55	207
Native Hawaiian or Pacific Islander	2.00	33
White	70.53	1163
Two or More Races	5.88	97
answered question		1649
skipped question		442

Are you currently employed in public health?	Percent	Count
Yes	87.10	1728
No	12.90	256
answered question		1984
skipped question		107

Which of the following best describes the primary sector of your current employer?	Percent	Count
Education/Academia	20.04	399
Government agency (health department)	26.27	523
Government agency (other than health department)	10.25	204
Health care	17.08	340
Non-profit, Non-governmental organization, foundation, volunteer, or other service organization	15.37	306
Private, for-profit organization	7.08	141
Self-employed	1.96	39
Other, please specify	1.96	39
answered question		1991
skipped question		100

What is your current public health employment level?	Percent	Count
Entry-level	13.90	276
Mid-level	43.32	860
Senior-level	23.43	465
Consultant	7.36	146
Clinical	5.79	115
Student	3.43	68
Other, please specify	2.77	55
answered question		1985
skipped question		106

Have you ever been Certified in Public Health (CPH)?	Percent	Count
Yes	40.92	822
No	59.08	1187
answered question		2009
skipped question		82

Appendix D: Summary of Frequency and Criticality Ratings

Table D-1. Criticality Distribution of Responses for Criticality Scale

Task	Count Percent	Not important (1)	Minimally important (2)	Moderately important (3)	Substantially important (4)	Critically important (5)
10100	Count	252	341	608	540	342
	%	12.10	16.37	29.19	25.92	16.42
10200	Count	201	337	584	607	350
	%	9.67	16.21	28.09	29.20	16.84
10300	Count	235	273	581	572	418
	%	11.30	13.13	27.95	27.51	20.11
10400	Count	186	255	544	633	465
	%	8.93	12.24	26.12	30.39	22.32
10500	Count	495	346	458	432	343
	%	23.87	16.68	22.08	20.83	16.54
10600	Count	252	259	487	538	540
	%	12.14	12.48	23.46	25.92	26.01
10700	Count	288	270	474	522	524
	%	13.86	12.99	22.81	25.12	25.22
10800	Count	180	236	486	578	599
	%	8.66	11.35	23.38	27.80	28.81
10900	Count	328	322	510	518	397
	%	15.81	15.52	24.58	24.96	19.13
11000	Count	132	213	500	638	596
	%	6.35	10.25	24.05	30.69	28.67
11100	Count	106	208	527	656	581
	%	5.10	10.01	25.36	31.57	27.96
11200	Count	232	290	590	606	359
	%	11.17	13.96	28.41	29.18	17.28
11300	Count	586	342	518	417	213
	%	28.23	16.47	24.95	20.09	10.26
20100	Count	1	40	142	321	1578
	%	0.05	1.92	6.82	15.42	75.79
20200	Count	25	114	311	663	967
	%	1.20	5.48	14.95	31.88	46.49
20300	Count	204	226	507	584	555
	%	9.83	10.89	24.42	28.13	26.73
20400	Count	188	213	537	636	506

Task	Count Percent	Not important (1)	Minimally important (2)	Moderately important (3)	Substantially important (4)	Critically important (5)
	%	9.04	10.24	25.82	30.58	24.33
20500	Count	99	142	390	563	878
	%	4.78	6.85	18.82	27.17	42.37
20600	Count	381	274	483	503	437
	%	18.33	13.19	23.24	24.21	21.03
20700	Count	263	244	523	563	484
	%	12.66	11.75	25.18	27.11	23.30
20800	Count	200	178	530	621	550
	%	9.62	8.56	25.49	29.87	26.46
20900	Count	275	237	487	571	509
	%	13.23	11.40	23.42	27.47	24.48
21000	Count	122	132	391	659	777
	%	5.86	6.34	18.79	31.67	37.34
30100	Count	246	202	435	567	632
	%	11.82	9.70	20.89	27.23	30.36
30200	Count	333	243	517	514	469
	%	16.04	11.71	24.90	24.76	22.59
30300	Count	129	225	517	586	623
	%	6.20	10.82	24.86	28.17	29.95
30400	Count	182	175	466	611	642
	%	8.77	8.43	22.45	29.43	30.92
30500	Count	267	246	533	551	475
	%	12.89	11.87	25.72	26.59	22.92
30600	Count	129	143	471	616	721
	%	6.20	6.88	22.64	29.62	34.66
30700	Count	61	88	337	647	943
	%	2.94	4.24	16.23	31.17	45.42
30800	Count	169	224	659	616	407
	%	8.14	10.80	31.76	29.69	19.61
30900	Count	126	139	523	679	607
	%	6.08	6.70	25.22	32.74	29.27
31000	Count	307	248	555	546	420
	%	14.79	11.95	26.73	26.30	20.23
31100	Count	233	245	524	592	486
	%	11.20	11.78	25.19	28.46	23.37
31200	Count	230	247	502	595	505
	%	11.06	11.88	24.15	28.62	24.29

