

CONTENT OUTLINE FOR THE AMBULATORY CARE PHARMACY CERTIFICATION EXAMINATION

The following domains, tasks, and knowledge statements were identified by the BPS Specialty Council on Ambulatory Care Pharmacy and validated through a role delineation study. The proportion of examination items allotted to each domain was determined through analysis and discussion of the results of the role delineation study by the Specialty Council.

Each of the major areas/domains of Ambulatory Care Pharmacy practice noted below will be tested. Questions will not be grouped by domain. Items testing each domain are distributed throughout the total examination. Please note that this examination will SAMPLE a candidate's knowledge rather than trying to test all of his/her knowledge. Here is a brief primer to understand the structure of the content outline/classification system.

Domains: A domain is a major responsibility or duty. You can think of a domain as a major heading in an outline format. You will see the domains displayed as black bars on the outline. Five domains are included in the content outline and are noted below.

1. Patient-Centered Care: Ambulatory Care Pharmacotherapy (37 percent of examination)
2. Patient-Centered Care: Collaboration and Patient Advocacy (29 percent of examination)
3. Translation of Evidence into Practice (14 percent of examination)
4. Practice Models and Policy (14 percent of examination)
5. Population and Public Health (6 percent of examination)

Tasks: A task statement defines an activity that elaborates on the domain or subdomain. The set of task statements in a domain offer a comprehensive and detailed description of the domain. You will see the tasks are light gray bars on the outline.

Knowledge Statement: For each task, it is valuable to understand what knowledge and skills are essential to competent performance. The set of knowledge statements clarifies the expectations for newly certified pharmacists. You will find the knowledge statements under each task statement.

DESCRIPTION
Domain I: Patient-Centered Care: Ambulatory Care Pharmacotherapy
<i>Task 1: Obtain accurate and pertinent patient information including history and physical assessment(s) to ensure the appropriate selection of therapeutic options.</i>
Knowledge of:
1. Anatomy and physiology
2. Core components of patient history (e.g., medical history, family history, social history, cultural factors, belief systems)
3. How to perform physical assessment and/or obtain physical assessment findings
4. Humanistic factors (e.g., quality of life, end of life), and how they may impact the care of the patient
5. Patient interviewing techniques (e.g., motivational interviewing)
6. Pertinent information to gather from the medical record and other sources
7. The principles and process of medication reconciliation
<i>Task 2: Interpret patient history, laboratory, physical assessment, and other clinical information to determine if and when modifications to medication therapy are warranted.</i>
Knowledge of:
1. Clinical assessment (other than laboratory and physical assessment)
2. Laboratory and monitoring parameters and their interpretation as they relate to drug therapy
3. Pathophysiology
4. Pharmacology
5. Pharmacotherapy
6. Physical assessment

DESCRIPTION
<i>Task 3: Assess pertinent information to identify medication and non-medication related problems in order to achieve specific therapeutic goals that maximize patient outcomes and response to therapy.</i>
Knowledge of:
1. Clinical assessment (other than laboratory and physical assessment)
2. Clinical practice guidelines for achieving therapeutic goals
3. Complementary and alternative medicine
4. Laboratory and monitoring parameters and their interpretation as they relate to drug therapy
5. Medication-related problems (e.g., indication, efficacy, safety, adherence)
6. Nonprescription medications
7. Pharmacotherapy
8. Physical assessment
<i>Task 4: Assess the benefits and risks of medication and non-medication therapy for patients, considering concomitant disease states, other medications, and other patient specific characteristics.</i>
Knowledge of:
1. Assessment of patient characteristics that affect medication therapy (e.g. pharmacogenomics, renal and/or hepatic impairment)
2. Prioritizing patient needs and/or drug-related problems
3. Process of determining appropriateness of nonprescription, complementary, and alternative medicine for individualized patients
4. Special populations (e.g., pediatrics, pregnancy, geriatrics)
5. Updates in product labeling (e.g., blackbox warnings, new indications)
<i>Task 5: Create a therapeutic plan for prevention, wellness, and self-care to optimize patient outcomes.</i>
Knowledge of:
1. Lifestyle behaviors that impact chronic diseases and wellness (e.g., nutrition, exercise, tobacco use) and appropriate modifications
2. Principles and practices of wellness and prevention (e.g., clinical practice guidelines)
3. Techniques for use of point of care testing (e.g., blood glucose, cholesterol, INR)
4. Types, indications, and uses of health-related screening tests (e.g., home pregnancy tests, hemocult tests)
5. Types, indications, and uses of self-care and point of care devices for monitoring chronic diseases (e.g., blood glucose meters, peak flow meters, blood pressure monitors, INR)
6. Vaccines
<i>Task 6: Manage medication and disease-state therapy including initiation, administration, modification, or discontinuation of therapy to optimize patient outcomes.</i>
Knowledge of:
1. Clinical practice guidelines for achieving therapeutic goals
2. Complementary and alternative medicines
3. Nonprescription medicines
4. Pharmacology and pharmacokinetics
5. Proper administration techniques for various medications (e.g., eye drops, inhalers, injections, vaccines, nebulizers)
6. Protocols for developing or implementing effective individualized treatment plans
<i>Task 7: Develop patient-specific monitoring and follow-up plans in order to assess response to both medication and non-medication therapy and modify to optimize patient outcomes.</i>
Knowledge of:
1. Appropriate timing of reassessment (e.g., follow up)
2. Clinical guidelines to achieve therapeutic goals
3. Humanistic factors (e.g., quality of life, end of life), and how they may impact the care of the patient
4. Laboratory and monitoring parameters for medications and disease
5. Pharmacoeconomic principles that pertain when designing cost effective therapy
6. Strategies for overcoming barriers (revised)
Domain 2: Patient-Centered Care: Collaboration and Patient Advocacy
<i>Task 1: Triage patients with needs beyond the scope of practice.</i>
Knowledge of:
1. Interprofessional roles

