Job Analysis

Critical Care Pharmacy (BCCCP)

June 2026

Board of Pharmacy Specialties®

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Executive Summary

The Board of Pharmacy Specialties (BPS) performed a job analysis, a multi-method approach into defining a job role or competency area in terms of the relevant tasks and associated knowledge areas, in 2026 to develop the content outline and other specifications for the specialty certification examination for pharmacists who specialize in critical care pharmacy. In accordance with relevant professional and accreditation standards, the study consisted of three major phases:

1. Definition of tasks and knowledge areas
2. Development, administration, and analysis of a survey
3. Finalization of the exam content outline

This report provides evidence for the exam content outline developed and its applicability to the critical care pharmacy specialty practice area. The outcome of this study was the creation of an examination blueprint that will be used to construct the critical care pharmacy specialty certification examination such that it aligns with the competencies identified and in equal proportions across all forms (versions) of the examination.

Examination Content Domains		
1	Patient Assessment and Care Planning	22%
2	Pharmacotherapy for Critically Ill Patients	43%
3	Implementation, Outcomes, and Monitoring	23%
4	Professional Practice	12%

Introduction

The Board of Pharmacy Specialties (BPS) performed a job analysis in 2026 to develop the content outline and other specifications for the specialty certification examination for pharmacists who specialize in critical care pharmacy.

A job analysis[1], sometimes called a role delineation study or practice analysis in healthcare certification settings, is a multi-method approach to defining a job role or competency area in terms of the relevant tasks or work activities and the associated competencies (operationalized as knowledge, skills, and abilities) and/or other attributes. Indeed, job analysis can also be thought of as referring to a family of related approaches to establishing the foundations of content validity[2] for an assessment[3], in this case applied to the assessment of competencies associated with a specialty area in the licensed practice of pharmacy. A job analysis is considered a multi-method approach because it incorporates both qualitative and quantitative evidence in support of the definition the practice area in question. The job analysis consisted of three major phases:

1. Definition of tasks and knowledge areas, organized in a content outline format and completed by an assembled panel of qualified pharmacists who are currently engaged in critical care pharmacy
2. Development, administration, and analysis of a survey to other qualified pharmacists who are currently engaged in critical care pharmacy, requesting their ratings either endorsing the inclusion or exclusion of each task and knowledge area identified by the committee
3. Finalization of the exam content outline, completed by the assembled panel and with consideration given to the survey results to help determine the retention, discard, or editing of knowledge and task lists, as well as the relative weights assigned to each content area

The study described in this report was conducted according to the Standards for Educational & Psychological Testing[4] and applicable accreditation standards (NCCA[5] and ISO/IEC 17024[6]). The subsequent sections describe the methods, results, and outcomes of the study, complemented by appendices which describe the qualifications and professional characteristics of the subject matter experts who contributed to this study, the actual text of the survey administered, and the final exam content outline produced by this study.

[1] Sackett, P.R., Laczo, R.M. (2003). Job and Work Analysis. Handbook of Psychology.
[2] Cronbach, L.J., Meehl, P.E. (1955). Construct Validity in Psychological Tests. Psychological Bulletin, 52(4), 281-302.
[3] Kane, M.T. (2013). Validating the Interpretations and Uses of Test Scores. Journal of Educational Measurement, 50(1), 1-73.
[4] American Educational Research Association, the American Psychological Association, National Council on Measurement in Education. (2014). Standards for Educational & Psychological Testing.
[5] National Commission for Certifying Agencies. (2014). Standards for the Accreditation of Certification Programs.
[6] International Organization for Standardization, International Electrotechnical Commission. (2012). Conformity Assessment: General Requirements for Bodies Operating Certification of Persons.

1. Definition of Tasks and Knowledge

BPS assembled a panel that consisted of 20 subject-matter experts in critical care pharmacy, who were representative of the diversity of professional characteristics within the specialty with respect to practice setting, patient populations served, years of experience, and geographic dispersion within the United States. See Appendix A for the qualifications and professional characteristics of the job analysis panel.

The panel met via teleconference on two occasions to develop, define, and update the tasks performed and knowledge required to practice as a specialist in critical care pharmacy. The dates of the meetings were 4 February and 13 March 2026.

On the first session, the panelists were oriented to the objectives of the study and the meeting, and then were presented a draft examination content outline and list of associated tasks that drew from the outgoing examination content outline and the interview notes. See Appendix B for the presentation used to orient the job analysis panelists.

The panel developed 17 task statements that describe the work activities performed by a critical care pharmacist.

1	Evaluate patient medical history, medication reconciliation, present illness, clinical status, and other pertinent patient characteristics
2	Prioritize patient care based on integration of clinical status, clinical assessment findings, advanced critical care monitoring, medication regimen complexity, and other pertinent information
3	Engage with the interprofessional healthcare team in the management of medical emergencies
4	Develop individualized therapeutic plans in alignment with evidence-based medicine, practice guidelines, and goals of treatment
5	Collaborate with the interprofessional healthcare team, patient, and caregivers in the development of the goals of care
6	Facilitate the administration of medications to patients in alignment with availability, route, compatibility, stability, and medication-delivery technology
7	Monitor and evaluate individual patient progress toward goals of care and goals of treatment
8	Modify therapeutic plans in response to changes in patient clinical status, goals of care, goals of treatment, and other pertinent information
9	Develop and provide healthcare education to patients and caregivers
10	Participate in quality improvement and safety initiatives within critical care and pharmacy operations
11	Develop and evaluate organizational policies and practices in alignment with accreditation standards, regulatory requirements, and evidence-based medicine
12	Engage in professional critical care pharmacy advocacy by serving on interprofessional healthcare committees and contributing to healthcare initiatives
13	Develop medication use evaluation and formulary management strategies to improve cost effectiveness, resource utilization, and risk mitigation

14	Utilize health information technology, clinical informatics, and clinical decision support tools to optimize pharmacotherapeutic and healthcare decisions
15	Engage in professional development, continuing education, and scholarly activities
16	Provide education, mentorship, and/or support to healthcare professionals and learners
17	Participate in the development and integration of critical care pharmacy services

The panel identified four content domains that describe the key high-level components of critical care pharmacy. Across the three content domains, the panel developed 37 knowledge areas that describe specific job knowledge associated with the practice of critical care pharmacy. In some cases, the panelists wrote examples in parenthesis, which are meant to be non-exhaustive, to help better illustrate the intended scope of the knowledge area listed.

