



**Required and Elective Educational Outcomes, Educational Goals, Educational Objectives, and Instructional Objectives for Postgraduate Year One (PGY1) Managed Care Pharmacy Residency Programs**

**Prepared Jointly by the American Society of Health-System Pharmacists and the Academy of Managed Care Pharmacy**

**Explanation of the Contents of This Document:**

Users of this document will want to refer to the accompanying glossary to assure a shared understanding of terms. Each of the document's objectives has been classified according to educational taxonomy (cognitive, affective, or psychomotor) and level of learning. An explanation of the taxonomies is available elsewhere.<sup>1</sup>

The order in which the required educational outcomes is presented in this document does not suggest relative importance of the outcome, amount of time that should be devoted to teaching the outcome, or sequence for teaching.

The educational outcomes, goals, and objectives are divided into those that are required and those that are elective. The required outcomes, including all of the goals and objectives falling under them, must be included in the design of all programs. The elective outcomes are provided for those programs that wish to add to the required outcomes. Programs selecting an elective outcome are not required to include all of the goals and objectives falling under that outcome. In addition to the potential elective outcomes contained in this document, programs are free to create their own elective outcomes with associated goals and objectives. Each of the goals falling under the program's selection of program outcomes (required and elective) must be evaluated at least once during the resident's year.

**Educational Outcomes (Outcome):** Educational outcomes are statements of broad categories of the residency graduates' capabilities.

**Educational Goals (Goal):** Educational goals listed under each educational outcome are broad sweeping statements of abilities.

**Educational Objectives (OBJ):** Resident achievement of educational goals is determined by assessment of the resident's ability to perform the associated educational objectives below each educational goal.

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<sup>1</sup> Nimmo, CM. Developing training materials and programs: creating educational objectives and assessing their attainment. In: Nimmo CM, Guerrero R, Greene SA, Taylor JT, eds. Staff development for pharmacy practice. Bethesda, MD: ASHP; 2000.

**Instructional Objectives (IO):** Instructional objectives are the result of a learning analysis of each of the educational objectives. They are offered as a resource for preceptors encountering difficulty in helping residents achieve a particular educational objective. The instructional objectives falling below the educational objectives suggest knowledge and skills required for successful performance of the educational objective that the resident may not possess upon entering the residency year. Instructional objectives are teaching tools only. They are not required in any way nor are they meant to be evaluated.

<b>Educational Outcomes Required for Postgraduate Year One (PGY1) Managed Care Pharmacy Residencies</b>
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**Outcome R1:** *Understand how to manage the drug distribution process for an organization's members.*

Goal R1.1: Understand how the managed care organization contracts with community pharmacies to form effective networks to fulfill the drug therapy needs of members.

OBJ R1.1.1: (Comprehension) Explain how to determine the requirements and characteristics of a network that would meet plan members' needs.

*IO: Explain the concept of access.*

*IO: Explain the plan's objectives for access.*

*IO: Explain the advantages and disadvantages of broad versus narrow networks.*

- Accurately explains the concept of access, including geographic access and the access requirements included in Medicare Part D
- Accurately explains the plan's objectives for access
- Accurately explains the advantages and disadvantages of broad versus narrow networks.
- Accurately describes additional services that are required or desirable within the network (vaccination, etc.)
- Accurately describes the requirements for out-of-network pharmacy services
- Accurately describes medication therapy management network objectives

Suggested assessment activity: Resident discussion of how to determine the requirements and characteristics of a network that would meet plan members' needs.

OBJ R1.1.2: (Comprehension) Explain how to design a strategy and work plan for the recruitment of pharmacies needed to create a network for a specific plan.

*IO: Explain suitable recruitment strategies for use with chain pharmacies.*

*IO: Explain suitable recruitment strategies for use with independent pharmacies.*

*IO: Compare and contrast recruitment strategies for urban versus rural pharmacies.*

- Accurately explains suitable recruitment strategies for use with chain pharmacies
- Accurately explains suitable recruitment strategies for use with independent pharmacies.
- Accurately explains similarities and differences between recruitment strategies for urban and rural pharmacies
- Accurately explains business factors (competition, employers) that affect recruitment strategies
- Describes an appropriate work plan for recruitment

Suggested assessment activity: Resident discussion of business and competitive factors in the recruitment of pharmacies needed to create a network

OBJ R1.1.3: (Comprehension) Explain the kinds of strategies managed care organizations employ when negotiating contracts with pharmacies being recruited into a network.

*IO: Explain the principles of negotiation.*

*IO: Explain the nature of contracts that are written between a managed care organization and a pharmacy in a pharmacy network.*

*IO: Explain the components of a contract between a managed care organization and a pharmacy in a pharmacy network.*

- Accurately explains the principles of negotiation
- Accurately explains the nature of contracts that are written between a managed care organization and a pharmacy in a pharmacy network.
- Accurately explains specific points of negotiation – after hours, special services, etc.
- Accurately explains the effects of state laws (e.g. “any willing provider”, “most favored nation”)
- Accurately explains the relationship between negotiation and the strategies used for recruitment
- Accurately explains distribution activities (mail order, retail, specialty) that may be included in contracts

Suggested assessment activity: Resident discussion of strategies managed care organizations employ when negotiating contracts with pharmacies being recruited into a network.

OBJ R1.1.4: (Comprehension) Explain how maximum allowable cost (MAC) is employed in managed care plans.

*IO: Explain the concept of maximum allowable cost (MAC).*

*IO: Explain how a MAC is determined.*

- Accurately explains the concept of maximum allowable cost (MAC)
- Accurately explains how a MAC is determined.
- Accurately explains which drugs can be subjected to MAC
- Accurately explains how MAC is used as a component of pricing in a network contract
- Accurately explains the differences and relationship between MAC for the network and MAC for a plan

Suggested assessment activity: Resident discussion of maximum allowable cost in managed care plans.

OBJ R1.1.5: (Comprehension) Explain strategies for monitoring pharmacy networks for instances of fraud or abuse.

*IO: Explain common types of fraud and abuse that may occur in managed care pharmacy networks.*

*IO: Explain strategies for detecting fraud and abuse from the information available to the managed care pharmacist.*

- Accurately explains common types of fraud and abuse (including dispensed quantity does not match prescription, refills dispensed without apparent authorization, dispensing without documented prescription, person other than member signing for prescription, drug switching – dispense a different drug from what is billed)
- Accurately explains strategies for detecting fraud (e.g. electronic systems, tabletop audits, onsite audits)

Suggested assessment activity: Resident discussion of strategies for monitoring pharmacy networks for instances of fraud or abuse.