Task	Count Percent	Not important (1)	Minimally important (2)	Moderately important (3)	Substantially important (4)	Critically important (5)
31300	Count	539	255	472	476	331
	%	26.00	12.30	22.77	22.96	15.97
31400	Count	333	225	578	545	396
	%	16.03	10.83	27.83	26.24	19.07
31500	Count	341	225	539	568	402
	%	16.43	10.84	25.98	27.37	19.37
31600	Count	198	179	468	590	637
	%	9.56	8.64	22.59	28.47	30.74
31700	Count	382	222	518	491	460
	%	18.43	10.71	24.99	23.69	22.19
31800	Count	123	165	518	664	613
	%	5.90	7.92	24.87	31.88	29.43
40100	Count	281	227	395	464	707
	%	13.55	10.95	19.05	22.37	34.09
40200	Count	432	234	372	494	546
	%	20.79	11.26	17.90	23.77	26.28
40300	Count	261	206	453	469	690
	%	12.55	9.91	21.79	22.56	33.19
40400	Count	154	173	384	542	824
	%	7.41	8.33	18.49	26.10	39.67
40500	Count	285	306	515	483	483
	%	13.75	14.77	24.86	23.31	23.31
40600	Count	548	272	412	425	414
	%	26.46	13.13	19.89	20.52	19.99
40700	Count	814	303	379	300	266
	%	39.48	14.69	18.38	14.55	12.90
40800	Count	394	288	486	466	437
	%	19.02	13.91	23.47	22.50	21.10
50100	Count	423	205	439	472	532
	%	20.42	9.90	21.20	22.79	25.69
50200	Count	518	211	363	424	552
	%	25.05	10.20	17.55	20.50	26.69
50300	Count	437	226	425	489	497
	%	21.07	10.90	20.49	23.58	23.96
50400	Count	538	257	437	405	433
	%	25.99	12.42	21.11	19.57	20.92
50500	Count	500	244	449	427	449

Task	Count Percent	Not important (1)	Minimally important (2)	Moderately important (3)	Substantially important (4)	Critically important (5)
	%	24.17	11.79	21.70	20.64	21.70
50600	Count	634	265	422	372	371
	%	30.72	12.84	20.45	18.02	17.97
50700	Count	569	255	416	411	414
	%	27.55	12.35	20.15	19.90	20.05
60100	Count	164	194	465	611	638
	%	7.92	9.36	22.44	29.49	30.79
60200	Count	235	200	479	595	565
	%	11.33	9.64	23.10	28.69	27.24
60300	Count	246	195	445	582	608
	%	11.85	9.39	21.44	28.03	29.29
60400	Count	392	235	503	493	447
	%	18.94	11.35	24.30	23.82	21.59
60500	Count	360	201	447	512	551
	%	17.38	9.71	21.58	24.72	26.61
60600	Count	262	206	481	535	588
	%	12.64	9.94	23.21	25.82	28.38
60700	Count	376	206	440	504	542
	%	18.18	9.96	21.28	24.37	26.21
60800	Count	435	295	468	474	398
	%	21.01	14.25	22.61	22.90	19.23
70100	Count	305	234	498	589	451
	%	14.68	11.27	23.98	28.36	21.71
70200	Count	286	276	493	533	482
	%	13.82	13.33	23.82	25.75	23.29
70300	Count	339	269	554	514	396
	%	16.36	12.98	26.74	24.81	19.11
70400	Count	274	207	525	570	498
	%	13.21	9.98	25.31	27.48	24.01
70500	Count	268	189	457	550	604
	%	12.96	9.14	22.10	26.60	29.21
70600	Count	208	192	509	582	584
	%	10.02	9.25	24.53	28.05	28.14
70700	Count	241	162	444	581	645
	%	11.63	7.81	21.42	28.03	31.11
70800	Count	461	225	442	500	438
	%	22.31	10.89	21.39	24.20	21.20

Task	Count Percent	Not important (1)	Minimally important (2)	Moderately important (3)	Substantially important (4)	Critically important (5)
70900	Count	431	230	444	504	456
	%	20.87	11.14	21.50	24.41	22.08
71000	Count	418	171	370	482	624
	%	20.24	8.28	17.92	23.34	30.22
71100	Count	565	220	424	467	391
	%	27.33	10.64	20.51	22.59	18.92
71200	Count	274	200	462	595	534
	%	13.27	9.69	22.37	28.81	25.86
71300	Count	346	208	509	531	478
	%	16.70	10.04	24.57	25.63	23.07
80100	Count	552	210	397	434	480
	%	26.63	10.13	19.15	20.94	23.15
80200	Count	556	180	383	471	481
	%	26.85	8.69	18.49	22.74	23.23
80300	Count	552	213	384	433	489
	%	26.65	10.28	18.54	20.91	23.61
80400	Count	469	256	446	507	389
	%	22.69	12.39	21.58	24.53	18.82
80500	Count	477	243	439	512	399
	%	23.04	11.74	21.21	24.73	19.28
80600	Count	324	224	482	541	499
	%	15.65	10.82	23.29	26.14	24.11
80700	Count	750	255	371	394	295
	%	36.32	12.35	17.97	19.08	14.29
80800	Count	151	117	380	597	832
	%	7.27	5.63	18.30	28.74	40.06
80900	Count	490	215	424	502	439
	%	23.67	10.39	20.48	24.25	21.21
81000	Count	126	104	371	555	918
	%	6.08	5.01	17.89	26.76	44.26
90100	Count	645	307	392	380	343
	%	31.20	14.85	18.96	18.38	16.59
90200	Count	735	242	391	397	298
	%	35.63	11.73	18.95	19.24	14.44
90300	Count	601	243	437	431	355
	%	29.08	11.76	21.14	20.85	17.17
90400	Count	569	237	428	420	407

