



Examination Specifications Infectious Diseases Pharmacy Board of Pharmacy Specialties

Name of Credential	BPS Board-Certified Infectious Diseases Pharmacist
Certification-Issuing Body	Board of Pharmacy Specialties
Designation Awarded	BCIDP
Level of Proficiency	Specialty Certification
Target Population	Pharmacists who specialize in the use of microbiology and pharmacology to develop, implement, and monitor drug regimens that incorporate antimicrobials to optimize therapy for patients
Program Purpose	To validate that the pharmacist has the advanced knowledge and experience to develop antimicrobial therapies, provide direct patient care, lead antimicrobial stewardship, and improve public health
Eligibility Requirements	<ul style="list-style-type: none">• Graduation from a pharmacy program accredited by the Accreditation Council for Pharmacy Education (ACPE) or a program outside the United States that qualifies the individual to practice in the jurisdiction• Current, active license or registration to practice pharmacy in the United States or another jurisdiction• One of the following, within the past 7 years:<ul style="list-style-type: none">○ At least 4 years of specialty area practice with at least 50% of time spent in the scope defined by the exam content outline○ Completion of PGY1 pharmacy residency and at least 2 years of specialty area practice experience with at least 50% of time spent in the scope defined by the exam content outline○ Completion of PGY1 pharmacy residency and PGY2 pharmacy residency in Infectious Diseases Pharmacy <p><i>Residency programs must be accredited by or deemed candidate status by the American Society of Health-System Pharmacists (ASHP) for PGY1, PGY2, and International Pharmacy Practice Residency Programs, or accredited by the Canadian Pharmacy Residency Board (CPRB) for year-1 programs.</i></p>
ECO Creation Date	December 2020

This document serves as examination specifications and certification scheme according to the respective requirements of the NCCA 2021 and ISO-IEC 17024:2012 standards.

For more information about the BCIDP examination program, please refer to the BPS website and candidate's guide: www.bpsweb.org/specialty-exams/candidates-guide/.

Examination Content Outline

1	Patient Care and Therapeutics
1.1	Design an appropriate empiric infectious diseases pharmacotherapeutic and/or monitoring plan based on patient specific data, laboratory data, antimicrobial pharmacology, and best available evidence
1.2	Modify an infectious diseases pharmacotherapeutic and/or monitoring plan based on patient-specific data, laboratory data, antimicrobial pharmacology, and best available evidence
1.3	Optimize an infectious diseases pharmacotherapeutic and/or monitoring plan for patients during transitions of care, such as outpatient parenteral antimicrobial therapy, institutional discharge, and transfer to other facilities
1.4	Identify and recommend appropriate tests/procedures which need to be performed to design an infectious diseases pharmacotherapeutic plan
1.5	Develop a preventative, prophylactic, or post-exposure therapy plan for appropriate patients
1.6	Educate and provide counseling to patients/caregivers regarding the safe and effective use of antimicrobials and preventative therapies, monitoring for therapeutic and adverse outcomes, and the importance of adherence to the infectious diseases pharmacotherapeutic plan
2	Education, Public Health, and Translation of Evidence to Practice
2.1	Educate healthcare professionals and trainees regarding infectious diseases
2.2	Provide public health information on infectious diseases, risk/benefits of antimicrobial therapy, and infection prevention
2.3	Critically evaluate infectious diseases in scientific literature with regard to study design, statistical analysis, study results, and applicability to patient care and policy development
3	Antimicrobial Stewardship and Practice Management
3.1	Monitor and evaluate institutional antimicrobial usage
3.2	Participate in the development of antibiograms (e.g., institution-specific, unit-specific) and monitor and evaluate susceptibility trends
3.3	Develop, modify and/or recommend optimal institutional policies, procedures, and interventions to promote appropriate use of antimicrobials and vaccines by incorporating guidelines, surveillance data, and best available evidence (e.g., formulary restrictions, criteria for use, prospective audit and feedback, rapid diagnostics)
3.4	Collaborate and participate in the development and compliance with infection prevention policies, including tracking of infection rates and monitoring of outbreaks