OBJ R1.1.6: (Comprehension) Explain strategies for monitoring pharmacy networks for contractual compliance.

*IO: Explain strategies for determining compliance with provisions of a contract(s).*

- Accurately describes tabletop audits and onsite audits
- Accurately describes member satisfaction surveys

Suggested assessment activity: Resident discussion of strategies for monitoring pharmacy networks for contractual compliance.

OBJ R1.1.7: (Comprehension) Explain strategies for assessing the performance and quality of distribution networks for pharmaceutical products and care.

*IO: Explain characteristics of a well-performing distribution network for pharmaceutical products and care.*

*IO: Explain measures of quality that could be applied to a distribution network for pharmaceutical products and care.*

*IO: Explain the organization's methods for measuring the performance and quality of its distribution networks for pharmaceutical products and care.*

- Accurately describes formulary compliance and its relationship to performance/quality
- Accurately describes generic dispensing rates and its relationship to performance/quality
- Accurately describes member satisfaction surveys, member complaints and their relationship to performance/quality

Suggested assessment activity: Resident discussion of strategies for assessing the performance and quality of distribution networks for pharmaceutical products and care.

OBJ R1.1.8: (Comprehension) Explain strategies for assessing the success of a distribution network in meeting the needs of members.

*IO: State sources of information for use in determining if member needs are being met (e.g., customer complaints, satisfaction surveys).*

- Accurately describes sources of information for use in determining if member needs are being met (e.g., customer complaints, satisfaction surveys).
- Accurately describes how to utilize given information to assess the success of a distribution network in meeting the needs of members.

Suggested assessment activity: Resident discussion of strategies for assessing the success of a distribution network in meeting the needs of members.

Goal R1.2: Understand principles guiding the establishment and operation of mail or online services to meet the drug therapy needs of members.

OBJ R1.2.1: (Comprehension) Explain the principles that guide, when appropriate, the establishment and operation of efficient and effective mail services.

*IO: Explain circumstances that may make use of mail services inappropriate.*

- Accurately describes situations that may make use of mail services inappropriate (e.g. acute needs)
- Accurately describes mandatory vs. optional mail order services
- Accurately explains how the characteristics of the member population affect the establishment and operation of mail services

Suggested assessment activity: Resident discussion of the principles that guide the establishment and operation of efficient and effective mail services.

OBJ R1.2.2: (Comprehension) Explain the principles that guide, when appropriate, the establishment and operation of efficient and effective online services.

*IO: Explain circumstances that may make use of online services inappropriate.*

- Accurately describes characteristics of the population and/or member demographics that make use of online services inappropriate.

Suggested assessment activity: Resident discussion of the principles that guide the establishment and operation of efficient and effective online services.

Goal R1.3: Understand and evaluate selected aspects of the processing of eligibility and claims for prescription drugs and professional services.

OBJ R1.3.1: (Comprehension) Explain the billing and payment functions involved in the adjudication of claims for pharmaceutical products.

- Accurately describes the purpose of online adjudication systems
- Accurately describes the components of online adjudication systems
- Accurately describes the sources and structures of fees associated with online adjudication systems

Suggested assessment activity: Resident discussion of the billing and payment functions involved in the adjudication of claims for pharmaceutical products.

OBJ R1.3.2: (Comprehension) Explain the role of clinical screens and edits.

- Accurately explains the role of clinical screens and edits for member safety (e.g. drug interactions)
- Accurately explains the role of clinical screens and edits for appropriateness of use (e.g. step therapy, prior authorization, refill too soon)

Suggested assessment activity: Resident discussion of the role of clinical screens and edits.

OBJ R1.3.3: (Comprehension) Explain the types of edits and clinical screens that can be transmitted according to established transmission standards.

*IO: State sources of transmission standards for edits and clinical screens.*

*IO: Explain the limitations that the transmission standard places on the content of alerts and clinical screens.*

- Accurately describes the role of NCPDP (National Council for Prescription Drug Programs) as the definitive source for how to electronically transmit information associated with pharmacy services
- Accurately describes how standards are changed as needs change
- Accurately describes the limitations that the transmission standard places on the content of alerts and clinical screens, including: number of bytes in a particular field in the standard, types of fields available, end user adoption and implementation of the standard

Suggested assessment activity: Resident discussion of the types of edits and clinical screens that can be transmitted according to established transmission standards.

OBJ R1.3.4: (Analysis) For a given benefit design, identify the necessary edits, alerts, and messages to be built into the computerized system for communicating with providers.

- Identifies any needed additions, changes, and/or deletions.

Suggested assessment activity: Review of resident's written document that identifies the necessary edits, alerts, and messages for a given a benefit design

OBJ R1.3.5: (Comprehension) Explain the billing and payment functions involved in the adjudication of claims for pharmacist professional services.

*IO: Explain the use of each of the codes used for billing for professional services.*

- Accurately describes professional services billing within a managed care environment

Suggested assessment activity: Resident discussion of the billing and payment functions involved in the adjudication of claims for pharmacist professional services

**Outcome R2: Design and implement clinical programs to enhance the efficacy of patient care.**

Goal R2.1: Contribute to the ongoing development of the managed care organization's formularies.

OBJ R2.1.1: (Comprehension) Explain the organization's process for tracking the progress of drugs in the development pipeline.

*IO: Explain reasons for a managed care organization to track drugs that are not yet approved for use.*

*IO: Explain sources of information on drugs that are in the development pipeline.*

- Accurately explains reasons for a managed care organization to track drugs that are not yet approved for use
- Accurately explains sources of information on drugs that are in the development pipeline
- Accurately explains internal process for tracking drugs that are not yet approved for use

Suggested assessment activity: Resident discussion of the organization's process for tracking the progress of drugs in the development pipeline

OBJ R2.1.2: (Analysis) Create a written monograph for a medication that is to be considered by the organization's P&T committee for inclusion in its formularies.

