CAPE Outcome: Pharmaceutical Care

I. Provide Pharmaceutical Care to achieve optimal patient outcomes

A. Engage in patient management activities

Compile patient-specific information
- Assess whether the pathophysiology of a specific disease can increase the potential for medication-related problems. (5 ME)
- Assess patient history for drug allergies or intolerances. (5 ME)
- Identify the patient’s primary complaint(s) and reason(s) for seeking medical care. (4 BE/ME)
- Assess patient history for drug allergies or intolerances. (4 BE/ME)
- Assess patient adherence to previously prescribed medication regimens. (4 BE/ME)
- Evaluate and interpret patient and drug-related data needed to identify actual or potential drug therapy problems. (3 BE)
- Assure there is not excessive medication use or unnecessary drug duplication. (3 BE)
- Identify appropriate information in profiles or medical records that can potentially affect drug dose and dosing schedule. (3 BE)
- Employ clinical and physical assessment skills to determine the adequacy of patient therapeutic self-management and to evaluate therapeutic effectiveness or potential drug-related problems in the patient. (3 BE)

Review patient profiles or medication administration records to determine the adequacy of patient therapeutic self-management. (2 BE/AO)
- Identify potential indicators of drug misuse or abuse. (2 BE/AO)

Develop, implement, monitor drug therapy
- Relate the chemical and/or biochemical structure of drugs to their therapeutic action. (5 ME)
- Evaluate patient characteristics that may influence the choice of a drug delivery system. (5 ME)
- Integrate patient and drug information with drug dosing methods to calculate appropriate dosage adjustments. (4 BE/ME)
- Develop a plan to influence patients to effectively manage their therapy and reinforce appropriate behaviors. (3 BE)
- Communicate orally and in writing an analysis of patient therapeutic self-management problems to the patient’s physician and/or other relevant health care providers. (3 BE)
- Communicate evidence of efficacy or potential for drug-related problems to the patient and/or caregiver and prescriber. (3 BE)
- Explain dosage recommendations and associated rationale to other health care team members. (3 BE)
- Evaluate any available laboratory test results and/or pharmacokinetics data that can influence dosing regimen. (3 BE)
- Relate psychosocial aspects of illness and health to the management of therapy-related problems. (3 BE)
- Communicate alternative delivery system or dosage strategies to the prescriber to help resolve specific patient therapeutic self-management problems. (2 BE/AO)
- Communicate alternative therapeutic strategies to the prescriber to correct or prevent drug-related problems. (2 BE/AO)
- Recommend revisions of therapeutic plans based upon changes in patient status. (1 AO)

Medical Devices
- Research the literature related to medical goods and devices in order to select or recommend the most appropriate device for an individual patient. (4 BE/ME)
- Obtain patient information relevant to the selection of a particular device. (3 BE)
- Assure that the patient or caregiver is able to use the necessary medical goods or devices. (3 BE)
- Determine which of the available medical devices or products in the market place meets the patient's or caregiver's needs. (3 BE)
- Demonstrate the proper use of the medical devices and products that help ensure that the patient or caregiver can effectively implement the use of the medical goods and devices. (3 BE)
- Ensure that equipment specific requirements for maintenance, testing, etc. are effectively communicated to the patient or caregiver. (3 BE)
- Make referrals to other health care agencies or professionals where indicated. (2 BE/AO)