DESCRIPTION
2. The scope and limitations of ambulatory care pharmacy practice
<i>Task 2: Conduct interviews to obtain information relevant to the patient's care.</i>
Knowledge of:
1. Core components of patient history (e.g., medical history, family history, social history, past medical history, cultural factors, belief systems)
2. Cultural competency and healthy literacy and how it may impact the care of the patient
3. Medication reconciliation skills and techniques
4. Techniques for conducting interviews and patient histories (e.g., motivational Interviewing)
5. The principles and process of medication reconciliation
<i>Task 3: Assess patient's willingness, self-management knowledge, understanding, skills, and ability to participate actively in his/her own care through strong patient-provider relationships in order to optimize care.</i>
Knowledge of:
1. Assessing the patient's readiness and/or willingness to participate in their own care (e.g. motivational interviewing)
2. Cultural competency and how it may impact the care of the patient (e.g., cultural and belief systems)
3. Developing effective collaborative partnerships with individual patients in order to maximize trust, encourage patient self-management, and optimize treatment outcomes (e.g. empathy active listening)
4. Factors affecting medication and treatment adherence
5. Health literacy
6. Humanistic factors (e.g., quality of life, end of life), and how they may impact the care of the patient
<i>Task 4: Implement a plan to overcome patient-specific barriers to care.</i>
Knowledge of:
1. Appropriate presentation techniques (e.g., audiovisual aids, handouts)
2. Appropriate writing techniques for composing patient education materials
3. Barriers to patient education and interventions to overcome them
4. Conflict management and negotiation skills
5. Cultural competence and how it may impact the care of the patient
6. Effective interventions to address medication and treatment nonadherence including motivational interviewing.
7. How to apply pharmacoeconomic principles when designing a treatment plan
8. Humanistic factors (e.g., quality of life, end of life), and how they may impact the care of the patient
9. Lifestyle behaviors which impact chronic diseases (e.g., dietary factors, exercise, tobacco use) and appropriate modifications
10. Prioritize patient needs and/or drug-related problems
<i>Task 5: Provide education to patients on wellness, prevention, monitoring, and outcomes of medication- and disease-related issues.</i>
Knowledge of:
1. Appropriate presentation techniques (e.g., audiovisual aids, handouts)
2. Appropriate writing techniques for composing patient education materials
3. Education and interviewing strategies (e.g., motivational interviewing)
4. Lifestyle behaviors which impact chronic diseases (e.g., dietary factors, exercise, tobacco use) and appropriate modifications
5. Patient education principles and techniques
6. Principles and practices of wellness and prevention
7. Techniques for use of home testing (e.g., blood glucose, blood pressure, cholesterol, INR)
8. The healthcare resources and services available to ambulatory care patients (e.g., disease specific websites)
<i>Task 6: Advocate for patient access to medications by facilitating the use of prescription drug plans and other resources to optimize patient outcomes.</i>
Knowledge of:
1. Patient-specific factors which may impact access to medications (e.g., socioeconomic status, Medicare gap, 'donut hole', citizenship)
2. Structure, guidelines, and process of patient and/or medication assistance programs
3. Structure, including benefits and limitations, of prescription drug plans/formularies for patients in ambulatory care
<i>Task 7: Collaborate with other healthcare professionals by communicating effectively to achieve optimal patient outcomes across the continuum of care.</i>
Knowledge of:

DESCRIPTION
1. Collaborative interprofessional relationships necessary to facilitate care
2. Format for documentation of patient care activities, plans and recommendations (e.g., SOAP notes)
3. How to develop or implement effective collaborative relationships with other healthcare professionals in order to access health-related patient information essential to the care of the patient
4. How to effectively communicate treatment recommendations to the appropriate healthcare provider(s) that represent a patient's healthcare needs and interests
5. Principles of conflict management and negotiation
6. Resources for medication reconciliation necessary during transitions of care
7. Steps involved in continuity of care between healthcare settings (e.g., transitioning)
Domain 3: Translation of Evidence into Practice
<i>Task 1: Retrieve biomedical literature applicable to ambulatory care pharmacy practice.</i>
Knowledge of:
1. Common sources of biomedical literature applicable to ambulatory pharmacy practice
2. Primary, secondary, and tertiary references
3. Search strategies to retrieve information from the biomedical literature
<i>Task 2: Interpret biomedical literature with regard to study design methodology, statistical analysis, and significance and applicability of reported data and conclusions.</i>
Knowledge of:
1. Clinical versus statistical significance in order to interpret medical literature
2. Different types of data (nominal, ordinal, interval, ratio scales)
3. Measures of central tendency (mean, mode, median)
4. Research methodology to interpret internal and external validity (e.g., population selection, blinding, intervention)
5. Statistical analysis
6. Strengths and limitations of study design and literature source
<i>Task 3: Respond to requests for information from patients and healthcare professionals using evidence-based literature.</i>
Knowledge of:
1. Appropriate citation of references (e.g., AMA, APA, MLA)
2. Interpretation of study results and guideline and consensus recommendations into applicable clinical responses
3. Pertinent literature, evidence-based treatment guidelines, and consensus statements in the ambulatory care environment
<i>Task 4: Use the principles and strategies of project and research design to generate and disseminate information in ambulatory care.</i>
Knowledge of:
1. Appropriate research methodology to design studies to test a hypothesis (e.g., MUE, CQI, outcomes research)
2. Methods for dissemination of research findings (e.g., abstract / poster, non-peer reviewed publication, peer-reviewed publication, professional platform presentation)
3. Regulatory requirements for the coordination of research (e.g., HIPAA, IRB, OSHA)
<i>Task 5: Enlist evidence-based strategies to effectively teach students, residents, pharmacists, and other healthcare professionals.</i>
Knowledge of:
1. Cognitive learning levels (e.g., Bloom's taxonomy) and learning styles (e.g., visual, auditory, kinesthetic)
2. Effective educational strategies appropriate to the audience (e.g., direct instruction, modeling, coaching, facilitation)
3. Effective presentation development (for example, to the appropriate target audience, learning objectives, assessment strategies)
4. Staff development principles and avenues for providing continuing education (e.g., inservice, small group discussion, journal club)
Domain 4: Practice Models and Policy
<i>Task 1: Establish an ambulatory care practice or service in response to patient needs and/or business potential.</i>
Knowledge of:
1. Effective marketing strategies for initiating or expanding ambulatory pharmacy services
2. Health information technology and documentation systems
3. Needs assessment techniques for prospective ambulatory care pharmacy services (e.g., SWOT)
4. Principles for effectively implementing and managing the practice elements of a business plan and related principles (e.g., accounting, purchasing, resource utilization, work flow, profit analysis)
5. Systems for patient referral and follow-up