*IO: Explain signs and symptoms, epidemiology, risk factors, pathogenesis, natural history of disease, pathophysiology, clinical course, etiology, of the disease(s) to be treated by the drug under consideration.*

*IO: Explain the mechanism of action, pharmacokinetics, pharmacodynamics, pharmacoeconomics, usual regimen (dose, schedule, form, route, and method of administration), indications, contraindications, interactions, adverse reactions, and therapeutics of the drug under consideration.*

*IO: Explain the structure and types of information supplied by pharmaceutical manufacturers using AMCP's Format for Formulary Submission.*

*IO: Explain the structure and the function of each element in the AMCP monograph template.*



- IO: Explain the managed care organization's process for assigning the level of evidence to information used in monograph development.*
- IO: Explain likely sources of relevant information not contained in the materials supplied by the pharmaceutical manufacturer.*
- IO: Explain the characteristics of scientific writing.*
- IO: Explain factors to consider when judging the safety, the efficacy, or the pharmacoeconomics of a specific medication.*
- IO: Explain circumstances in which a monograph should include recommendations for utilization management programs.*

- Monograph is based on a thorough review of pertinent literature
- Monograph is written in the appropriate format
- Monograph is written using accepted scientific writing style
- Monograph is objective
- Monograph includes appropriate levels of evidence
- Monograph appropriately judges the safety, the efficacy, and if appropriate, the pharmacoeconomics of a specific medication
- Monograph includes appropriate recommendations for utilization management programs

Suggested assessment activity: Review of written monograph for a medication that is to be considered by the organization's P&T committee for inclusion in its formularies.

OBJ R2.1.3: (Analysis) Prepare a written therapeutic class review for consideration by the organization's P&T committee.

- Review is based on a thorough review of pertinent literature
- Review is presented in the appropriate format
- Review is objective
- Review includes appropriate recommendations for utilization management programs, if applicable

Suggested assessment activity: Review of resident's written therapeutic class review prepared for consideration by the organization's P&T committee

- IO: Compare the purpose of drug monographs with the purpose of therapeutic class reviews.*
- IO: Compare contents of drug monographs with the contents of therapeutic class reviews.*
- IO: Explain the decision-making criteria when considering the results of a therapeutic class review.*

OBJ R2.1.4: (Synthesis) When appropriate, present the recommendations contained in a monograph to members of the P&T Committee.

- IO: Explain the composition and responsibilities of the organization's P&T committee.*

*IO: Explain the pharmacist's responsibilities when participating in P&T committee decision-making.*

*IO: Explain an appropriate style of presentation for P&T committee meetings.*

- Presentation reflects understanding of the composition and responsibilities of the organization's P&T committee
- Presentation reflects understanding of the pharmacist's responsibilities when participating in P&T committee decision-making.
- Presentation uses appropriate style

Suggested assessment activity: Direct observation of resident presentation of a monograph to members of the P&T Committee

OBJ R2.1.5: (Synthesis) Contribute to the customization of a formulary so that it meets the requirements of a particular plan sponsor.

*IO: Explain the factors important in determining the need for customization.*

*IO: Explain pros and cons of a plan sponsor's decision to customize a formulary.*

- Response/presentation educates sponsors about clinical and financial ramifications of customization decisions
- Response/presentation incorporates knowledge of when it is appropriate for sponsors to customize the formulary

Suggested assessment activity: Review of written response or direct observation of presentation to sponsor or sponsor representative.

Goal R2.2: Contribute to the implementation of the managed care organization's formularies.

OBJ R2.2.1: (Synthesis) Design a strategy for effectively communicating to the plan sponsor, members, prescribers, and pharmacy network information regarding formulary design and/or changes.

*IO: Explain various techniques that are suitable for communicating formulary design or changes to each type of audience.*

*IO: Explain the depth of communication and information suitable for each type of audience when communicating formulary design or changes.*

- The strategy takes into account the demographics of the member population affected
- The strategy takes into account the impact of the change on the sponsor, members, prescribers, and pharmacy network
- The strategy takes into account the required timeline

Suggested assessment activity: Review of resident's written strategy for communicating information regarding formulary design and/or changes.

OBJ R2.2.2: (Synthesis) Participate in the communication of information regarding formulary design and/or changes.

- The communication is at a level appropriate for the audience
- The content is appropriate for the audience

Suggested assessment activity: Review of resident's written document or presentation communicating information regarding formulary design and/or changes

OBJ R2.2.3: (Synthesis) Design a strategy for transitioning patients where coverage of present medications may change as a result of formulary modifications.

*IO: Explain typically employed strategies for transitioning patients when a formulary decision affects their drug coverage.*

- The selected strategy is appropriate for the demographics of affected members
- The selected strategy considers all changes that impact members

Suggested assessment activity: Review of resident's written strategy for transitioning patients where coverage of present medications may change as a result of formulary modifications.

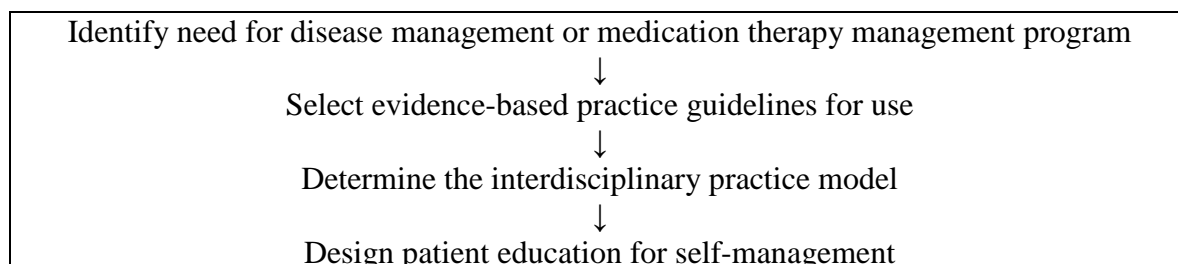
OBJ R2.2.4: (Evaluation) Participate in the organization's process for evaluating the impact of implementation of formulary changes.

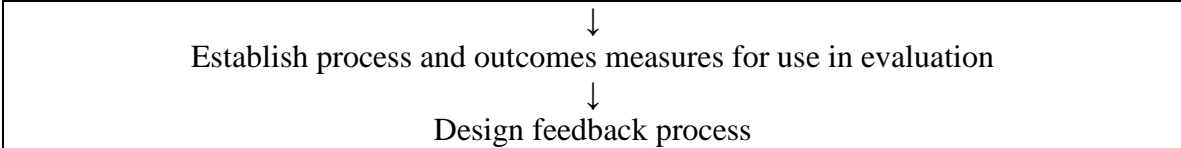
*IO: Explain the organization's strategy for evaluating the impact of the implementation of a formulary change.*

- Evaluation correctly assesses the impact of the implementation of the formulary change
- Evaluation includes appropriate analysis of unexpected consequences and lessons learned

Suggested assessment activity: Review resident's contribution to evaluating the impact of implementation of formulary changes

Goal R2.3: Participate in the design or redesign of disease management and/or medication therapy management programs for patient populations.