Task	Count Percent	Not important (1)	Minimally important (2)	Moderately important (3)	Substantially important (4)	Critically important (5)
	%	27.61	11.50	20.77	20.38	19.75
90500	Count	410	188	453	496	520
	%	19.84	9.10	21.92	24.00	25.16
90600	Count	675	254	444	381	309
	%	32.72	12.31	21.52	18.47	14.98
90700	Count	703	257	430	402	267
	%	34.14	12.48	20.88	19.52	12.97
90800	Count	702	210	379	400	373
	%	34.01	10.17	18.36	19.38	18.07
100100	Count	495	199	429	470	452
	%	24.21	9.73	20.98	22.98	22.10
100200	Count	338	214	459	521	514
	%	16.52	10.46	22.43	25.46	25.12
100300	Count	238	169	437	533	669
	%	11.63	8.26	21.36	26.05	32.70
100400	Count	376	198	454	516	501
	%	18.39	9.68	22.20	25.23	24.50
100500	Count	411	177	423	509	521
	%	20.14	8.67	20.73	24.94	25.53
100600	Count	477	208	390	441	528
	%	23.34	10.18	19.08	21.58	25.83
100700	Count	309	180	415	494	642
	%	15.15	8.82	20.34	24.22	31.47
100800	Count	446	188	405	456	546
	%	21.85	9.21	19.84	22.34	26.75

Table D-2. Frequency Distribution of Responses for Frequency Scale

Task	Count Percent	Never (1)	Every few years (2)	Every few months to yearly (3)	Every few weeks to monthly (4)	Every few days to weekly (5)	Daily (6)
10100	Count	269	177	515	468	399	261
	%	12.88	8.47	24.65	22.40	19.10	12.49
10200	Count	208	181	508	540	451	194
	%	9.99	8.69	24.40	25.94	21.66	9.32
10300	Count	263	217	599	502	329	173

Task	Count Percent	Never (1)	Every few years (2)	Every few months to yearly (3)	Every few weeks to monthly (4)	Every few days to weekly (5)	Daily (6)
	%	12.63	10.42	28.76	24.10	15.79	8.31
10400	Count	224	255	666	541	283	112
	%	10.76	12.25	32.00	26.00	13.60	5.38
10500	Count	623	257	423	350	272	159
	%	29.89	12.33	20.30	16.79	13.05	7.63
10600	Count	305	170	464	517	405	222
	%	14.64	8.16	22.28	24.82	19.44	10.66
10700	Count	330	201	462	460	387	242
	%	15.85	9.65	22.19	22.09	18.59	11.62
10800	Count	201	154	417	515	493	302
	%	9.65	7.40	20.03	24.74	23.68	14.51
10900	Count	374	226	490	450	380	163
	%	17.95	10.85	23.52	21.60	18.24	7.83
11000	Count	151	138	429	531	498	337
	%	7.25	6.62	20.59	25.48	23.90	16.17
11100	Count	126	114	445	615	510	271
	%	6.05	5.48	21.38	29.55	24.51	13.02
11200	Count	265	221	571	528	359	135
	%	12.75	10.63	27.47	25.40	17.27	6.49
11300	Count	701	252	423	370	232	96
	%	33.80	12.15	20.40	17.84	11.19	4.63
20100	Count	1	43	101	105	191	1644
	%	0.05	2.06	4.84	5.04	9.16	78.85
20200	Count	32	61	206	388	691	708
	%	1.53	2.92	9.88	18.60	33.13	33.94
20300	Count	266	181	463	474	389	310
	%	12.77	8.69	22.23	22.76	18.67	14.88
20400	Count	260	163	506	510	414	228
	%	12.49	7.83	24.32	24.51	19.89	10.96
20500	Count	142	104	369	422	428	616
	%	6.82	5.00	17.73	20.28	20.57	29.60
20600	Count	471	220	419	434	328	213
	%	22.59	10.55	20.10	20.82	15.73	10.22
20700	Count	327	162	358	471	430	336
	%	15.69	7.77	17.18	22.60	20.63	16.12
20800	Count	271	137	426	483	396	369