1	**Patient Assessment and Care Planning**
1.01	Triage and Prioritization
1.02	Medical Emergencies
1.03	Laboratory and Diagnostic Testing
1.04	Therapeutic Targets and Endpoints
1.05	Pharmacodynamics and Pharmacokinetics
1.06	Healthcare Access, Quality, and Equity
1.07	Shared Decision-Making and Patient Advocacy
1.08	Special Populations (e.g., pregnancy/peripartum, extremes in weight, immunocompromised)
2	**Pharmacotherapy for Critically Ill Patients**
2.01	Pharmacotherapy for Respiratory Conditions
2.02	Pharmacotherapy for Cardiovascular Conditions
2.03	Pharmacotherapy for Nephrology Conditions
2.04	Pharmacotherapy for Neurological Conditions
2.05	Pharmacotherapy for Gastroenterology Conditions
2.06	Pharmacotherapy for Toxicology
2.07	Pharmacotherapy for Infectious Diseases
2.08	Pharmacotherapy for Trauma and Dermatology
2.09	Pharmacotherapy for Hematology, Oncology, and Immunology
2.10	Pharmacotherapy for Endocrine Conditions
2.11	Pharmacotherapy for Hepatic Conditions
2.12	Pharmacotherapy for Supportive Care
2.13	Pharmacotherapy for End-of-Life Care
2.14	Pharmacotherapy for Patients with Organ Transplants
2.15	Fluids, Electrolytes, and Nutrition
3	**Implementation, Outcomes, and Monitoring**
3.01	Medical Therapies and Devices (e.g., ECMO, mechanical circulatory support, RRT, mechanical/assisted ventilation)
3.02	Medication Delivery (e.g., routes of administration, delivery devices, anatomic alterations)

3.03	Perioperative Care
3.04	Therapeutic Drug Monitoring
3.05	Physiologic Response Monitoring
3.06	Drug Interactions and Adverse Reactions
3.07	Interdisciplinary Care Coordination
3.08	Transitions of Care (e.g., medication reconciliation, disposition, stepdown, PICS)
4	**Professional Practice**
4.01	Medication Safety and Risk Mitigation
4.02	Pharmacoeconomics and Formulary Management
4.03	Informatics and Clinical Decision Support Systems
4.04	Healthcare Regulations and Standards (e.g., FDA, TJC, CMS, NIOSH, USP<800>)
4.05	Literature Evaluation (e.g., statistics, research methods, publications, applicability, IRB/IEC)
4.06	Quality Management and Process Improvement

The panel also refined a list of demographic questions to be provided to survey respondents which would help better understand the professional characteristics of the respondent sample, which is described in more detail in the next section.

Lastly, the panel engaged in a linkage analysis, which is an exercise to identify the inter-relationships among the knowledge areas and tasks. Each panelist was asked to individually develop a linkage matrix in which tasks are listed as columns and knowledge areas as rows, and an x-mark indicating that the knowledge area is required for performance of the task. Individual matrices were aggregated such that any proposed linkage (x-mark) by more than half of the panelists was counted in the final (consensus) linkage matrix.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1																	
1.01	X	X	X														
1.02	X	X	X														
1.03	X	X	X	X			X	X									
1.04		X	X	X	X		X	X									
1.05		X		X		X		X									
1.06									X			X					
1.07			X		X				X			X					
1.08	X	X	X	X				X									
2																	
2.01	X	X	X	X			X	X									
2.02	X	X	X	X			X	X									
2.03	X	X		X			X	X									
2.04	X	X	X	X			X	X									
2.05	X	X		X			X	X									

2.06	X	X	X	X			X	X								
2.07	X	X	X	X			X	X								
2.08	X	X	X	X			X	X								
2.09	X	X		X			X	X								
2.10	X	X		X			X	X								
2.11	X	X		X			X	X								
2.12	X	X	X	X			X	X								
2.13	X			X	X		X	X	X							
2.14	X	X		X			X	X								
2.15	X	X	X	X			X	X								
3																
3.01		X	X	X		X		X								
3.02			X	X		X		X	X							
3.03				X				X								
3.04		X		X			X	X								
3.05	X	X	X	X			X	X								
3.06	X	X	X	X		X	X	X		X						
3.07			X		X							X				X	
3.08	X				X				X								
4																	
4.01						X			X	X	X	X	X	X			X
4.02										X	X	X	X				X
4.03										X	X	X	X	X			X
4.04										X	X	X	X	X			X
4.05										X	X	X	X		X	X	X
4.06										X	X	X	X	X	X		X

2. Survey Administration and Analysis

A survey was created for the purpose of soliciting ratings of endorsement from the larger practitioner population. Survey results are used to validate the appropriateness of the knowledge areas and tasks developed by the panelists and to inform content weighting decisions. The survey was developed with the following components:

- Description of the purpose of the survey
- Definition of the target population identified by the specialty practice area
- Respondent ratings of endorsement for the task statements
- Respondent ratings of endorsement for the knowledge areas
- Demographic questions that assess survey respondents' professional qualifications
- Open field for any additional comments

The ratings of endorsement from the survey respondents were solicited using two scales: Importance and Frequency. Each scale consists of a prompt for task statement, prompt for knowledge areas, and numerical responses with an associated text anchor (description).

Importance	How important is this task to critical care pharmacy practice? How important is this knowledge area to critical care pharmacy practice?
0	not at all / not applicable
1	of very little importance
2	somewhat important
3	moderately important
4	very important
5	critically important
Frequency	How frequently is this task performed in critical care pharmacy practice? How frequently is this knowledge used in critical care pharmacy practice?
0	not at all / not applicable
1	very rarely
2	rarely
3	occasionally
4	often
5	very often

The survey was pilot tested with a sample that consisted of the job analysis panelists, the specialty examination council, and BPS staff persons. The pilot test was conducted during the dates of 24 March to 6 April 2026. Pilot testers did not identify any necessary changes. See Appendix C for a copy of the final survey text.