OBJ R2.3.1: (Comprehension) Explain the ASHP-endorsed stepwise process for the provision of evidence-based, patient-centered medication therapy management with interdisciplinary teams in the acute and ambulatory care environments.

*IO: Explain the importance of understanding the ASHP-endorsed stepwise process for provision of evidence-based, patient-centered medication therapy management with interdisciplinary teams in the acute and ambulatory care environments when performing the clinical functions of a managed care pharmacist.*

*IO: State sources of information on the ASHP-endorsed stepwise process.*

- Discussion demonstrates understanding of the ASHP-endorsed stepwise process for the provision of evidence-based, patient-centered medication therapy management with interdisciplinary teams in the acute and ambulatory care environments
- Discussion demonstrates understanding of how process applies at resident’s practice site/organization
- Discussion demonstrates knowledge of sources of information on the ASHP-endorsed stepwise process

Assessment Activity: Resident discussion of the ASHP-endorsed stepwise process for the provision of evidence-based, patient-centered medication therapy management with interdisciplinary teams in the acute and ambulatory care environments

OBJ R2.3.2: (Comprehension) Explain the organization’s process for designing disease management and/or medication therapy management programs.

- Discussion demonstrates knowledge of the organization’s process for designing disease management and/or medication therapy management programs
- Discussion demonstrates understanding of the relationship between the organization’s process and the ASHP-endorsed stepwise process for the provision of evidence-based, patient-centered medication therapy management with interdisciplinary teams in the acute and ambulatory care environments
- Discussion demonstrates knowledge of the organization’s capability related to disease management and/or medication therapy management programs
- Discussion demonstrates knowledge of case management and its role in disease management and medication therapy management programs

Assessment Activity: Resident discussion of the organization's process for designing disease management and/or medication therapy management programs

OBJ R2.3.3: (Analysis) Apply an understanding of evidence-based, patient-centered medication therapy management to contribute to the identification of the need for a disease management and/or medication therapy management program.

*IO: Explain characteristics of a patient population or disease state that would indicate the need for a disease management or medication therapy management program.*

- Demonstrates knowledge of the aspects of the disease state and patient population that suggest a need for a specific disease management and/or medication therapy management program

Assessment Activity: Resident contribution to the identification of the need for a disease management and/or medication therapy management program

OBJ R2.3.4: (Evaluation) Apply an understanding of evidence-based, patient-centered medication therapy management to contribute to the selection of evidence-based practice guidelines to be utilized in a disease management and/or medication therapy management program.

*IO: Explain sources of evidence-based practice guidelines pertaining to the disease state under consideration.*

- Includes guidelines that are appropriate based on the organization's needs and goals
- Follows the organization's procedure for developing guidelines

Assessment Activity: Review of resident's written or verbal synopsis/proposal/presentation for the selection of evidence-based practice guidelines to be utilized in a disease management and/or medication therapy management program

OBJ R2.3.5: (Synthesis) Apply an understanding of evidence-based, patient-centered medication therapy management to contribute to the design of the specifics of an interdisciplinary practice model that would be used to implement a disease management and/or medication therapy management program.

*IO: Explain typical interdisciplinary practice models employed by managed care organizations in disease management or medication therapy management programs.*

- Design is appropriate for particular disease and/or medication
- Design is practical to implement
- Design incorporates appropriate members of the interdisciplinary team

Assessment Activity: Resident written proposal/plan for an interdisciplinary practice model that would be used to implement a disease management and/or medication therapy management program

OBJ R2.3.6: (Synthesis) Apply an understanding of evidence-based, patient-centered medication therapy management to contribute to the design of patient education about self-management to be utilized in a disease management and/or medication therapy management program.

*IO: Explain a systematic approach to identifying patient education needs.*

- Patient educational materials are appropriate for the patient population (e.g. take into account healthcare literacy of population)
- Patient educational materials contain accurate information
- Patient educational materials are comprehensive
- Patient educational materials flow in a step-wise manner
- Patient educational materials are practical to implement in the anticipated setting

Assessment Activity: Review of resident's proposed patient education materials

OBJ R2.3.7: (Synthesis) Apply an understanding of evidence-based, patient-centered medication therapy management to contribute to the establishment of process and outcomes measurements that would be used to manage and evaluate the implementation and success of a disease management and/or medication therapy management program.

*IO: Explain the concept of process measurements.*

*IO: Explain the concept of outcomes measurements.*

*IO: Explain commonly used process measurements.*

*IO: Explain commonly used outcomes measurements.*

- Process and outcomes measurements use appropriate criteria
- Appropriate process and outcomes measurements are selected
- Assessment is practical
- Assessment is efficient

Assessment Activity: Review of resident's written proposal for process and outcomes measurements that would be used to manage and evaluate the implementation and success of a disease management and/or medication therapy management program

OBJ R2.3.8: (Synthesis) Apply an understanding of evidence-based, patient-centered medication therapy management to contribute to the design of a feedback process involving the patient, physician, managed care organization and associated

providers to be utilized in a disease management and/or medication therapy management program.

*IO: Explain the importance of establishing an effective and efficient feedback process for a disease management or medication therapy management program.*

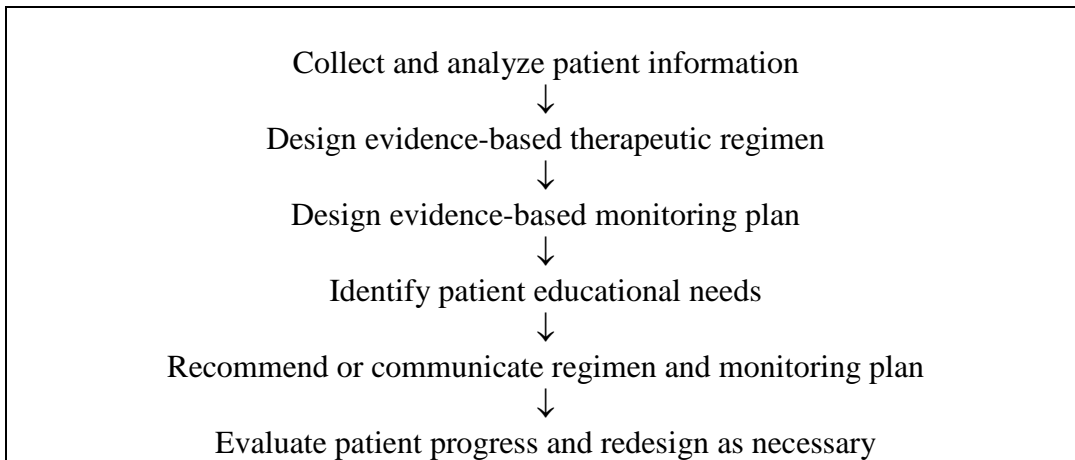
*IO: Explain typical structures for a feedback process.*

- Feedback process demonstrates an understanding of the organization's goals
- Feedback process addresses the goals of the disease management and/or medication therapy management program
- Feedback process is aligned with organization's approach to quality

Assessment Activity: Review of resident's contribution to the design of a feedback process involving the patient, physician, managed care organization and associated providers to be utilized in a disease management and/or medication therapy management program

Goal R2.4: In collaboration with other healthcare professionals resolve medication-related problems for individual patients. (When provided as part of the practice of patient care, this goal always involves a series of integrated, interrelated steps.)