Task	Count Percent	Never (1)	Every few years (2)	Every few months to yearly (3)	Every few weeks to monthly (4)	Every few days to weekly (5)	Daily (6)
	%	13.02	6.58	20.46	23.20	19.02	17.72
20900	Count	368	152	453	433	371	308
	%	17.65	7.29	21.73	20.77	17.79	14.77
21000	Count	140	102	258	462	580	540
	%	6.72	4.90	12.39	22.19	27.86	25.94
30100	Count	306	114	430	457	425	353
	%	14.68	5.47	20.62	21.92	20.38	16.93
30200	Count	405	188	403	441	355	290
	%	19.45	9.03	19.36	21.18	17.05	13.93
30300	Count	174	138	427	507	451	384
	%	8.36	6.63	20.52	24.36	21.67	18.45
30400	Count	238	114	359	486	492	393
	%	11.43	5.48	17.24	23.34	23.63	18.88
30500	Count	314	170	399	446	447	302
	%	15.11	8.18	19.20	21.46	21.51	14.53
30600	Count	161	81	395	454	428	561
	%	7.74	3.89	18.99	21.83	20.58	26.97
30700	Count	66	74	240	458	608	634
	%	3.17	3.56	11.54	22.02	29.23	30.48
30800	Count	203	141	800	450	323	162
	%	9.76	6.78	38.48	21.65	15.54	7.79
30900	Count	159	105	373	561	522	358
	%	7.65	5.05	17.95	27.00	25.12	17.23
31000	Count	372	194	519	468	350	179
	%	17.87	9.32	24.93	22.48	16.81	8.60
31100	Count	274	297	568	440	309	192
	%	13.17	14.28	27.31	21.15	14.86	9.23
31200	Count	287	196	500	489	375	234
	%	13.79	9.42	24.03	23.50	18.02	11.24
31300	Count	644	215	511	375	219	119
	%	30.92	10.32	24.53	18.00	10.51	5.71
31400	Count	401	226	553	449	291	163
	%	19.25	10.85	26.55	21.56	13.97	7.83
31500	Count	408	185	622	456	268	142
	%	19.61	8.89	29.89	21.91	12.88	6.82
31600	Count	237	92	300	506	460	486

Task	Count Percent	Never (1)	Every few years (2)	Every few months to yearly (3)	Every few weeks to monthly (4)	Every few days to weekly (5)	Daily (6)
	%	11.39	4.42	14.42	24.32	22.10	23.35
31700	Count	468	245	495	413	276	181
	%	22.52	11.79	23.82	19.87	13.28	8.71
31800	Count	141	115	401	552	506	369
	%	6.77	5.52	19.24	26.49	24.28	17.71
40100	Count	338	201	504	371	265	401
	%	16.25	9.66	24.23	17.84	12.74	19.28
40200	Count	541	225	465	334	257	259
	%	26.00	10.81	22.35	16.05	12.35	12.45
40300	Count	316	164	426	426	301	449
	%	15.18	7.88	20.46	20.46	14.46	21.57
40400	Count	197	125	393	470	383	513
	%	9.47	6.01	18.89	22.59	18.40	24.65
40500	Count	342	200	548	449	280	258
	%	16.47	9.63	26.38	21.62	13.48	12.42
40600	Count	668	216	422	355	253	167
	%	32.10	10.38	20.28	17.06	12.16	8.02
40700	Count	960	199	323	282	174	141
	%	46.18	9.57	15.54	13.56	8.37	6.78
40800	Count	468	230	483	410	272	216
	%	22.51	11.06	23.23	19.72	13.08	10.39
50100	Count	467	163	423	395	307	327
	%	22.43	7.83	20.32	18.97	14.75	15.71
50200	Count	579	184	349	326	312	333
	%	27.80	8.83	16.75	15.65	14.98	15.99
50300	Count	493	151	401	409	358	271
	%	23.67	7.25	19.25	19.64	17.19	13.01
50400	Count	614	193	395	348	297	234
	%	29.51	9.27	18.98	16.72	14.27	11.24
50500	Count	580	168	404	399	294	235
	%	27.88	8.08	19.42	19.18	14.13	11.30
50600	Count	742	193	363	318	261	201
	%	35.71	9.29	17.47	15.30	12.56	9.67
50700	Count	644	265	418	324	225	203
	%	30.98	12.75	20.11	15.58	10.82	9.76
60100	Count	189	138	457	511	431	356