The survey was open and available from 7 April to 1 June 2026. All pharmacists who hold the BCCCP credential were directly invited via email to complete the online survey. The survey was also disseminated through the following affiliate organizations: American College of Clinical Pharmacy.

The survey yielded 137 usable responses. Responses were not used if the survey was not completed or if the respondent indicated spending less than 50% of their pharmacy practice in critical care.

Percentage of Professional Practice in Critical Care Pharmacy Mean = 87.8 | SD = 15.9	***n***	
50 – 75	30	
76 – 99	36	
100	71	
Time Spent in Professional Role	***n*** (>50%)	**Average %**
Direct Patient Care	108	67.4%
Administration / Management	5	10.7%
Teaching / Precepting	0	14.5%
Research / Scholarship	2	6.6%
Other	0	0.8%
Years of Experience in Pharmacy Mean = 13.7 | SD = 8.8	***n***	**%**
0 to 5	21	15.3%
6 to 10	35	25.5%
11 to 15	39	28.5%
16 to 20	22	16.1%
20+	20	14.6%
Years of Experience in Critical Care Pharmacy Mean = 10.7 | SD = 7.0	***n***	**%**
0 to 5	33	24.1%
6 to 10	45	32.8%
11 to 15	37	27.0%
16 to 20	11	8.0%
20+	11	8.0%
BPS Certifications	***n***	
BCACP - Ambulatory Care	0	
BCCCP - Critical Care	135	
BCCP - Cardiology	0	
BCEMP - Emergency Medicine	3	
BCGP - Geriatric	1	
BCIDP - Infectious Diseases	2	
BCNP - Nuclear	0	
BCNSP- Nutrition Support	5	
BCOP - Oncology	0	
BCPMP - Pain Management	0	
BCPP - Psychiatric	0	
BCPPS - Pediatric	1	
BCPS - Pharmacotherapy	42	

BCSCP - Compounded Sterile Preparations	0	
BCTXP - Solid Organ Transplantation	0	
Post-graduate pharmacy residency programs	***n***	
PGY1 Pharmacy	105	
PGY1 Managed Care Pharmacy	0	
PGY1 Community-Based Pharmacy	0	
PGY2 Ambulatory Care Pharmacy	0	
PGY2 Cardiology Pharmacy	0	
PGY2 Clinical Pharmacogenomics	0	
PGY2 Community-Based Pharmacy Administration and Leadership	0	
PGY2 Corporate Pharmacy Administration and Leadership	0	
PGY2 Critical Care Pharmacy	68	
PGY2 Emergency Medicine Pharmacy	4	
PGY2 Geriatric Pharmacy	0	
PGY2 Health System Pharmacy Administration and Leadership	1	
PGY2 Infectious Diseases Pharmacy	0	
PGY2 Internal Medicine Pharmacy	1	
PGY2 Investigational Drugs and Research	0	
PGY2 Medication Use Safety and Policy	0	
PGY2 Neurology	0	
PGY2 Oncology Pharmacy	0	
PGY2 Palliative Care / Pain Management Pharmacy	1	
PGY2 Pediatric Pharmacy	1	
PGY2 Pharmacotherapy	0	
PGY2 Pharmacy Informatics	0	
PGY2 Population Health Management and Data Analytics Pharmacy	0	
PGY2 Psychiatric Pharmacy	0	
PGY2 Solid Organ Transplant Pharmacy	0	
PGY2 Specialty Pharmacy Administration and Leadership	0	
Other	9	
Primary Practice Setting	***n***	**%**
Academic Institution / Educational Institution	12	8.8%
Academic Medical Center or Hospital	63	46.0%
Children's Hospital	0	0.0%
Community Hospital	45	32.8%
Governmental Healthcare Facility / Veterans Affairs Hospital	6	4.4%
Hybrid Academic-Community Hospital	9	6.6%
Integrated Health System / Accountable Care Organization	2	1.5%
Long-Term Acute Care Facility	0	0.0%
Pharmaceutical Industry	0	0.0%
Telehealth / Tele-ICU	0	0.0%

Other	0	0.0%
Location of Primary Practice	***n***	**%**
United States	**126**	**91.6%**
AK	1	0.7%
AL	6	4.4%
AZ	3	2.2%
CA	18	13.1%
CO	4	2.9%
CT	1	0.7%
FL	7	5.1%
GA	3	2.2%
GU	1	0.7%
HI	1	0.7%
ID	2	1.5%
IL	5	3.6%
IN	4	2.9%
KS	1	0.7%
KY	4	2.9%
LA	1	0.7%
MA	3	2.2%
MD	2	1.5%
MI	4	2.9%
MN	1	0.7%
MO	2	1.5%
MS	1	0.7%
NC	5	3.6%
NJ	2	1.5%
NM	1	0.7%
NV	1	0.7%
NY	6	4.4%
OH	8	5.8%
OK	1	0.7%
OR	2	1.5%
PA	10	7.3%
RI	1	0.7%
SC	2	1.5%
TN	2	1.5%
TX	5	3.6%
VA	3	2.2%
WA	1	0.7%
WI	1	0.7%

Outside of United States	**11**	**8.0%**
Bahrain	1	0.7%
Canada	2	1.5%
Egypt	1	0.7%
Malaysia	1	0.7%
Qatar	1	0.7%
Saudi Arabia	2	1.5%
Spain	1	0.7%
Taiwan	2	1.5%