The examination content outline is a product of a job analysis (aka role delineation study) that includes facilitation of discussions with a representative panel of 15-20 subject matter experts who identify competencies required for safe and effective pharmacy practice in this specialty area as well as a validation survey soliciting endorsement of the identified competencies from certified pharmacists in this specialty area. The job analysis process is conducted every 5 years to help ensure that the competencies in the examination content outline reflect current pharmacy practice in the specialty area.

Secondary Classification Scheme: Associated Knowledge Areas

1	Patient Care and Therapeutics
1.01	Pathophysiology and epidemiology of infections including:
1.01.01	<i>Bloodstream infections</i>
1.01.02	<i>Bone and joint infections</i>
1.01.03	<i>Cardiovascular infections</i>
1.01.04	<i>Central nervous system infections</i>
1.01.05	<i>Fungal infections</i>
1.01.06	<i>Gastrointestinal infections</i>
1.01.07	<i>Gynecologic infections</i>
1.01.08	<i>HIV-infection and AIDS (including opportunistic infections)</i>
1.01.09	<i>Infective endocarditis</i>
1.01.10	<i>Intra-abdominal infections</i>
1.01.11	<i>Malaria and other parasitic infections</i>
1.01.12	<i>Mycobacterial infections</i>
1.01.13	<i>Respiratory tract infections</i>
1.01.14	<i>Sepsis</i>
1.01.15	<i>Sexually transmitted diseases</i>
1.01.16	<i>Skin and soft tissue infections</i>
1.01.17	<i>Urinary tract infections and prostatitis</i>
1.01.18	<i>Viral hepatitis</i>
1.01.19	<i>Viral infections, miscellaneous</i>
1.02	Pharmacotherapies related to specific infectious diseases (e.g., bacterial, fungal, viral)
1.03	Pharmacokinetics and pharmacodynamics of antimicrobials (e.g., antifungals)
1.04	Pharmacology of antimicrobials
1.05	Pharmacology of vaccines
1.06	Clinical immunology of biological response modifiers (e.g., TNF inhibitors, colony stimulating factors)
1.07	Mechanisms of pathogen resistance
1.08	Antimicrobial drug interactions
1.09	Complications of antimicrobials
1.10	Complications of vaccines
1.11	Spectrum of activity of antimicrobials
1.12	Structure and characteristics of pathogenic microorganisms
1.13	Basic microbiology laboratory procedures
1.14	Clinical laboratory tests in infectious diseases (e.g., rapid diagnostic testing, RPR, antibody concentrations)
1.15	Diagnostic and therapeutic procedures in infectious diseases (e.g., lumbar puncture, paracentesis)
1.16	Factors that alter the risk of infection
1.17	Immunologic response to infection
1.18	Outpatient parenteral antimicrobial therapy
1.19	Therapeutic monitoring of antimicrobials
1.20	Factors that may impact response to therapy (e.g., dose optimization, penetration of antimicrobials, source control, immune status)
1.21	Antimicrobial de-escalation
1.22	Measures to monitor response to antimicrobial therapy (e.g., resolution of signs and symptoms, laboratory data, readmission, development of drug resistance)
1.23	Patient and caregiver education and counseling techniques
1.24	Antimicrobial allergy and cross-reactivity
1.25	Antimicrobial desensitization