(Residency programs in practice environments that include the provision of acute and/or ambulatory direct patient care services may choose to substitute outcome E2 in this document for this goal.)



OBJ R2.4.1: (Analysis) Collect and organize all patient-specific information needed by the pharmacist to resolve a medication-related problem and to make appropriate evidence-based, patient-centered, medication and/or non-medication, health improvement, wellness, and/or disease prevention recommendations in collaboration with the interdisciplinary team.

- **Information base contains all information needed (demographic, medical, medication therapy, behavioral/lifestyle, social/economic, and administrative [e.g., physician/prescriber, informed consent, pharmacy])**
- **Information base does not contain extraneous information**
- **Sources of information are the most reliable available**
- **Gaps in information are identified, and appropriate methods are used to acquire the necessary information or make decisions despite the gap in information**
- **Recording system is functional for subsequent problem solving and decision making**

*Suggested assessment activity: Audit of resident's information base for a specific patient or pharmacy department's patient information base*

*IO: Identify the types of patient-specific information the pharmacist requires to resolve medication-related problems and to make appropriate evidence-based, patient-centered medication therapy and/or non-medication, health improvement, wellness, and/or disease prevention recommendations in collaboration with the interdisciplinary team.*



- IO: Explain the role of collecting information regarding the patient's culture, emotional needs, preferences, values, and life issues in formulating evidence-based, patient-centered care decisions.*
  - IO: Explain issues surrounding confidentiality of patient information and the impact of HIPAA regulations on the collection and safeguarding of patient-specific information.*
  - IO: Explain the impact of having discontinuous or fragmented patient-care information.*
  - IO: Explain signs and symptoms, epidemiology, risk factors, pathogenesis, natural history of disease, pathophysiology, clinical course, etiology, and treatment of diseases commonly encountered.*
  - IO: Explain the mechanism of action, pharmacokinetics, pharmacodynamics, pharmacoconomics, usual regimen (dose, schedule, form, route, and method of administration), indications, contraindications, interactions, adverse reactions, and therapeutics of medications in the treatment of diseases commonly encountered.*
  - IO: Explain current trends and issues in nontraditional therapy.*
  - IO: Use standard patient medical charts, records and/or internal electronic information databases to collect information that may be pertinent to resolve medication-related problems and to make informed evidence-based, patient-centered medication and/or non-medication, health improvement, wellness, and/or disease prevention recommendations to an interdisciplinary team.*
  - IO: Integrate effective communication techniques in interviews with patients, caregivers, health care professionals, or others so that the patient-specific information needed by the pharmacist for evidence-based, patient-centered care is collected.*
  - IO: When presented with a limited time frame (e.g., prior authorization telephone encounter) use an interview strategy that elicits maximum pertinent information*
  - IO: Explain effective phone techniques to be used to obtain information for the patient database.*
  - IO: Determine the most reputable and credible source of required patient-specific information.*
  - IO: Record required patient-specific information in a manner that facilitates resolving medication-related problems and making appropriate recommendations to an interdisciplinary team.*
- OBJ R2.4.2:** (Analysis) Determine the presence of any of the following medication- or non-medication-related problems in a patient's current therapy:
1. Medication used with no medical indication
  2. Patient has medical conditions for which there is no medication prescribed
  3. Medication prescribed inappropriately for a particular medical condition
  4. Immunization regimen is incomplete
  5. Current medication therapy regimen contains something inappropriate (dose, dosage form, duration, schedule, route of administration, method of administration)

6. There is therapeutic duplication
7. Medication to which the patient is allergic has been prescribed
8. Patient is experiencing nuisance side effects that interfere with the patient's ability to take the medication as prescribed
9. There are adverse drug or device-related events or potential for such events
10. There are clinically significant drug-drug, drug-disease, drug-nutrient, or drug-laboratory test interactions or potential for such interactions
11. Medical therapy has been affected by social, recreational, nonprescription, or nontraditional drug use by the patient or others
12. Patient not receiving full benefit of prescribed medication therapy
13. Medication not covered or lack of patient ability to pay inhibits the patient's ability to take the medication as prescribed.
14. Patient lacks understanding of medication therapy
15. Patient not adhering to or not persistent with their medication regimen

- **All medications used with no medical indication are identified**
- **All medical conditions for which there is not a medication prescribed are identified**
- **All medications inappropriately prescribed for a particular medical condition are identified**
- **All missing immunizations are identified**
- **Everything inappropriate in the current medication therapy regimen (dose, dosage form, schedule, duration, route of administration, method of administration) is identified**
- **All therapeutic duplications are identified**
- **All medications in the regimen to which the patient is allergic are identified**
- **Any presence or potential for adverse drug events is identified**
- **Any presence or potential for clinically significant drug interactions is identified**
- **Any interference with medical therapy by social, recreational, nonprescription or nontraditional medication use is identified**
- **Any instance of the patient not receiving full benefit of prescribed medication therapy is identified (e.g., system failure, clinical failure)**
- **All problems arising from the financial impact of medication therapy on the patient are identified**
- **Any lack of patient (or caregiver) understanding of his/her medication therapy is identified**
- **Any lack of patient adherence to medication regimen is identified**
- **Nothing is identified as a problem that is not a problem**
- **If medication-use problems are found, medical record documentation exhibits the following characteristics:**
  - **Written in time to be useful**
  - **Follows the organization's policies and procedures, including that entries are signed, dated, timed, legible, and concise**
- **Incorporates information from all available sources and is reconciled for accuracy and consistency**

***Suggested assessment activity: Audit of patient’s medical records, resident’s patient information base, or pharmacy department’s patient information base***

*IO: Explain psychological, cultural, and economic factors that influence patient adherence and persistence with prescribed medications.*

*IO: Explain factors to consider when comparing the benefits and risks of an alternative medication therapy.*

*IO: Explain factors to consider when trying to determine the likelihood that a reaction is occurring because of a medication.*

*IO: Explain criteria for assessing the severity of an adverse drug reaction.*

*IO: Explain acceptable approaches to the therapeutic management of an adverse drug reaction.*

*IO: Prioritize patients' pharmacotherapy problems.*

OBJ R2.4.3: (Synthesis) Specify therapeutic goals for the patient, incorporating the principles of evidence-based medicine that integrate patient-specific data; disease, medication and non-medication-specific information; ethics; and quality-of-life considerations.