Provide education/information to patients and caregivers to appropriately use medication
- Use effective written, visual, verbal, and nonverbal communication skills when providing medication self-management counseling to patients and/or caregivers. (4 BE/ME)
- Demonstrate/describe proper administration technique for a selected drug delivery systems (e.g. inhalation, otic, eye, nasal, buccal, rectal, vaginal). (5 ME)
- Explain any action that should be taken in the event of a missed dose. (5 ME)
- Encourage patients/caregivers to contact the pharmacist for further information or advice regarding therapy. (5 ME)
- Use appropriate methods of patient education to review indications, adverse effects, dosage, storage, and administration techniques. (4 BE/ME)
- Advise patients on how to avoid potential interactions with other therapies. (4 BE/ME)
- Explain signs and symptoms associated with the common and/or severe adverse reactions to a therapy. (4 BE/ME)
- Explain the significance and frequency of adverse drug reactions and interactions associated with a given therapy. (3 BE)
Assist patients seeking self-care
Assess a patient’s self-identified problem (e.g., common cold, fever, pain, gastrointestinal problems) to determine if the problem is appropriate for self care or requires referral.  
Discuss options for treatment and recommend appropriate non-prescription product(s) if indicated.  
Teach a patient the proper and safe use of commonly used health products (e.g., condoms, thermometers, blood pressure monitoring devices, blood glucose meters, metered-dose devices, ear syringes, adherence devices).  
Counsel the patient about the proper use of self care products.  
Instruct a patient about the proper use of a diagnostic agent or device, including directions for obtaining accurate results and how to interpret the results.

B. Engage in drug delivery and product management activities

Prepare and dispense medication(s) prescribed or recommended as part of the patient's care plan
Evaluate the acceptability of prescription or medication order transmission and legitimacy of source.  
Verify that dose, frequency, formulation, and route of administration on prescription or medication orders are correct.  
Clarify, add, and/or correct prescription order information when necessary.  
Accurately enter patient information into the patient’s pharmacy profile or medication record.  
Select a drug delivery system that will provide optimal therapeutic benefit to individual patients.  
Accurately prepare and dispense medications or supervise the preparation of medications.  
Correctly count, measure, and/or mix preformulated products.  
Correctly prepare the label for a finished prescription or drug order, assuring it conforms to all state and federal laws.  
Assure that the label conveys directions in a manner that is understandable to the patient and that appropriate auxiliary labels are attached.  
Select an appropriate container for the prescription that protects the integrity of the drug delivery system and that meets the patient's needs.  
Select an appropriate container for storage or use of medications with special requirements (e.g., child-resistant containers, compliance devices).  
Determine the validity of the patient-prescriber relationship.

B. Engage in drug delivery and product management activities—continued

Compounding
Use correct gravimetric and volumetric measuring procedures to obtain the desired quantity of any formulation component.  
Identify potential physical and chemical incompatibilities among components of compounded (parenteral or non-parenteral) prescriptions.  
Follow USP compendial standards (<795> or <797>) for the extemporaneous compounding of a non-sterile or sterile patient-specific drug delivery system.  
Determine the appropriate storage of manufactured or compounded medications before and after dispensing.  
Evaluate the suitability of an extemporaneously compounded prescription as opposed to available manufactured products  
Recommend appropriate alternatives to avoid physical and chemical incompatibilities among components of compounded prescriptions.

C. Engage in practice management activities

Documentation
Adjudicate third-party insurance claims using established billing systems.  
Demonstrate proper procedures for taking/giving a prescription transfer.  
Record all patient information accurately, legibly, and succinctly.  
Observe legal and ethical guidelines for protecting the confidentiality of patient information.  
Record actions taken and recommendation made to achieve desired therapeutic outcomes.  
Document the effectiveness and adverse effects attributed to drug therapy.  
Record the patient care plan.  
Consolidate and organize information that is already in the patient's medical record to facilitate its review.
D. Communication and Professional Behavior

Communicate effectively
- Actively listen to patients, peers, and other health care professionals. 5 ME
- Use proper grammar, spelling, and pronunciation in communications. 5 ME
- Explain medication information to patients in understandable terms. 5 ME
- Routinely verify patient or recipient understanding of communicated information. 4 BE/ME
- Adjust communication based on contextual or cultural factors, including health literacy, language barriers, and cognitive impairment. 3 BE
- Develop verbal, non-verbal, written and graphic communication materials for patients, peers, and other health care professionals. 3 BE
- Communicate with prescribers, patients, caregivers, and other health care providers to engender a team approach to patient care. 2 BE/AO