	Mean Ratings for Task Statements	Importance	Frequency
1	Evaluate patient medical history, medication reconciliation, present illness, clinical status, and other pertinent patient characteristics	4.68	4.83
2	Prioritize patient care based on integration of clinical status, clinical assessment findings, advanced critical care monitoring, medication regimen complexity, and other pertinent information	4.65	4.84
3	Engage with the interprofessional healthcare team in the management of medical emergencies	4.62	4.38
4	Develop individualized therapeutic plans in alignment with evidence-based medicine, practice guidelines, and goals of treatment	4.69	4.82
5	Collaborate with the interprofessional healthcare team, patient, and caregivers in the development of the goals of care	4.01	4.15
6	Facilitate the administration of medications to patients in alignment with availability, route, compatibility, stability, and medication-delivery technology	4.25	4.45
7	Monitor and evaluate individual patient progress toward goals of care and goals of treatment	4.26	4.47
8	Modify therapeutic plans in response to changes in patient clinical status, goals of care, goals of treatment, and other pertinent information	4.63	4.70
9	Develop and provide healthcare education to patients and caregivers	3.04	2.83
10	Participate in quality improvement and safety initiatives within critical care and pharmacy operations	3.93	3.64
11	Develop and evaluate organizational policies and practices in alignment with accreditation standards, regulatory requirements, and evidence-based medicine	3.77	3.37
12	Engage in professional critical care pharmacy advocacy by serving on interprofessional healthcare committees and contributing to healthcare initiatives	3.54	3.23
13	Develop medication use evaluation and formulary management strategies to improve cost effectiveness, resource utilization, and risk mitigation	3.40	3.15
14	Utilize health information technology, clinical informatics, and clinical decision support tools to optimize pharmacotherapeutic and healthcare decisions	3.44	3.53
15	Engage in professional development, continuing education, and scholarly activities	3.60	3.66
16	Provide education, mentorship, and/or support to healthcare professionals and learners	3.87	3.99
17	Participate in the development and integration of critical care pharmacy services	3.88	3.36

		IMPO	FREQ
1	**Patient Assessment and Care Planning**		
1.01	Triage and Prioritization	4.10	4.34
1.02	Medical Emergencies	4.64	4.15
1.03	Laboratory and Diagnostic Testing	4.15	4.52
1.04	Therapeutic Targets and Endpoints	4.43	4.57
1.05	Pharmacodynamics and Pharmacokinetics	4.55	4.61
1.06	Healthcare Access, Quality, and Equity	3.09	3.07
1.07	Shared Decision-Making and Patient Advocacy	3.47	3.34
1.08	Special Populations (e.g., pregnancy/peripartum, extremes in weight, immunocompromised)	4.10	3.68
2	**Pharmacotherapy for Critically Ill Patients**		
2.01	Pharmacotherapy for Respiratory Conditions	4.57	4.71
2.02	Pharmacotherapy for Cardiovascular Conditions	4.72	4.76
2.03	Pharmacotherapy for Nephrology Conditions	4.45	4.53
2.04	Pharmacotherapy for Neurological Conditions	4.46	4.29
2.05	Pharmacotherapy for Gastroenterology Conditions	3.93	3.99
2.06	Pharmacotherapy for Toxicology	4.18	3.36
2.07	Pharmacotherapy for Infectious Diseases	4.83	4.90
2.08	Pharmacotherapy for Trauma and Dermatology	3.78	3.45
2.09	Pharmacotherapy for Hematology, Oncology, and Immunology	3.66	3.33
2.10	Pharmacotherapy for Endocrine Conditions	3.93	3.90
2.11	Pharmacotherapy for Hepatic Conditions	4.15	4.02
2.12	Pharmacotherapy for Supportive Care	4.17	4.33
2.13	Pharmacotherapy for End-of-Life Care	3.80	3.84
2.14	Pharmacotherapy for Patients with Organ Transplants	3.79	2.99
2.15	Fluids, Electrolytes, and Nutrition	4.52	4.71
3	**Implementation, Outcomes, and Monitoring**		
3.01	Medical Therapies and Devices (e.g., ECMO, mechanical circulatory support, RRT, mechanical/assisted ventilation)	4.44	4.25
3.02	Medication Delivery (e.g., routes of administration, delivery devices, anatomic alterations)	4.46	4.61
3.03	Perioperative Care	3.35	3.47
3.04	Therapeutic Drug Monitoring	4.69	4.66
3.05	Physiologic Response Monitoring	4.07	4.28
3.06	Drug Interactions and Adverse Reactions	4.50	4.45
3.07	Interdisciplinary Care Coordination	3.99	4.19
3.08	Transitions of Care (e.g., medication reconciliation, disposition, stepdown, PICS)	3.74	3.86
4	**Professional Practice**		
4.01	Medication Safety and Risk Mitigation	4.12	3.88
4.02	Pharmacoeconomics and Formulary Management	3.19	3.07

4.03	Informatics and Clinical Decision Support Systems	3.31	3.29
4.04	Healthcare Regulations and Standards (e.g., FDA, TJC, CMS, NIOSH, USP<800>)	3.04	2.98
4.05	Literature Evaluation (e.g., statistics, research methods, publications, applicability, IRB/IEC)	4.00	3.90
4.06	Quality Management and Process Improvement	3.77	3.50

An exploratory factor analysis[7] using maximum likelihood extraction and varimax rotation[8] was performed on the importance ratings provided for the knowledge areas. One factor emerged, with an eigenvalue of 9.69, as the primary factor explaining 26.2% of the variability in importance ratings. All subsequent factors had eigenvalues of 2.40 or less and each explained less than 6.5% of the variability in importance ratings. This provides additional evidence for the consistency of the knowledge areas developed and their applicability to the intended measurement construct.

[7] Thompson, B. (2004). Exploratory and confirmatory factor analysis: Understanding concepts and applications. American Psychological Association: Washington DC.
[8] Kaiser, H. (1958). The varimax criterion for analytic rotation in factor analysis. Psychometrika, 23(3).

3. Finalization of Exam Content Outline

The job analysis panel reconvened on 8 June 2026 via teleconference to review the results of the survey and to finalize the exam content outline.

The panelists reviewed the results of the survey demographic questions and deemed the respondent sample to be representative of the target population, which are pharmacists specializing in critical care pharmacy.

The panelists agreed to retain all the task statements and knowledge statements developed.

Lastly, the panelists were tasked with determining the content weighting, the proportion of examination content to be distributed to each content domain. A criticality value was calculated by multiplying the importance and frequency rating for each knowledge statement. To develop a percentage weight for each content domain, the sum of the criticality values for the knowledge statements in each domain was tabulated and compared against the sum of the mean criticality values for all knowledge areas.