Task	Count Percent	Never (1)	Every few years (2)	Every few months to yearly (3)	Every few weeks to monthly (4)	Every few days to weekly (5)	Daily (6)
	%	9.08	6.63	21.95	24.54	20.70	17.10
60200	Count	282	155	463	535	378	269
	%	13.54	7.44	22.24	25.70	18.16	12.92
60300	Count	293	171	471	486	382	276
	%	14.09	8.23	22.66	23.38	18.37	13.28
60400	Count	475	216	442	406	312	226
	%	22.87	10.40	21.28	19.55	15.02	10.88
60500	Count	446	182	401	427	331	290
	%	21.47	8.76	19.31	20.56	15.94	13.96
60600	Count	318	201	430	486	359	286
	%	15.29	9.66	20.67	23.37	17.26	13.75
60700	Count	452	203	447	436	287	252
	%	21.76	9.77	21.52	20.99	13.82	12.13
60800	Count	545	244	510	372	234	171
	%	26.25	11.75	24.57	17.92	11.27	8.24
70100	Count	371	218	629	442	258	161
	%	17.85	10.49	30.25	21.26	12.41	7.74
70200	Count	363	204	540	481	292	200
	%	17.45	9.81	25.96	23.13	14.04	9.62
70300	Count	398	221	562	478	271	144
	%	19.19	10.66	27.10	23.05	13.07	6.94
70400	Count	319	170	596	539	303	151
	%	15.35	8.18	28.68	25.94	14.58	7.27
70500	Count	317	148	400	457	349	398
	%	15.32	7.15	19.33	22.09	16.87	19.24
70600	Count	242	148	462	524	412	285
	%	11.67	7.14	22.29	25.28	19.87	13.75
70700	Count	285	150	387	504	388	361
	%	13.73	7.23	18.65	24.29	18.70	17.40
70800	Count	543	230	476	393	264	167
	%	26.19	11.10	22.96	18.96	12.74	8.06
70900	Count	520	149	465	436	297	208
	%	25.06	7.18	22.41	21.01	14.31	10.02
71000	Count	515	203	447	392	282	239
	%	24.78	9.77	21.51	18.86	13.57	11.50
71100	Count	661	317	429	342	197	128

Task	Count Percent	Never (1)	Every few years (2)	Every few months to yearly (3)	Every few weeks to monthly (4)	Every few days to weekly (5)	Daily (6)
	%	31.87	15.28	20.68	16.49	9.50	6.17
71200	Count	329	203	540	479	313	211
	%	15.86	9.78	26.02	23.08	15.08	10.17
71300	Count	412	218	570	437	269	166
	%	19.88	10.52	27.51	21.09	12.98	8.01
80100	Count	664	205	675	321	140	76
	%	31.91	9.85	32.44	15.43	6.73	3.65
80200	Count	660	144	389	398	244	243
	%	31.76	6.93	18.72	19.15	11.74	11.69
80300	Count	658	280	584	319	172	66
	%	31.65	13.47	28.09	15.34	8.27	3.17
80400	Count	572	257	546	386	183	133
	%	27.54	12.37	26.29	18.58	8.81	6.40
80500	Count	562	260	529	407	209	113
	%	27.02	12.50	25.43	19.57	10.05	5.43
80600	Count	370	122	499	492	360	237
	%	17.79	5.87	23.99	23.65	17.31	11.39
80700	Count	877	341	384	240	155	84
	%	42.14	16.39	18.45	11.53	7.45	4.04
80800	Count	186	78	231	418	506	657
	%	8.96	3.76	11.13	20.13	24.37	31.65
80900	Count	578	232	492	343	231	203
	%	27.80	11.16	23.67	16.50	11.11	9.76
81000	Count	146	75	227	314	399	915
	%	7.03	3.61	10.93	15.13	19.22	44.08
90100	Count	775	276	374	293	197	164
	%	37.28	13.28	17.99	14.09	9.48	7.89
90200	Count	870	219	390	311	180	106
	%	41.91	10.55	18.79	14.98	8.67	5.11
90300	Count	681	244	429	355	207	161
	%	32.79	11.75	20.65	17.09	9.97	7.75
90400	Count	677	235	500	323	211	131
	%	32.60	11.31	24.07	15.55	10.16	6.31
90500	Count	487	197	479	401	279	236
	%	23.42	9.48	23.04	19.29	13.42	11.35
90600	Count	787	227	395	328	199	140

Task	Count Percent	Never (1)	Every few years (2)	Every few months to yearly (3)	Every few weeks to monthly (4)	Every few days to weekly (5)	Daily (6)
	%	37.91	10.93	19.03	15.80	9.59	6.74
90700	Count	831	262	378	297	190	118
	%	40.03	12.62	18.21	14.31	9.15	5.68
90800	Count	851	247	396	293	177	109
	%	41.05	11.92	19.10	14.13	8.54	5.26
100100	Count	607	267	468	354	226	131
	%	29.57	13.01	22.80	17.24	11.01	6.38
100200	Count	411	246	442	442	284	228
	%	20.02	11.98	21.53	21.53	13.83	11.11
100300	Count	282	154	399	468	366	376
	%	13.79	7.53	19.51	22.89	17.90	18.39
100400	Count	454	180	459	443	302	211
	%	22.16	8.78	22.40	21.62	14.74	10.30
100500	Count	491	184	458	462	270	188
	%	23.92	8.96	22.31	22.50	13.15	9.16
100600	Count	595	216	426	364	248	198
	%	29.07	10.55	20.81	17.78	12.12	9.67
100700	Count	375	186	431	452	335	272
	%	18.28	9.07	21.01	22.04	16.33	13.26
100800	Count	540	191	390	383	263	283
	%	26.34	9.32	19.02	18.68	12.83	13.80