Interact with patients & the health care team.
- Articulate the pharmacist’s role as a member of the health care team. 5 ME
- Demonstrate sensitivity to and respect for each individual’s needs, values, and beliefs, including cultural factors, religious beliefs, language barriers, and cognitive abilities. 5 ME
- Demonstrate empathy and caring in interactions with others. 5 ME
- Maintain patient confidentiality and respect patients’ privacy. 5 ME
- Establish professional rapport with patients and healthcare professionals. 3 BE
- Demonstrate ability to resolve conflict in the pharmacy practice setting. 2 BE/AO

Behave in a professional and ethical manner.
- Dress professionally and appropriately for the practice setting. 5 ME
- Arrive punctually and remain until all responsibilities are completed. 5 ME
- Distinguish professional interests from personal interests and respond appropriately. 5 ME
- Accept responsibility for one’s actions. 5 ME
- Respond appropriately to feedback from preceptors, patients, peers, and other health care professionals. 5 ME
- Demonstrate passion and enthusiasm for the profession. 5 ME
- Manage time appropriately and efficiently. 5 ME
- Be self-directed in undertaking responsibilities. 5 ME
- Adhere to all state and federal laws and regulations as a pharmacy intern in the practice setting. 5 ME
- Demonstrate awareness of personal competence and limitations and seek guidance or assistance from preceptors when appropriate. 4 BE/ME
- Assess one’s own knowledge and abilities independently. 4 BE/ME
- Set personal knowledge and ability goals and take responsibility for attaining them. 4 BE/ME
- Show initiative in interactions with patients, peers, and other health care professionals. 4 BE/ME
- Be aware of and work appropriately within the culture of the assigned practice setting. 4 BE/ME
- Demonstrates personal and professional growth. 4 BE/ME
- Demonstrate awareness of site or institutional policies and procedures. 3 BE
- Prioritize workload appropriately. 3 BE
- Identify issues involving ethical dilemmas. 3 BE
- Propose steps to resolve ethical dilemmas. 3 BE
- Identify and analyze emerging issues, products, and services that may impact patient-specific and population-based pharmaceutical care. 2 BE/AO
- Weigh and balance different options for responding to ethical dilemmas. 2 BE/AO

CAPE Outcome: Systems Management
II. Manage the Practice

A. Product-related

Determine which drugs require special storage conditions and insure that these drugs are properly stored. 5 ME
Communicate to the patient and/or other health care professionals the differences and similarities of generic and branded products. 5 ME
Evaluate the validity of experimental designs, analytical methods, and statistical analyses used in bioavailability studies. 4 BE/ME
Evaluate the validity of relevant bioequivalence studies. 4 BE/ME
Ascertain product availability and time required to obtain product from vendor. 3 BE
Identify alternative actions if product quality is compromised. 3 BE
Select the most cost-effective source of a given product. 3 BE
Evaluate pricing information, including relevant pricing structures for products under consideration. 3 BE
Evaluate characteristics of the product(s) under consideration that may impact cost and/or therapeutic outcome. 3 BE
Determine the availability of pharmaceutical alternatives. 3 BE
Determine the availability of generic counterparts to brand name products. 3 BE
Properly dispose of/return those drug products that have expired and/or exceeded their reasonable shelf life. 3 BE
Properly implement steps required for a manufacturer’s product recall. 3 BE
Identify alternative actions if product quality is compromised. 3 BE
Use appropriate references for the evaluation of drug product quality. 3 BE
Determine if a reasonable length of expiration time remains when products arrive from the vendor. 2 BE/AO
Use management principles related to purchasing and inventory control. 2 BE/AO
Use management principles related to purchasing and inventory control. 2 BE/AO
Ascertain dependability of the vendor. 2 BE/AO
Apply relevant regulations to product selection from among multi-source drug products. 2 BE/AO
Assess bioequivalence and therapeutic equivalence recommendations embodied in institutional, state and federal formularies, and documents. 2 BE/AO
Monitor compliance with policies and procedures for inventory management. 2 BE/AO
Evaluate the quality record of drug products through the regular use of the FDA website and listservs. 2 BE/AO
Consider other factors that are indicative of a manufacturer's product quality and their ability to replicate the product and ensure an adequate supply. 2 BE/AO