- **Goals reflect consideration of all relevant patient-specific information including culture and preferences**
- **Goals reflect consideration of the goals of other interdisciplinary team members**
- **Goals reflect consideration of the patient's disease state(s)**
- **Goals reflect consideration of medication-specific information**
- **Goals reflect consideration of best evidence**
- **Goals reflect consideration of ethical issues involved in the patient's care**
- **Goals reflect consideration of quality-of-life issues specific to the patient**
- **Goals reflect integration of all the above factors influencing the setting of goals**
- **Goals are realistic**
- **Goals are measurable**
- **Medical record documentation exhibits the following characteristics:**
  1. **Written in time to be useful**
  2. **Follows the organization’s policies and procedures, including that entries are signed, dated, timed, legible, and concise**

***Suggested assessment activity: Audit of patient’s medical records, resident’s patient information base, or pharmacy department’s patient information base***

*IO: Explain the use of evidence-based consensus statements and guidelines in the setting of patient-specific therapeutic goals.*

*IO: Explain how culture influences patients’ perceptions of desirable outcomes.*

*IO: Explain the importance of the patient's perception of desirable outcomes when setting therapeutic goals for a patient with functional limitations.*

*IO: Explain the impact of quality-of-life issues on making decisions about therapeutic goals.*

- IO: Explain ethical issues that may need consideration when setting therapeutic goals.*
- IO: Compare and contrast the realistic limits of treatment outcomes among the various care settings.*
- IO: Explain how a patient's age or mental status might affect the setting of therapeutic goals.*
- IO: Explain the patient's role in determining his/her therapeutic goals.*

**OBJ R2.4.4:** (Synthesis) Design or redesign the patient-centered regimen to meet the evidence-based therapeutic goals established for the patient; integrates patient-specific information, disease, medication and non-medication-specific information, ethical issues and quality-of-life issues; and considers pharmacoeconomic principles.

- **Regimen reflects the therapeutic goals established for the patient**
- **Regimen reflects the patient's and caregiver's specific needs**
- **Regimen reflects consideration of compliance**
- **Regimen is appropriate to the disease states being treated**
- **Regimen reflects consideration of any pertinent pharmacogenomic or pharmacogenetics**
- **Regimen reflects consideration of best evidence**
- **Regimen reflects consideration of pertinent ethical issues**
- **Regimen reflects consideration of pharmacoeconomic components (patient, medical, and systems resources)**
- **Regimen reflects consideration of culture and/or language differences**
- **Regimen adheres to the organization's medication-use policies**
- **Medical record documentation exhibits the following characteristics:**
  - 1. Written in time to be useful**
  - 2. Follows the organization's policies and procedures, including that entries are signed, dated, timed, legible, and concise**
  - 3. Recommended plan is clearly presented**

*Suggested assessment activity: Audit of patient's medical records, resident's patient information base, or pharmacy department's patient information base*

- IO: Explain the use of evidence-based consensus statements and guidelines in the design of patient-specific therapeutic regimens.*
- IO: Accurately interpret best evidence for use in the design of a patient-centered regimen for a specific patient.*
- IO: Explain where and how to find the best possible sources of evidence for a specific patient case.*
- IO: Explain how to conduct a search for relevant answers to a specific clinical question, including searches of resources that evaluate or appraise the evidence for its validity and usefulness with respect to a particular patient or population.*
- IO: Explain how to integrate seemingly applicable findings of best evidence with clinical judgment to arrive at an optimal evidence-based regimen for a specific patient.*

- IO: Explain how culture influences patients' perception of disease and how this affects responses to various symptoms, diseases, and treatments.*
- IO: Explain additional concerns with adherence, persistence, cost, and route of administration when making decisions on medication regimens.*

OBJ R2.4.5: (Synthesis) Design or redesign the patient-centered, evidenced-based monitoring plan for the patient's medication and/or non-medication, health improvement, wellness, and/or disease prevention regimen that effectively evaluates achievement of the patient-specific goals.

- **Parameters are appropriate measures of therapeutic goal achievement**
- **Plan reflects consideration of best evidence**
- **Selects the most reliable source for each parameter measurement**
- **Value ranges selected are appropriate for the patient**
- **Parameters measure efficacy**
- **Parameters measure potential adverse drug events**
- **Parameters are cost-effective**
- **Measurement of the parameters specified is obtainable**
- **Plan reflects consideration of compliance**
- **Plan includes strategy for assuring patient returns for needed follow-up visit(s)**
- **When applicable, plan reflects preferences and needs of the patient**
- **Medical record documentation exhibits the following characteristics:**
  1. **Written in time to be useful**
  2. **Follows the organization's policies and procedures, including that entries are signed, dated, timed, legible, and concise**
  3. **Recommended plans are clearly presented**

*Suggested assessment activity: Audit of patient's medical records, resident's patient information base, or pharmacy department's patient information base*

- IO: Explain the use of evidence-based consensus statements and guidelines in the design of patient-specific monitoring plans.*
- IO: Explain cultural and social issues that should be considered when designing a monitoring plan.*
- IO: Explain the importance of considering what is feasible and useful when designing a monitoring plan.*
- IO: Compare and contrast various methods for monitoring patient adherence and persistence (e.g., refill rates, questioning).*
- IO: Determine monitoring parameters that will measure achievement of goals for a therapeutic regimen.*
- IO: State customary drug-specific monitoring parameters for medical regimens commonly prescribed.*
- IO: Explain the relationship between what are normal value ranges for parameters and the influence on those ranges by a given disease state.*
- IO: Identify the most reliable sources of data for measuring the selected parameters.*

*IO: Define a desirable value range for each selected parameter, taking into account patient-specific information.*

*IO: Explain factors that should influence the frequency and timing of parameter measurements in monitoring plans.*

*IO: Identify the most appropriate person to collect monitoring data (e.g., family member, nurse, patient).*

OBJ R2.4.6: (Analysis) Accurately identify what healthcare professional-delivered education will be essential to the patient's understanding of the therapeutic plan, how to adhere to it, and the importance of adherence and persistence.