Appendix E: 2023 CPH Test Specifications

Classification	Statement	Percent	Count
010000	Data, Analytics, and Informatics	0.12	22
010100	Differentiate between primary data and secondary data and their applications		
010200	Identify existing secondary data sources		
010300	Identify validated instruments or methods for data collection		
010400	Design data collection tools/surveys		
010500	Perform data cleaning and management to ensure validity and reliability (Added by comments)		
010600	Conduct descriptive statistics commonly used to summarize data		
010700	Interpret mortality, morbidity, prevalence, incidence, and risk data		
010800	Interpret quantitative and qualitative results in public health studies or reports		
010900	Identify the strengths and limitations of data collected from population health surveillance systems and registries		
011000	Synthesize information from different sources or studies		
011100	Create and interpret data visualizations (e.g., graphs, charts)		
011200	Understand the importance of informatics in public health		
020000	Communication	0.12	21
020100	Communicate in a responsive, responsible, and professional manner		
020200	Identify communication needs and gaps		
020300	Assess health literacy of populations served and apply health literacy concepts		
020400	Develop and implement communication plans		
020500	Incorporate culturally appropriate approaches into communications		
020600	Use risk communication models/principles to address public health issues, emergencies, crises, and disasters		
020700	Identify and utilize social, digital, and traditional media in public health communication		
020800	Assess communications for effectiveness		
020900	Apply ethical principles and analysis in developing communication plans and promotional initiatives		
021000	Apply facilitation skills in interactions with individuals and groups		
021100	Translate data for dissemination across a variety of audiences		
030000	Leadership	0.09	16
030100	Prioritize and justify allocation of resources		
030200	Apply appropriate organizational change management concepts and skills		
030300	Apply conflict management skills		
030400	Implement team building skills and strategies to support and improve team performance		
030500	Apply negotiation skills		
030600	Establish and demonstrate standards of performance and accountability		

Classification	Statement	Percent	Count
030700	Utilize evidence or data to inform decision making and planning		
030800	Develop strategies for collaborative and inclusive problem solving, decision-making, and evaluation		
030900	Develop capacity-building strategies at the individual, organizational, or community level		
031000	Contribute to the development, implementation, and evaluation of a strategic plan for an organization or with a community in conjunction with key stakeholders		
031100	Communicate an organization's or a community's mission, goals, values, and shared vision to stakeholders		
031200	Develop, implement, and evaluate a continuous quality improvement plan		
031300	Evaluate organizational performance in relation to strategic and defined goals		
031400	Motivate others within an organization or community to operate effectively		
031500	Encourage innovative solutions to current, persistent, and emerging problems		
040000	Law and Ethics	0.08	14
040100	Identify regulations regarding privacy, security, confidentiality (e.g., personal health information)		
040200	Design and implement strategies to ensure compliance with laws and regulations governing the scope of one's legal authority		
040300	Apply ethical analysis and principles to public health research, practice, and policy		
040400	Apply ethical and equitable principles in the collection, maintenance, use, and dissemination of data and information		
040500	Identify and manage potential, perceived, and actual conflicts of interest		
040600	Identify the role of international health regulations in promoting and protecting public health		
040700	Assess the health impacts of laws, policies, and regulations on public health		
050000	Disease and Injury Prevention	0.11	19
050100	Identify health hazards and assess their frequency and impact on public health		
050200	Identify risk and protective factors for modes of transmission for infectious diseases and how they affect public health		
050300	Identify risk and protective factors for non-infectious chronic diseases and how they affect public health		
050400	Identify risk and protective factors for non-infectious environmental hazards and how they affect public health		
050500	Identify risk and protective factors for mental health and substance use disorders and how they affect public health		
050600	Identify risk and protective factors of unintentional and intentional injury and how they affect public health		

Classification	Statement	Percent	Count
050700	Utilize public health emergency management principles to prepare for and respond to public health emergencies		
060000	Community Engagement and Partnerships	0.10	18
060100	Identify opportunities to partner across sectors and related disciplines		
060200	Identify and engage key stakeholders for the planning, implementation, and evaluation of health problems, policies, and interventions		
060300	Access and utilize the broader public health system across all sectors to ensure that policies, programs, and resources improve public health		
060400	Identify, develop, and manage partnerships with governmental agencies that have the authority over public health responsibilities		
060500	Implement strategies for collaboration and partnerships among diverse organizations to achieve common public health goals		
060600	Engage the community in collective actions to improve health		
060700	Evaluate the effectiveness of coalitions and partnerships in achieving public health objectives		
070000	Program Planning and Evaluation	0.11	19
070100	Develop and conduct formative, process, and outcome evaluations		
070200	Determine when to use and apply quantitative, qualitative, and mixed evaluation methods		
070300	Assess the quality and utility of evaluation reports		
070400	Utilize evaluation results to enhance activities and program performance		
070500	Apply project management principles for program planning, implementation, and evaluation		
070600	Identify challenges of and opportunities for program implementation		
070700	Ensure that program implementation occurs as intended		
070800	Design and implement context-specific health interventions based upon analysis of community needs and assets		
070900	Evaluate personnel, financial, and material resources		
071000	Design public health interventions with a health equity lens		
071100	Create objectives and evaluation metrics for program planning, monitoring, and evaluation		
080000	Program and Resource Management	0.09	15
080100	Develop budgets with justifications		
080200	Manage operations and programs with current and forecasted resources (financial, personnel, material, etc.)		
080300	Develop proposals to secure financial support		
080400	Participate in the development and implementation of contracts or other agreements		
080500	Identify methods for assuring program sustainability		
080600	Give constructive feedback to others about their performance		
080700	Implement a Community Health Assessment (CHA) and Community Health Improvement Plan (CHIP)		
080800	Coordinate communication across project team members*		