DESCRIPTION
6. Types of patient care services within an ambulatory practice (e.g., medication adherence programs, Medication Therapy Management services, disease management services, transitions of care)
<i>Task 2: Manage a financially viable ambulatory care practice or service.</i>
Knowledge of:
1. Accounting systems and expense analysis
2. Compensation strategies and funding sources
3. Components of sustainable business models (cost benefit analysis, cost effectiveness analysis, ROI, clinical outcomes analyses)
4. Cost avoidance
5. Different payment models (e.g., fee-for-service)
6. Insurance contracting
7. Procedures for coding, billing, and reimbursement as relevant to pharmacy practice
<i>Task 3: Implement scope-of-practice protocols in accordance with legal and regulatory requirements.</i>
Knowledge of:
1. Interprofessional roles and relationships
2. Principles of establishing a scope of practice protocol
3. Regulations, strategies, and resources surrounding collaborative practice agreements
4. Role of pharmacist in patient centered medical home, accountable care organizations, and other specialty care services.
<i>Task 4: Develop policies and procedures by identifying and complying with pertinent guidelines, standards of practice, and regulatory and accrediting bodies.</i>
Knowledge of:
1. Clinical practice guidelines
2. Organizations, agencies, and accrediting bodies that play a role in ambulatory care practice
3. Policy and procedure utilization in practice settings
4. Regulations regarding the protection of patient information (HIPAA)
5. Regulations with regard to point of care testing (e.g., OSHA, CLIA)
6. Standards created by national accrediting and regulatory bodies (e.g., NCQA, CMS, PQA, AHRQ, ADA)
<i>Task 5: Implement processes for cost-effective care focusing on continuous quality improvement, patient safety, and outcome measures in order to justify modifications in ambulatory care services.</i>
Knowledge of:
1. Components of sustainable business models and related metrics (e.g., cost benefit analysis, cost effectiveness analysis, ROI, clinical outcomes analyses)
2. Continuous quality improvement processes (e.g., Plan, Do, Study, Act (PDSA); Six Sigma)
3. Literature evaluating medication errors and patient safety (e.g., IOM report, Beers criteria, START/STOPP)
4. Principles of medication use evaluation
5. Processes/procedures for ADR, medication error, and incident reporting (e.g., MedWatch, VAERS)
6. Quality measures (e.g., HEDIS, PQA, CMS, NQF)
<i>Task 6: Participate in formulary or inventory management.</i>
Knowledge of:
1. Cost effective treatment protocols and alternative and therapeutic interchange options (e.g., prior authorization, cost sharing, tier system, quantity limits)
2. Develop criteria for use protocols
3. Formulary management systems
4. P&T Committee operation
5. Prescription coverage plans (e.g., Medicare A, B, C, D; Medicaid)
6. Prior authorization and nonformulary drugs based on medical necessity
7. Special order drug systems (e.g., patient assistant programs, REMS, specialty medications/biologics)
8. Systems of drug procurement
<i>Task 7: Advocate to ensure appropriate healthcare policy for optimal patient outcomes.</i>
Knowledge of:
1. Current legislative processes and issues
2. Current regulatory processes and issues
3. Roles and benefits of professional organizations and agencies

DESCRIPTION**Domain 5: Population and Public Health**

Task 1: Use population-level data to develop, implement, and assess practices or strategies for addressing health promotion and disease prevention that advocate for public health.

Knowledge of:

1. Clinical practice guidelines and national initiatives (e.g., Healthy People 2020)
2. Data available from electronic medical record
3. Established quality metrics (e.g., HEDIS, NCQA, ACO Quality Metrics)
4. Resources and data repositories of public health data (e.g., county and state report cards, CDC-Behavioral Risk Factor Surveillance System, CDC National Health and Nutrition Examination Survey)
5. Strategies for effective health promotion and disease prevention efforts
6. Survey methodology
7. Type of data available from claims database (e.g., prescription drug claims database, electronic health records)

Task 2: Educate healthcare providers and the public regarding health promotion and disease prevention.

Knowledge of:

1. Clinical practice guidelines for conducting health screenings (e.g., USPSTF recommendations, prostate, colorectal, cervical and breast cancer, tobacco cessation)
2. Immunization schedules
3. Proper drug storage and disposal
4. Public information resources regarding the prevention and treatment of diseases, (e.g., reliable Internet websites {MedlinePlus, professional organizations and foundations}, toll-free information hotlines (e.g., Poison Control Center, Suicide, educational materials)
5. Resources available through relevant groups, organizations, and agencies (e.g., ADA, AHA, NIH, CDC, AAAAI)
6. Techniques and/or strategies for effective communication

Task 3: Coordinate appropriate pharmacotherapy in preparation for and response to public health threats and disasters through the selection, procurement, and distribution of medication.

Knowledge of:

1. Prevention and treatment plans for public health threats and disasters (e.g., National Association of County and City Health Officials (NACCHO), CDC, public health departments)