- The method by which the education is delivered (video, verbal, written, etc.) is appropriate for the patient population
- Content is accurate
- Content is appropriate based on the healthcare literacy of the target patient population
- Educational plan utilizes appropriate methods to encourage adherence and persistence
- Educational plan reflects disease state, desired outcomes, and therapeutic plan

Assessment activity: Resident's written or verbal presentation of an educational plan that addresses a specific therapeutic plan.

*IO: Explain strategies for convincing patients of the importance of adhering to their therapeutic plans.*

OBJ R2.4.7: (Application) Recommend or communicate the patient-centered, evidence-based, medication and/or non-medication, health improvement, wellness, and/or disease prevention regimen and corresponding monitoring plan to other members of the interdisciplinary team, and to the patient when appropriate, in a way that is systematic, logical, accurate, timely, and secures consensus.

- **Recommendation is persuasive**
- **Presentation of recommendation accords patient's right to refuse treatment**
- **If patient refuses treatment, resident exhibits responsible professional behavior**
- **Creates an atmosphere of collaboration**
- **Skillfully manages negative reactions**
- **Communication conveys expertise**
- **Communication is assertive, but not aggressive**
- **Where the patient has been directly involved in the design of the plans, communication appropriately reflects previous collaboration**
- **Medical record documentation exhibits the following characteristics:**
  1. **Written in time to be useful**
  2. **Follows the organization's policies and procedures, including that entries are signed, dated, timed, legible, and concise**
  3. **Recommended plans are clearly presented**

*Suggested assessment activity: Audit of patient's medical records, resident's patient information base, or pharmacy department's patient information base where recommendation to the caregiver is done in writing; direct observation of communication process to a specific patient*

*IO: Explain the importance of explicitly citing the use of best evidence when recommending or communicating a patient's regimen and monitoring plan.*

*IO: Explain what would be a pharmacist's responsible professional behavior in the circumstance that a patient contests a proposed treatment.*

OBJ R2.4.8: (Evaluation) Accurately assess the patient's progress toward the therapeutic goal(s).

- Accounts for all patient data specified in the monitoring plan
- Interprets each monitoring parameter measurement accurately
- Accounts for the patient's current status
- Properly judges the reliability of data (e.g., timing or site of collection, differences in data sources)
- Where monitoring data are incomplete, makes sound judgments in determining if there are sufficient data upon which to base a conclusion
- Conclusions drawn reflect consideration of any significant trends in laboratory values or clinical endpoints
- Conclusions drawn reflect consideration of the safety and effectiveness of the current medication therapy
- Conclusions drawn reflect consideration of any ineffectiveness in patient counseling
- Conclusions drawn reflect currency of information
- Overall conclusions about reasons for patient's progress or lack of progress toward each stated goal is appropriate
- Medical record documentation exhibits the following characteristics:
  1. Warrants documentation
  2. Written in time to be useful
  3. Follows the organization's policies and procedures, including that entries are signed, dated, timed, legible, and concise

*Suggested assessment activity: Audit of patient's medical records, resident's patient information base, or pharmacy department's patient information base for resident's interpretation of monitoring data for a specific patient*

*IO: Gather data as specified in a monitoring plan.*

*IO: Explain factors that may contribute to the unreliability of monitoring results (e.g., patient-specific factors, timing of monitoring tests, equipment errors, and outpatient versus inpatient monitoring).*

*IO: Determine reasons for a patient's progress or lack of progress toward the stated health care goal.*

*IO: Explain the importance of the analysis of trends over time in monitoring parameter measurements.*

*IO: Accurately assess the effectiveness of a patient-specific education program.*

*IO: Explain methods for assessing the effects of patient-specific education.*

OBJ R2.4.9: (Synthesis) Redesign the patient-centered, evidence-based medication and/or non-medication, health improvement, wellness, and/or disease prevention regimen and/or corresponding monitoring plan, as necessary, based on evaluation of monitoring data and outcomes.

- **Meets criteria for regimen and/or monitoring plan (R2.4.4 and/or R2.4.5)**
- **Rationale for proposed changes is articulated**
- **Changes are appropriate**
- **Appropriate data is acquired and analyzed in support of the redesign of the plan**
- **Modifications to the plan are effectively communicated to the patient, caregivers, prescriber, and other relevant health care professionals in a timely manner**
- **Conditions of urgency for communicating results to the prescriber are honored**

*Suggested assessment activity: Audit of patient's medical records, resident's patient information base, or pharmacy department's patient information base for resident communication of modifications to a specific patient's plan*

Goal R2.5: Use information technology to make decisions and reduce error.

OBJ R2.5.1: (Comprehension) Explain security and patient protections such as access control, data security, data encryption, HIPAA privacy regulations, as well as ethical and legal issues related to the use of information technology in pharmacy practice.

- **Explanation includes reasons for security and patient protections of patient information**
- **Explanation includes how access control, data security, data encryption, and HIPAA privacy regulations work to ensure security of patient information**
- **Explanation includes description of ethical issues related to use of information technology in pharmacy practice**
- **Explanation includes description of legal issues related to use of information technology in pharmacy practice**

*Suggested assessment activity: Resident discussion of security and patient protections*

OBJ R2.5.2: (Application) Exercise skill in basic use of databases and data analysis software.

- **Accurate conclusion drawn about the significance of information derived from statistical analysis**
- **Appropriate databases drawn upon to answer question posed**



***Suggested assessment activity: Review of analytical work performed by resident plus resident discussion of resources used in performing analysis***

*IO: Explain the principles and uses of databases in the management of large volumes of data.*

*IO: Perform statistical analyses for the purpose of evaluating the data.*

OBJ R2.5.3: (Evaluation) Successfully make decisions using electronic data and information from internal information databases, external online databases, and the Internet.

- **Decision utilizes only valid and reliable electronic sources**
- **Only pertinent resources are utilized**
- **Decisions made are appropriate and based on data/information accessed**
- **Information gaps and timeliness are identified and factored into conclusions; alternative sources of data are utilized as needed/appropriate**

***Suggested assessment activity: Review of multiple resident decisions involving individuals and populations in which the resident has used electronic data and information from internal information databases, external online databases, and/or the internet***

*IO: Explain the type of data collected, transmitted and stored by information systems.*

*IO: Explain the impact on the quality of decision-making facilitated by information systems by the validity, reliability, and consistency of data put into the system.*

*IO: Explain the use and risks of decision support tools.*

*IO: Explain the sources, the benefits and potential risks of patient use of the Internet to acquire drug and health-related information.*

***OutcomeR3: Ensure the safety and quality of the medication-use system.***

Goal R3.1: Identify opportunities for improvement of the organization's medication-use system.