Classification	Statement	Percent	Count
080900	Contribute to the recruitment, management, and retention of appropriate personnel		
090000	Policy and Advocacy	0.08	14
090100	Navigate the governmental policy-making process		
090200	Establish goals, timelines, funding, and partnerships for the implementation of policy initiatives		
090300	Defend existing health policies, programs, and resources		
090400	Educate policy and decision makers to improve health, social justice, and health equity		
090500	Use scientific evidence, best practices, stakeholder input, and public opinion data to inform policy and program decision making		
090600	Analyze political, social, and economic policies for their impact on health outcomes at local through global levels		
090700	Analyze the feasibility and expected outcomes of policy options (e.g., health, fiscal, administrative, legal, ethical, social, political)		
090800	Design policies and programs that ensure equitable distribution of health resources with attention to diversity, systemic racism, and discrimination		
100000	Health Equity and Social Justice	0.10	17
100100	Design and conduct culturally appropriate needs or resource assessments with communities or populations		
100200	Assess how the values and perspectives of diverse individuals, communities and cultures influence individual and societal health behaviors, choices, and practices		
100300	Incorporate culturally appropriate concepts and skills to engage, empower, interact, and collaborate with individuals from diverse backgrounds		
100400	Analyze and address the availability, acceptability, and accessibility of public health services and activities across diverse populations		
100500	Enable representatives of diverse communities to engage and participate in partnerships		
100600	Identify and address the causes and effects of systemic racism and discrimination on the health of individuals and communities		
100700	Identify and address the factors that contribute to health disparities		
100800	Apply environmental justice, social justice and human rights principles when addressing public health and community needs		

Appendix F: 2023 CPH Content Outline

Type	Statement	Classification ID
Domain	Data, Analytics, and Informatics	010000
Task	Differentiate between primary data and secondary data and their applications	010100
Task	Identify existing secondary data sources	010200
Task	Identify validated instruments or methods for data collection	010300
Task	Design data collection tools/surveys	010400
Task	Perform data cleaning and management to ensure validity and reliability (Added by comments)	010500
Task	Conduct descriptive statistics commonly used to summarize data	010600
Task	Interpret mortality, morbidity, prevalence, incidence, and risk data	010700
Task	Interpret quantitative and qualitative results in public health studies or reports	010800
Task	Identify the strengths and limitations of data collected from population health surveillance systems and registries	010900
Task	Synthesize information from different sources or studies	011000
Task	Create and interpret data visualizations (e.g., graphs, charts)	011100
Task	Understand the importance of informatics in public health	011200
Domain	Communication	020000
Task	Communicate in a responsive, responsible, and professional manner	020100
Task	Identify communication needs and gaps	020200
Task	Assess health literacy of populations served and apply health literacy concepts	020300
Task	Develop and implement communication plans	020400
Task	Incorporate culturally appropriate approaches into communications	020500
Task	Use risk communication models/principles to address public health issues, emergencies, crises, and disasters	020600
Task	Identify and utilize social, digital, and traditional media in public health communication	020700
Task	Assess communications for effectiveness	020800
Task	Apply ethical principles and analysis in developing communication plans and promotional initiatives	020900
Task	Apply facilitation skills in interactions with individuals and groups	021000
Task	Translate data for dissemination across a variety of audiences	021100
Domain	Leadership	030000
Task	Prioritize and justify allocation of resources	030100
Task	Apply appropriate organizational change management concepts and skills	030200
Task	Apply conflict management skills	030300
Task	Implement team building skills and strategies to support and improve team performance	030400
Task	Apply negotiation skills	030500