Content Weighting for Exam Content Domains		% WT	CRIT
1	**Patient Assessment and Care Planning**	22%	133.19
1.01	Triage and Prioritization	2.93%	17.82
1.02	Medical Emergencies	3.16%	19.25
1.03	Laboratory and Diagnostic Testing	3.08%	18.73
1.04	Therapeutic Targets and Endpoints	3.33%	20.25
1.05	Pharmacodynamics and Pharmacokinetics	3.45%	20.98
1.06	Healthcare Access, Quality, and Equity	1.56%	9.51
1.07	Shared Decision-Making and Patient Advocacy	1.90%	11.57
1.08	Special Populations (e.g., pregnancy/peripartum, extremes in weight, immunocompromised)	2.48%	15.09
2	**Pharmacotherapy for Critically Ill Patients**	43%	259.07
2.01	Pharmacotherapy for Respiratory Conditions	3.54%	21.51
2.02	Pharmacotherapy for Cardiovascular Conditions	3.69%	22.44
2.03	Pharmacotherapy for Nephrology Conditions	3.31%	20.15
2.04	Pharmacotherapy for Neurological Conditions	3.15%	19.14
2.05	Pharmacotherapy for Gastroenterology Conditions	2.58%	15.68
2.06	Pharmacotherapy for Toxicology	2.31%	14.05
2.07	Pharmacotherapy for Infectious Diseases	3.89%	23.67
2.08	Pharmacotherapy for Trauma and Dermatology	2.15%	13.05
2.09	Pharmacotherapy for Hematology, Oncology, and Immunology	2.00%	12.17
2.10	Pharmacotherapy for Endocrine Conditions	2.52%	15.34
2.11	Pharmacotherapy for Hepatic Conditions	2.74%	16.67
2.12	Pharmacotherapy for Supportive Care	2.97%	18.04

2.13	Pharmacotherapy for End-of-Life Care	2.40%	14.57
2.14	Pharmacotherapy for Patients with Organ Transplants	1.86%	11.31
2.15	Fluids, Electrolytes, and Nutrition	3.50%	21.27
3	**Implementation, Outcomes, and Monitoring**	23%	141.49
3.01	Medical Therapies and Devices (e.g., ECMO, mechanical circulatory support, RRT, mechanical/assisted ventilation)	3.10%	18.85
3.02	Medication Delivery (e.g., routes of administration, delivery devices, anatomic alterations)	3.38%	20.54
3.03	Perioperative Care	1.91%	11.64
3.04	Therapeutic Drug Monitoring	3.59%	21.86
3.05	Physiologic Response Monitoring	2.86%	17.42
3.06	Drug Interactions and Adverse Reactions	3.29%	19.99
3.07	Interdisciplinary Care Coordination	2.75%	16.73
3.08	Transitions of Care (e.g., medication reconciliation, disposition, stepdown, PICS)	2.38%	14.46
4	**Professional Practice**	12%	74.56
4.01	Medication Safety and Risk Mitigation	2.63%	16.01
4.02	Pharmacoeconomics and Formulary Management	1.61%	9.80
4.03	Informatics and Clinical Decision Support Systems	1.79%	10.91
4.04	Healthcare Regulations and Standards (e.g., FDA, TJC, CMS, NIOSH, USP<800>)	1.49%	9.04
4.05	Literature Evaluation (e.g., statistics, research methods, publications, applicability, IRB/IEC)	2.56%	15.59
4.06	Quality Management and Process Improvement	2.17%	13.20

See Appendix D for the final Examination Content Outline.

Appendix A – Subject Matter Experts

Name	Credentials	Years Exp.	Job Title	Employer/ Affiliation	Location	Practice Setting	Sub-specialty
Zainab Muhaisin Almuairfi	Msc, BCCCP	7	Critical care Clinical Pharmacist	KFSHRC	Saudi Arabia	Government Healthcare Facility	Mixed Medical/ Surgical ICU
Sydney Archer	PharmD, BCCCP	8	Pharmacist	The University of Kansas Health System	KS	Academic Medical Center/ Hospital	Emergency Medicine
Elizabeth J Beckman	PharmD, BCCCP, BCPPS, BCPS	14	Pediatric Clinical Pharmacy Specialist - PCICU	Golisano Children's at UK HealthCare	KY	Other	Cardio-thoracic/ Cardiac ICU
Sarah B Blackwell	PharmD, BCCCP, BCPS	13	Clinical Pharmacy Specialist	Baptist Health Princeton Hospital	AL	Community Hospital	Medical ICU
Quintin Marshall Broussard	PharmD, BCCCP, BCNSP, BCPS	11	Associate Professor of Clinical Sciences	Keck Graduate Institute	CA	Academic Institution	Mixed Medical/ Surgical ICU
Joshua Campbell	PharmD, BCCCP	14	Clinical Pharmacy Specialist	Guthrie Robert Packer Hospital	PA	Academic Medical Center/ Hospital	Mixed Medical/ Surgical ICU
David Do	PharmD, BCCCP	2	Emergency Medicine Pharmacist	Banner	AZ	Academic Medical Center/ Hospital	Emergency Medicine
Christy Forehand	PharmD, BCCCP, FCCM	14	Clinical Pharmacy Manager	Piedmont Augusta	GA	Community Hospital	Medical ICU
Brian Gilbert	PharmD, MBA, BCCCP, FCCM, FNCS, FCCP, FKCHP	10	Emergency Medicine Clinical Pharmacy Specialist	Wesley Medical Center	KS	Community Hospital	Emergency Medicine