B. Management

Comply with federal, state, and local laws and related regulations that affect the practice of pharmacy. 5 ME
Participates in social and professional interaction and teamwork. 5 ME
Promotes a team approach to health care. 5 ME
Recognize professional practice situations that may give rise to liability under civil law. 3 BE
Demonstrates trust, leadership, delegation, and interdependence. 3 BE
Apply principles of personnel management to train, develop, supervise, and motivate support staff. 2 BE/AO
Use policies and procedures that improve the efficiency and effectiveness of a given drug distribution system. 2 BE/AO
Develop appropriate position descriptions for a given drug distribution system. 1 AO

C. Practice Improvement

Predict future patient care needs and professional service opportunities in various practice settings. 1 AO
Formulate and evaluate strategies to meet future patient care needs within a specific practice setting. 1 AO
Evaluate the achievements of a practice in relation to the established mission, fiscal resources, and customer needs. 1 AO
Continually review the operational functioning of the pharmacy and recommend strategic changes to improve the quality of care provided. 1 AO
Identify deficiencies in facilities design and equipment at an existing practice site. 1 AO
Develop/specify information system needs and implement an information management system that meets legal, business, archival, and patient care needs. 1 AO
III. Manage/Improve Medication Use Systems

A. Medication use system improvement & management

Identify appropriate drug use guidelines developed by governmental regulatory or health agencies. 4 BE/ME
Evaluate information obtained from adverse drug reaction and medication error reporting systems (e.g. MedWatch) to identify preventable causes. 3 BE
Identify and report medication errors and adverse drug reactions to appropriate individuals and organizations. 3 BE
Articulate the pharmacist’s role in medication use oversight (e.g., formulary management, practice guidelines.) 2 BE/AO
Participate in established medication safety and quality improvement activities (e.g., adverse drug reaction reporting, medication reconciliation, health systems improvement) 2 BE/AO
Develop drug use evaluation criteria and/or indicators based on analysis of the literature. 2 BE/AO
Collect institutional data for a drug utilization review. 2 BE/AO
Manage the incidence of medication errors and adverse drug reactions. 2 BE/AO
Recommend actions to minimize the occurrence of adverse drug reactions and medication errors. 2 BE/AO
Apply criteria to collected drug utilization review data. 1 AO
Implement corrective actions to improve drug use. 1 AO
Monitor prescriber and pharmacist compliance with formulary standards. 1 AO
Communicate with managers and caregivers regarding formulary decisions. 1 AO
Implement corrective action if variances from the formulary standards occur. 1 AO

B. Quality Improvement in Practice/Health Systems

Apply elements of continuous quality improvement to pharmaceutical care. 2 BE/AO
Apply principles of pharmacoconomics in making pharmaceutical care decisions. 2 BE/AO
Apply principles of humanistic outcomes in determining impact of pharmaceutical care services on patient’s quality of life. 2 BE/AO
Use appropriate structure, process, and outcome measures to evaluate the quality of pharmaceutical care. 1 AO
Document patient services in practice, analyze them against comprehensive pharmaceutical care processes, develop, and implement practice improvements. 1 AO
Use appropriate critical pathways, clinical practice guidelines, and disease management protocols in the delivery of pharmaceutical care. 1 AO

C. Value-added activities

Identify appropriate drugs for DUE review. 1 AO
Compile and evaluate drug use data across patients and prescribers within the system. 1 AO
Develop therapeutic interchange guidelines. 1 AO
Document quality assurance activities according to the specifications of relevant accrediting and regulatory bodies. 1 AO
Use report cards in assessing the quality of health care. 1 AO