1.26	Preventive therapies (e.g., infection prophylaxis, vaccines, behavior modification)
1.27	Factors to consider when differentiating infection from non-infection
1.28	Considerations in special populations (e.g., geriatrics, pediatrics, obesity)
1.29	Facilitation across transitions of care
1.30	Considerations in drug delivery
1.31	ACIP immunization recommendations and schedules
2	Education, Public Health, and Translation of Evidence to Practice
2.01	Principles and methods of educating and communicating with healthcare professionals and trainees
2.02	Appropriate resources for infectious diseases information
2.03	Infectious diseases and pharmacologic therapy
2.04	Public health information resources and services related to infectious diseases
2.05	Populations at risk for infection
2.06	Screening guidelines for infectious diseases (e.g., HIV, STDs, tuberculosis)
2.07	Research study design and methodology, including those specific to infectious diseases and antimicrobial stewardship (e.g., Monte Carlo simulation, microbiologic surveillance, time-kill, interrupted time series)
2.08	Statistical methods and interpretation
2.09	Clinical application and limitations of published data and reports
2.10	Metrics for evaluating quality, safety, service, and cost
2.11	Process improvement tools (e.g., MUE, process mapping, failure mode effects analysis, plan-do-study-act, root cause analysis)
3	Antimicrobial Stewardship and Practice Management
3.01	Metrics for antimicrobial use (e.g., DDD, DOT, SAAR)
3.02	Clinical practice guidelines (e.g., IDSA, SHEA, CDC)
3.03	National, accreditation, and regulatory organizations and requirements (e.g., Joint Commission, CMS, NHSN)
3.04	Process improvement tools (e.g., MUE, process mapping, failure mode effects analysis, plan-do-study-act, root cause analysis)
3.05	Pharmacoeconomic assessment of antimicrobials
3.06	Antibiogram design and development
3.07	Antimicrobial resistance trends
3.08	Methods for developing and evaluating institutional clinical practice guidelines
3.09	Antimicrobial stewardship strategies
3.10	Roles of infection control and prevention, microbiology, and infectious diseases divisions/departments
3.11	Strategies for advocating vaccination and prudent antimicrobial use
3.12	Infection control and prevention strategies
3.13	Metrics for infection control
3.14	CDC notifiable infectious diseases

Examination Administration and Scoring

<u>Number of Examination Items</u>		Certification Exam	Recertification Exam
1	Patient Care and Therapeutics	123	70
2	Education, Public Health, and Translation of Evidence to Practice	26	15
3	Antimicrobial Stewardship and Practice Management	26	15
TOTAL		175	100

	Certification Exam	Recertification Exam
Exam Administration Time	4 hours 23 minutes	2 hours 30 minutes
Minimum Score	200	200
Minimum Passing Score	500	500
Maximum Score	800	800

The certification examination is split into two parts with an optional break (up to 30 minutes) in between. Part 1 consists of 100 items (2 hours 30 minutes) and Part 2 consists of 75 items (1 hour 53 minutes).

Maintenance of Certification

Recertification Requirements	<p>Pharmacists who earn the BCIDP designation will be required to maintain their certification over a 7-year period by completing one of the following recertification pathways:</p> <ul style="list-style-type: none"> • Achieving a passing score on the BCIDP recertification examination in their seventh year following initial certification • Earning 100 hours of BPS-approved continuing pharmacy education (CPE) credit provided by the joint professional development programs offered by the American College of Clinical Pharmacy (ACCP) and the American Society of Health-System Pharmacists (ASHP) and/or the programs offered by the Society of Infectious Diseases Pharmacists (SIDP). <p><i>The Infectious Diseases Pharmacy Preparatory Review and Recertification Course offered by either of the approved providers may only be completed for recertification credit up to two times, in nonconsecutive years, during the 7-year recertification cycle.</i></p>
Ethics and Professionalism	<p>The Board of Pharmacy Specialties ascribes to the belief that certification carries an obligation for ethical behavior and professionalism necessary in all conduct. Candidates or certificants who are found to have exhibited unethical behavior or lack of professionalism may be prevented from pursuing certification or may be subject to suspension or withdrawal of certification, at the discretion of the Board of Pharmacy Specialties.</p> <p>Please refer to the BPS Ethics and Professionalism Policy: https://www.bpsweb.org/wp-content/uploads/2015/11/ethics.pdf</p>