Miranda Graham	PharmD, BCCCP, BCPS	3	Neurocritical Care Pharmacist	Hospital of the University of Penn-sylvania	PA	Academic Medical Center/ Hospital	Neuro ICU
Kyle Gustafson	PharmD, BCCCP	14	Pharmacy Clinical Specialist, Multispecialty Critical Care	Cleveland Clinic, Main Campus	OH	Academic Medical Center/ Hospital	Mixed Medical/ Surgical ICU
Jessica Hu	PharmD, BCCCP	3	Clinical Assistant Professor	Rutgers University	NJ	Hybrid Academic-Community Hospital	Mixed Medical/ Surgical ICU
Kayla Lawlor	PharmD, BCCCP	9	Clinical Pharmacy Coordinator, Cardiology and Critical Care	Emory University Hospital	GA	Academic Medical Center/ Hospital	Cardio-thoracic/ Cardiac ICU
Courtney Brooke McKinney	PharmD, BCCCP, BCNSP, BCPS	15	Clinical Pharmacy Specialist	Dignity Health	AZ	Hybrid Academic-Community Hospital	Trauma ICU
Hassan Mitwally	PharmD, BCCCP, BCPS	12	Clinical Pharmacy Specialist	Hamad Medical Corporation	Qatar	Government Healthcare Facility	Mixed Medical/ Surgical ICU
Kelly Newman	PharmD, BCCCP, BCPS	15	Clinical Pharmacy Manager	Massa-chusetts General Hospital	MA	Academic Medical Center/ Hospital	Surgical ICU
Russel Joseph Roberts	PharmD, BCCCP, FCCM, FMSHP	20	Clinical Pharmacy Manager	Massa-chusetts General Hospital	MA	Academic Medical Center/ Hospital	Mixed Medical/ Surgical ICU
Tayler Tillage	PharmD, BCCCP, BCPS	5	Clinical Pharmacy Coordinator	Sentara Health	VA	Community Hospital	Medical ICU
Brittany D Bissell Turpin	PharmD, PhD, BCCCP, FCCM, FCCP	9	Clinical Pharmacist - Pulmonary/ Medical ICU	University of Kentucky	KY	Academic Medical Center/ Hospital	Medical ICU
Antonia Leigh-Pittit Vilella	PharmD, BCCCP, BCPS	13	ICU Clinical Pharmacy Specialist	Sarasota Memorial Hospital	FL	Community Hospital	Mixed Medical/ Surgical ICU

Appendix B – Orientation Presentation

Job Analysis

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Job Analysis

A job analysis can take many forms, but the key points of inquiry in a job analysis for credentialing are:

- ✓ **Definition of Target Population**
- ✓ **Tasks Performed**
- ✓ **Competencies Required**

The outcome is an exam content outline, which is used as a blueprint for the creation of examinations and to identify the scope of the exam to interested parties

Job Analysis is sometimes called a role delineation study or practice analysis in healthcare certification settings

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Multi-Method Approach

Both quantitative and qualitative methods are used, which helps bolster the defensibility of the process and outcomes

Qualitative
- Focus Group Discussions

Quantitative
- Survey Administration and Analysis

Here is what the process looks like in sequence

JA Panel Develops ECO (*you are here*) → Survey Development → Survey Administration → Survey Analysis → JA Panel Finalizes ECO

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Multiple Levels of Analysis

Consider how you would describe a job role to someone

All three levels help define the scope

But only the outer layer is the level at which an examinee is assessed

bps

Exam Content Outline

An ECO is a grouping of examination content areas in a hierarchical list

Exam Content Outline Structure and Components		(Somewhat Silly) Example
1	Content Domain	Chocolate
1A	Content Subdomain	History
1A1	Knowledge Area	Mesoamerican Usage
1A2	Knowledge Area	European Adaptation
1A3	Knowledge Area	Modern Production
1B	Content Subdomain	Types
1B1	Knowledge Area	Milk Chocolate
1B2	Knowledge Area	Dark Chocolate
1B3	Knowledge Area	White Chocolate

Domains

The Major Aspects of Practice Area

Meaningful Divisions within the Domain

The Knowledge Assessed by Exam Items

Each of these should be written such that they can be preceded by the phrase "Knowledge of"

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Context Is Key

In addition to creation of an ECO, we will develop an inventory of task statements.

- These tasks identify the objectives and responsibilities of the role.
- These tasks provide the context in which the knowledge is applied.
- Tasks need not be grouped into content domains.
- Tasks will not be used to classify exam items nor determine what is tested.

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Linkage Analysis

A linkage matrix looks something like this

	1	2	3	4	5	6	7	8	9
1A1						x		x	
1A2					x				
1A3				x					x
1B1			x	x					
1B2			x				x		
1C1	x	x							
1C2		x					x		x

Purpose of the Linkage Matrix

- demonstrate which knowledge areas are required for each task
- demonstrate that the knowledge areas are indeed practice-based
- help identify gaps in either inventory
- help identify tasks or knowledge that are superfluous or out-of-scope

Helpful Hints

- An x-mark means that the specific knowledge is needed to perform that specific task.
- For example, knowledge of different types of chocolate is needed to *Develop Chocolate Recipes* but history of chocolate is not needed for that same task.

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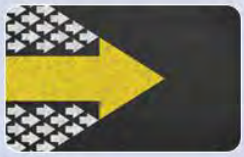
Discussion and Consensus


Please be respectful and welcoming of others' perspectives


Discussion is meant to serve consensus-building and decision-making


All of you are here because we want to hear from you


Don't lose sight of the bigger picture to get hung up on details

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Confidentiality

Although the outcomes of the Job Analysis will eventually be summarized in a public-facing document, please do not disclose information about our deliberations or work in progress

Any information other than that provided by BPS can give an unfair advantage or disadvantage to examinees, thereby threatening the validity of the exam

When asked about your involvement, simply direct interested parties to official channels (BPS website) for information about the certification program

Summary of Meeting Objectives

- Review Exam Eligibility Requirements
- Develop List of Task Statements
- Develop Exam Content Outline
- Conduct Linkage Analysis
- Revise Tasks and ECO, as needed

Appendix C – Survey Text

BPS 2026 BCCCP Job Analysis Survey

Survey Introduction

The Board of Pharmacy Specialties (BPS) is conducting a Job Analysis for the Board-Certified Critical Care Pharmacy (BCCCP) certification program to develop an updated examination content outline, which serves as a blueprint for the certification exam and the scope for recertification and eligibility purposes.

As part of this Job Analysis, we request your participation in this survey to provide ratings and feedback for the tasks and knowledge areas identified as representing current pharmacy practice in critical care pharmacy.

Survey respondents will be prompted to rate each task and knowledge area on its importance to critical care pharmacy practice and its frequency of use.

Additionally, respondents will be asked a few demographic questions to better understand the respondent sample's professional qualifications - but no personally identifiable information will be solicited.

Responses will only be reviewed in aggregate and will not be used for any other purpose than the Job Analysis.