CAPE Outcome: Public Health

IV. Public Health, Health Promotion, Disease Prevention

Promote to patients the importance of managing their diseases and therapies to optimize outcomes. 5 ME
Participate in activities that promote health and wellness and the use of preventive care measures. 5 ME
Describe the role of immunizations in disease prevention. 5 ME
Administer subcutaneous, intramuscular, or intradermal injections, including immunizations. 5 ME
Screen for common medical conditions and make appropriate referrals. 5 ME
Conduct smoking-cessation interventions when appropriate. 5 ME
Raise public awareness about the role of a pharmacist as a public health educator. 5 ME
Identify at-risk populations requiring immunizations. 4 BE/ME
Assess the needs of a target population relative to disease prevention/detection. 3 BE
Select and implement an appropriate strategy to prevent (e.g., immunizations) or detect (e.g., blood cholesterol screening) disease in a target population. 3 BE
Apply basic principles of nutrition to the management of patient health. 3 BE
Articulate the concept of advocacy - what it means both professionally and personally. 3 BE
Relate the major components of the American health care system and their relationship to pharmaceutical care delivery. 3 BE
Evaluate program impact on the target population. 2 BE/AO
Explain how to assure availability of effective, quality health, and disease prevention services. 2 BE/AO
Assess the health needs of a specific patient population by analyzing epidemiologic data and identifying risk factors that would adversely affect patient health. 2 BE/AO
Develop appropriate criteria and outcome indicators and conduct medication reviews in specific populations. 1 AO
Demonstrate how evidence-based disease management programs are incorporated into outcome indicators, drug treatment protocols, risk reduction strategies, and education programs for providers and patients.

**Value-added activities**

Identify and evaluate common emergencies including those requiring CPR.  
4 BE/ME

Describe legal and ethical implications of intervention in emergency situations.  
4 BE/ME

Assist individuals in obtaining emergency transportation to a medical facility.  
3 BE

Describe legal and ethical implications of intervention in poisoning/drug overdose situations.  
3 BE

Determine urgency of the situation and necessity to summon emergency medical service personnel.  
3 BE

Apply appropriate emergency care in relationship to available personnel, equipment, and facilities.  
3 BE

Apply effective communication techniques when responding to requests for information on poisoning and drug overdose.  
3 BE

Consult appropriate resources for identification of the symptoms, signs, and management of a specific poisoning or drug overdose.  
3 BE

Provide recommendations for management and/or refer patients for further medical evaluation.  
2 BE/AO

**V. Provide Drug Information and Education**

Recognize the type of content that is available in general (tertiary), secondary, and primary information sources.  
5 ME

Collect accurate and comprehensive drug information from appropriate sources to make informed, evidence-based decisions.  
4 BE/ME

Collect accurate and comprehensive information to be used in monitoring therapeutic outcomes.  
4 BE/ME

Use abstracting and indexing services to access necessary information.  
4 BE/ME

Use computerized programs for monitoring and identifying adverse reactions, drug interactions, etc.  
4 BE/ME

Consult personal and organizational sources of information.  
4 BE/ME

Evaluate information obtained from available sources.  
4 BE/ME

Use appropriate written and verbal communication techniques to respond to information requests.  
4 ME

Document responses to information requests.  
4 ME

Identify the educational needs and background of the intended audience.  
4 BE/ME

Choose appropriate media to communicate effectively.  
4 BE/ME

Choose health education strategies that are appropriate to the type of health care education program.  
4 BE/ME

Demonstrate effective oral and written communication tailored to the individual needs of the audience and type of setting.  
4 BE/ME

Determine the nature and specific aspects of the request by obtaining appropriate background information and establishing the urgency of the response.  
3 BE

Apply knowledge of the content of general (tertiary), secondary, and primary information sources.  
3 BE

Provide accurate information applicable to the question/case.  
3 BE

Use health education strategies effectively.  
3 BE

Compile and update literature for ready reference in the provision of patient care.  
3 BE

Evaluate the impact of an educational program on the behaviors/performance of program participants.  
2 BE/AO