Type	Statement	Classification ID
Task	Establish and demonstrate standards of performance and accountability	030600
Task	Utilize evidence or data to inform decision making and planning	030700
Task	Develop strategies for collaborative and inclusive problem solving, decision-making, and evaluation	030800
Task	Develop capacity-building strategies at the individual, organizational, or community level	030900
Task	Contribute to the development, implementation, and evaluation of a strategic plan for an organization or with a community in conjunction with key stakeholders	031000
Task	Communicate an organization's or a community's mission, goals, values, and shared vision to stakeholders	031100
Task	Develop, implement, and evaluate a continuous quality improvement plan	031200
Task	Evaluate organizational performance in relation to strategic and defined goals	031300
Task	Motivate others within an organization or community to operate effectively	031400
Task	Encourage innovative solutions to current, persistent, and emerging problems	031500
Domain	Law and Ethics	040000
Task	Identify regulations regarding privacy, security, confidentiality (e.g., personal health information)	040100
Task	Design and implement strategies to ensure compliance with laws and regulations governing the scope of one's legal authority	040200
Task	Apply ethical analysis and principles to public health research, practice, and policy	040300
Task	Apply ethical and equitable principles in the collection, maintenance, use, and dissemination of data and information	040400
Task	Identify and manage potential, perceived, and actual conflicts of interest	040500
Task	Identify the role of international health regulations in promoting and protecting public health	040600
Task	Assess the health impacts of laws, policies, and regulations on public health	040700
Domain	Disease and Injury Prevention	050000
Task	Identify health hazards and assess their frequency and impact on public health	050100
Task	Identify risk and protective factors for modes of transmission for infectious diseases and how they affect public health	050200
Task	Identify risk and protective factors for non-infectious chronic diseases and how they affect public health	050300
Task	Identify risk and protective factors for non-infectious environmental hazards and how they affect public health	050400
Task	Identify risk and protective factors for mental health and substance use disorders and how they affect public health	050500
Task	Identify risk and protective factors of unintentional and intentional injury and how they affect public health	050600
Task	Utilize public health emergency management principles to prepare for and respond to public health emergencies	050700
Domain	Community Engagement and Partnerships	060000

Type	Statement	Classification ID
Task	Identify opportunities to partner across sectors and related disciplines	060100
Task	Identify and engage key stakeholders for the planning, implementation, and evaluation of health problems, policies, and interventions	060200
Task	Access and utilize the broader public health system across all sectors to ensure that policies, programs, and resources improve public health	060300
Task	Identify, develop, and manage partnerships with governmental agencies that have the authority over public health responsibilities	060400
Task	Implement strategies for collaboration and partnerships among diverse organizations to achieve common public health goals	060500
Task	Engage the community in collective actions to improve health	060600
Task	Evaluate the effectiveness of coalitions and partnerships in achieving public health objectives	060700
Domain	Program Planning and Evaluation	070000
Task	Develop and conduct formative, process, and outcome evaluations	070100
Task	Determine when to use and apply quantitative, qualitative, and mixed evaluation methods	070200
Task	Assess the quality and utility of evaluation reports	070300
Task	Utilize evaluation results to enhance activities and program performance	070400
Task	Apply project management principles for program planning, implementation, and evaluation	070500
Task	Identify challenges of and opportunities for program implementation	070600
Task	Ensure that program implementation occurs as intended	070700
Task	Design and implement context-specific health interventions based upon analysis of community needs and assets	070800
Task	Evaluate personnel, financial, and material resources	070900
Task	Design public health interventions with a health equity lens	071000
Task	Create objectives and evaluation metrics for program planning, monitoring, and evaluation	071100
Domain	Program and Resource Management	080000
Task	Develop budgets with justifications	080100
Task	Manage operations and programs with current and forecasted resources (financial, personnel, material, etc.)	080200
Task	Develop proposals to secure financial support	080300
Task	Participate in the development and implementation of contracts or other agreements	080400
Task	Identify methods for assuring program sustainability	080500
Task	Give constructive feedback to others about their performance	080600
Task	Implement a Community Health Assessment (CHA) and Community Health Improvement Plan (CHIP)	080700
Task	Coordinate communication across project team members*	080800

Type	Statement	Classification ID
Task	Contribute to the recruitment, management, and retention of appropriate personnel	080900
Domain	Policy and Advocacy	090000
Task	Navigate the governmental policy-making process	090100
Task	Establish goals, timelines, funding, and partnerships for the implementation of policy initiatives	090200
Task	Defend existing health policies, programs, and resources	090300
Task	Educate policy and decision makers to improve health, social justice, and health equity	090400
Task	Use scientific evidence, best practices, stakeholder input, and public opinion data to inform policy and program decision making	090500
Task	Analyze political, social, and economic policies for their impact on health outcomes at local through global levels	090600
Task	Analyze the feasibility and expected outcomes of policy options (e.g., health, fiscal, administrative, legal, ethical, social, political)	090700
Task	Design policies and programs that ensure equitable distribution of health resources with attention to diversity, systemic racism, and discrimination	090800
Domain	Health Equity and Social Justice	100000
Task	Design and conduct culturally appropriate needs or resource assessments with communities or populations	100100
Task	Assess how the values and perspectives of diverse individuals, communities and cultures influence individual and societal health behaviors, choices, and practices	100200
Task	Incorporate culturally appropriate concepts and skills to engage, empower, interact, and collaborate with individuals from diverse backgrounds	100300
Task	Analyze and address the availability, acceptability, and accessibility of public health services and activities across diverse populations	100400
Task	Enable representatives of diverse communities to engage and participate in partnerships	100500
Task	Identify and address the causes and effects of systemic racism and discrimination on the health of individuals and communities	100600
Task	Identify and address the factors that contribute to health disparities	100700
Task	Apply environmental justice, social justice and human rights principles when addressing public health and community needs	100800

Appendix G: 2022 Panelist Qualifications

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Appendix H: Validation Survey Comments

X CPH Domain
Comments.xlsx