Your participation is expected to take 15 to 30 minutes in total.

Those who complete the survey are eligible for entry into a raffle for one of ten $25 Amazon gift cards.

If you have any questions about this survey, please feel free to contact ja@aphanet.org.

Are you willing to participate in this survey and provide your responses to BPS?

◯ Yes

◯ No

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BPS 2026 BCCCP Job Analysis Survey

Task Statements

Please rate each task statement according to its importance to critical care pharmacy practice and the frequency of its performance in critical care pharmacy practice.

	Importance	Frequency
Evaluate patient medical history, medication reconciliation, present illness, clinical status, and other pertinent patient characteristics		
Prioritize patient care based on integration of clinical status, clinical assessment findings, advanced critical care monitoring, medication regimen complexity, and other pertinent information		
Engage with the interprofessional healthcare team in the management of medical emergencies		
Develop individualized therapeutic plans in alignment with evidence-based medicine, practice guidelines, and goals of treatment		
Collaborate with the interprofessional healthcare team,		

patient, and caregivers in the development of the goals of care		
Facilitate the administration of medications to patients in alignment with availability, route, compatibility, stability, and medication-delivery technology		
Monitor and evaluate individual patient progress toward goals of care and goals of treatment		
Modify therapeutic plans in response to changes in patient clinical status, goals of care, goals of treatment, and other pertinent information		
Develop and provide healthcare education to patients and caregivers		
Participate in quality improvement and safety initiatives within critical care and pharmacy operations		
Develop and evaluate organizational policies and practices in alignment with accreditation standards, regulatory requirements, and evidence-based medicine		
Engage in professional critical care pharmacy advocacy by serving on interprofessional healthcare committees and contributing to healthcare initiatives		
Develop medication use evaluation and		

formulary management strategies to improve cost effectiveness, resource utilization, and risk mitigation		
Utilize health information technology, clinical informatics, and clinical decision support tools to optimize pharmacotherapeutic and healthcare decisions		
Engage in professional development, continuing education, and scholarly activities		
Provide education, mentorship, and/or support to healthcare professionals and learners		
Participate in the development and integration of critical care pharmacy services		

What task associated with critical care pharmacy is missing from this list, if any? **(leave blank if none)**

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BPS 2026 BCCCP Job Analysis Survey

Knowledge Areas

Please rate each knowledge area in the Patient Assessment and Care Planning content domain according to its importance to critical care pharmacy practice and the frequency of its use in critical care pharmacy practice.

	Importance	Frequency
Triage and Prioritization		
Medical Emergencies		
Laboratory and Diagnostic Testing		
Therapeutic Targets and Endpoints		
Pharmacodynamics and Pharmacokinetics		
Healthcare Access, Quality, and Equity		
Shared Decision-Making and Patient Advocacy		
Special Populations (e.g., pregnancy/peripartum, extremes in weight, immunocompromised)		

Please rate each knowledge area in the Pharmacotherapy for Critically Ill Patients content domain according to its importance to critical care pharmacy practice and the frequency of its use in critical care pharmacy practice.

	Importance	Frequency
Pharmacotherapy for Respiratory Conditions		
Pharmacotherapy for Cardiovascular Conditions		
Pharmacotherapy for Nephrology Conditions		
Pharmacotherapy for Neurological Conditions		
Pharmacotherapy for Gastroenterology Conditions		
Pharmacotherapy for Toxicology		
Pharmacotherapy for Infectious Diseases		
Pharmacotherapy for Trauma and Dermatology		
Pharmacotherapy for Hematology, Oncology, and Immunology		
Pharmacotherapy for Endocrine Conditions		
Pharmacotherapy for Hepatic Conditions		
Pharmacotherapy for Supportive Care		
Pharmacotherapy for End-of-Life Care		
Pharmacotherapy for Patients with Organ Transplants		
Fluids, Electrolytes, and Nutrition		

Please rate each knowledge area in the Implementations, Outcomes, and Monitoring content domain according to its importance to critical care pharmacy practice and the frequency of its use in critical care pharmacy practice.

	Importance	Frequency
Medical Therapies and Devices (e.g., ECMO, mechanical circulatory support, RRT, mechanical/assisted ventilation)		
Medication Delivery (e.g., routes of administration, delivery devices, anatomic alterations)		
Perioperative Care		
Therapeutic Drug Monitoring		
Physiologic Response Monitoring		
Drug Interactions and Adverse Reactions		
Interdisciplinary Care Coordination		
Transitions of Care (e.g., medication reconciliation, disposition, stepdown, PICS)		

Please rate each knowledge area in the Professional Practice content domain according to its importance to critical care pharmacy practice and the frequency of its use in critical care pharmacy practice.

	Importance	Frequency
Medication Safety and Risk Mitigation		
Pharmacoeconomics and Formulary Management		
Informatics and Clinical Decision Support Systems		
Healthcare Regulations and Standards (e.g., FDA, TJC, CMS, NIOSH, USP<800>)		
Literature Evaluation (e.g., statistics, research methods, publications, applicability, IRB/IEC)		
Quality Management and Process Improvement		

What knowledge area associated with critical care pharmacy is missing from this list, if any? **(leave blank if none)**

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BPS 2026 BCCCP Job Analysis Survey

Survey Respondent Demographics

What percentage of your professional practice is spent in critical care pharmacy?

What percentage of your time do you spend in each area?

Direct Patient Care	
Administration / Management	
Teaching / Precepting	
Research / Scholarship	
Other	

How many years of experience do you have as a pharmacist?

How many years of experience do you have in critical care pharmacy?

Which BPS certifications do you currently hold? Select all that apply and leave blank if none.

- [ ] BCACP - Ambulatory Care
- [ ] BCCCP - Critical Care
- [ ] BCCP - Cardiology
- [ ] BCEMP - Emergency Medicine
- [ ] BCGP - Geriatric
- [ ] BCIDP - Infectious Diseases
- [ ] BCNP - Nuclear
- [ ] BCNSP- Nutrition Support
- [ ] BCOP - Oncology
- [ ] BCPP - Psychiatric
- [ ] BCPMP - Pain Management
- [ ] BCPPS - Pediatric
- [ ] BCPS - Pharmacotherapy
- [ ] BCSCP - Compounded Sterile Preparations
- [ ] BCTXP - Solid Organ Transplantation

Which post-graduate pharmacy residency programs have you completed? Select all that apply and leave blank if none.

- [ ] PGY1 Pharmacy
- [ ] PGY1 Managed Care Pharmacy
- [ ] PGY1 Community-Based Pharmacy
- [ ] PGY2 Ambulatory Care Pharmacy
- [ ] PGY2 Cardiology Pharmacy
- [ ] PGY2 Clinical Pharmacogenomics
- [ ] PGY2 Community-Based Pharmacy Administration and Leadership
- [ ] PGY2 Corporate Pharmacy Administration and Leadership

- [ ] PGY2 Critical Care Pharmacy
- [ ] PGY2 Emergency Medicine Pharmacy
- [ ] PGY2 Geriatric Pharmacy
- [ ] PGY2 Health System Pharmacy Administration and Leadership
- [ ] PGY2 Infectious Diseases Pharmacy
- [ ] PGY2 Internal Medicine Pharmacy
- [ ] PGY2 Investigational Drugs and Research
- [ ] PGY2 Medication Use Safety and Policy
- [ ] PGY2 Neurology
- [ ] PGY2 Oncology Pharmacy
- [ ] PGY2 Palliative Care / Pain Management Pharmacy
- [ ] PGY2 Pediatric Pharmacy
- [ ] PGY2 Pharmacotherapy
- [ ] PGY2 Pharmacy Informatics
- [ ] PGY2 Population Health Management and Data Analytics Pharmacy
- [ ] PGY2 Psychiatric Pharmacy
- [ ] PGY2 Solid Organ Transplant Pharmacy
- [ ] PGY2 Specialty Pharmacy Administration and Leadership
- [ ] Other: please specify

What is your primary practice setting?

- ◯ Academic Institution / Educational Institution
- ◯ Academic Medical Center or Hospital
- ◯ Children's Hospital
- ◯ Community Hospital
- ◯ Governmental Healthcare Facility / Veterans Affairs Hospital
- ◯ Hybrid Academic-Community Hospital
- ◯ Integrated Health System / Accountable Care Organization
- ◯ Long-Term Acute Care Facility
- ◯ Pharmaceutical Industry
- ◯ Telehealth / Tele-ICU
- ◯ Other (please specify)

In which critical care settings do you currently work? Select all that apply and leave blank if none.

- [ ] Burn ICU
- [ ] Cardiac ICU
- [ ] Cardiothoracic ICU
- [ ] Medical ICU
- [ ] Mixed Medical/Surgical ICU
- [ ] Neonatal ICU
- [ ] Neurosciences/Stroke ICU
- [ ] Oncology/Immunocompromised/Transplant ICU
- [ ] Pediatric ICU
- [ ] Surgical ICU
- [ ] Telehealth ICU
- [ ] Trauma ICU
- [ ] Emergency Department
- [ ] Float / Multidisciplinary
- [ ] Other: please specify

Where is your primary practice located?

State or Territory (if in United States) -- select state --

Nation/Country

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BPS 2026 BCCCP Job Analysis Survey

Thank You

Please provide any feedback or comments about the survey here.

(leave blank if none)

Those who complete the survey are eligible for entry into a raffle for one of ten $25 Amazon gift cards. If you would like to be entered into the raffle, please enter your email address below. Your email address will be used for the sole purpose of sending your gift card if you win.

Thank you very much for your interest and participation!

Appendix D – Exam Content Outline

1	**Patient Assessment and Care Planning**	22%
1.01	Triage and Prioritization	
1.02	Medical Emergencies	
1.03	Laboratory and Diagnostic Testing	
1.04	Therapeutic Targets and Endpoints	
1.05	Pharmacodynamics and Pharmacokinetics	
1.06	Healthcare Access, Quality, and Equity	
1.07	Shared Decision-Making and Patient Advocacy	
1.08	Special Populations (e.g., pregnancy/peripartum, extremes in weight, immunocompromised)	
2	**Pharmacotherapy for Critically Ill Patients**	43%
2.01	Pharmacotherapy for Respiratory Conditions	
2.02	Pharmacotherapy for Cardiovascular Conditions	
2.03	Pharmacotherapy for Nephrology Conditions	
2.04	Pharmacotherapy for Neurological Conditions	
2.05	Pharmacotherapy for Gastroenterology Conditions	
2.06	Pharmacotherapy for Toxicology	
2.07	Pharmacotherapy for Infectious Diseases	
2.08	Pharmacotherapy for Trauma and Dermatology	
2.09	Pharmacotherapy for Hematology, Oncology, and Immunology	
2.10	Pharmacotherapy for Endocrine Conditions	
2.11	Pharmacotherapy for Hepatic Conditions	
2.12	Pharmacotherapy for Supportive Care	
2.13	Pharmacotherapy for End-of-Life Care	
2.14	Pharmacotherapy for Patients with Organ Transplants	
2.15	Fluids, Electrolytes, and Nutrition	
3	**Implementation, Outcomes, and Monitoring**	23%
3.01	Medical Therapies and Devices (e.g., ECMO, mechanical circulatory support, RRT, mechanical/assisted ventilation)	
3.02	Medication Delivery (e.g., routes of administration, delivery devices, anatomic alterations)	
3.03	Perioperative Care	
3.04	Therapeutic Drug Monitoring	
3.05	Physiologic Response Monitoring	
3.06	Drug Interactions and Adverse Reactions	
3.07	Interdisciplinary Care Coordination	
3.08	Transitions of Care (e.g., medication reconciliation, disposition, stepdown, PICS)	
4	**Professional Practice**	12%
4.01	Medication Safety and Risk Mitigation	

4.02	Pharmacoeconomics and Formulary Management
4.03	Informatics and Clinical Decision Support Systems
4.04	Healthcare Regulations and Standards (e.g., FDA, TJC, CMS, NIOSH, USP<800>)
4.05	Literature Evaluation (e.g., statistics, research methods, publications, applicability, IRB/IEC)
4.06	Quality Management and Process Improvement