OBJ R3.1.1: (Comprehension) Explain the organization's medication-use system and its vulnerabilities to medication-related problems.

- **Explanation provides accurate definition of terms associated with adverse drug events**
- **Explanation of organization's medication-use system is clear and accurate**
- **Explanation reflects understanding of the organization's medication-use process as a system**
- **Accurately states sources of information on the design, implementation, and maintenance of safe medication-use systems**
- **Explanation reflects understanding of system error**
- **Explanation reflects understanding of human factors error**
- **Cites the potential contribution of automation and technology to preventing medication misadventures at the departmental and at the organizational levels**
- **Accurately explains the capability for receiving prescriptions electronically**

- **Cites the potential contribution of automation and technology to the occurrence of medication misadventures at the departmental and organizational levels**
- **Accurately explains the meaning of the term “culture of safety”**
- Explanation includes all applicable methods of providing medication and pharmacy services (e.g. traditional community pharmacy networks, mail service, and specialty pharmacy services)
- Explanation includes how the organization arranges for and evaluates safety and efficacy of the system used to get the right medication to the right patient at the right time

***Suggested assessment activity: Resident discussion of the organization’s medication-use system and its vulnerabilities to adverse drug events***

*MISSING IO: Explain how the org has arranged to provide medication and pharmacy services through traditional community pharmacy networks, mail service, and specialty pharmacy services.*

*MISSING IO: Explain how the organization arranges for and evaluates safety and efficacy of the system used to get the right medication to the right patient at the right time*

*IO: Explain the central concepts of systems theory.*

*IO: Explain the concept of system error.*

*IO: Explain the definitions of the following terms: adverse drug events (ADEs), medication misadventure, medication error, adverse drug reaction, error, accident, systems error, individual error, and latent error.*

*IO: State sources of information on the design, implementation, and maintenance of safe medication-use systems.*

*IO: Explain the potential for contribution to the occurrence of adverse drug events by the use of automation and information technology.*

*IO: Explain the role that automation and information technology play in preventing adverse drug events.*

*IO: Explain the meaning of the term “culture of safety.”*

**OBJ R3.1.2: (Evaluation) Identify opportunities for improvement in the organization’s medication-use system by comparing the medication-use system to relevant best practices.**

- **Best practices selected for comparison are relevant**
- **Ideas for improvement have potential to result in significant improvements to the existing process**

***Suggested assessment activity: Evaluation of resident’s identification of opportunities for improvement in the organization’s medication-use system from comparison with best practice***

*(Change to order of IOs – or can we remove ADE’s)*

*IO: Explain how basic safety design principles such as standardization, simplification, and the employment of human factors training can minimize the incidence of error in the medication-use process.*

*IO: Explain safe practices for the storage, dispensing, administration, and security of pharmaceuticals.*

*IO: Explain how to use information on how to design, implement, and maintain safe medication-use systems from external sources to identify opportunities for improvement in the organization’s medication-use system.*

*IO: Explain safe practices for selecting and securing alternative medications when shortages occur and for adjusting the formulary and notifying prescribers.*

*IO: Participate in the organization’s ongoing process for tracking and trending ADEs.*

*IO: When a clinically significant ADE is identified, participate in determining the presence of any similar potential ADEs.*

**OBJ R3.1.3:** (Characterization) Display initiative in preventing, identifying, and resolving pharmacy-related patient-care problems.

- **Actively works to identify the potential for significant medication-related and service delivery problems**
- **Utilizes the organization’s methods for identifying and resolving medication-related and service delivery problems**
- **Correctly identifies the problem to be solved**
- **Takes initiative and seeks information to solve the problem**
- **Accurately identifies appropriate sources of information needed to solve the problem**
- **Explores logical alternative approaches to solving the problem**
- **Chooses most appropriate plan for solving the problem**
- **Initiates alternative plan if the problem is not solved**
- **Actively pursues all significant existing and potential medication-related problems until satisfactory resolution is obtained**

***Suggested assessment activity: Cumulative direct observation of practice***

*IO: Explain the role of the pharmacist in preventing, identifying, and resolving pharmacy-related patient-care problems.*

*Missing IO: Explain the organization’s methods for identifying and resolving medication-related and service delivery problems.*

*IO: Explain the importance of contacting the appropriate parties when a problem is identified.*

*IO: Explain the role of assertiveness in presenting pharmacy concerns, solutions, and interests.*

*IO: Explain the pharmacist’s obligation for absolute attention to detail in the preparation/distribution process.*

*IO: Explain the interdependent relationship between operational tasks and clinical activities.*

*IO: Explain the importance of follow-through of medication-use system activities.*

OBJ R3.1.4: (Synthesis) Design a drug use evaluation for a specific drug, a class of drugs, or to assess a pattern of practice.

- Drug use evaluation identifies appropriate target drugs for review
- Drug use evaluation identifies areas for improvement in drug use
- Drug use evaluation identifies appropriate mechanism to conduct drug use evaluation (prospective, retrospective, or concurrent)
- Drug use evaluation is designed to identify potential patterns of use that require intervention

Suggested assessment activity: Review of resident's written drug use evaluation design

*IO: Explain the role of drug use evaluation in measuring medication-use processes.*

*IO: Explain the role of drug use evaluation in measuring outcomes of medication-use processes.*

*IO: Explain the characteristic design of a well-structured drug use evaluation.*

OBJ R3.1.5: (Evaluation) Assess the use of a specific drug, the use of a class of drugs, or a pattern of practice using the criteria set forth in the design of a drug use evaluation.

- Follows criteria set forth in the design of the drug use evaluation
- Demonstrates accurate and appropriate analysis of data
- Draws appropriate conclusions based on data

Activity: Review of resident's written report of a drug use evaluation

OBJ R3.1.6: (Evaluation) Based on the results of a drug use evaluation, make recommendations for needed improvements in the medication-use system.

- Draws appropriate conclusions based on data
- Provides recommendations that are appropriate based on the conclusions of the analysis
- Provides recommendations that are practical

Activity: Review of resident's written report of a drug use evaluation

OBJ R3.1.7: (Evaluation) Determine the need for new or modified point-of-care medication safety interventions to prevent drug-related problems.

- All necessary medication safety interventions are included
- Proposed medication safety interventions are accurate and appropriate
- Proposal includes appropriate point-of-service clinical edits

Activity: Resident written proposal for medication safety interventions related to new information about a specific drug.

*IO: Explain alerts and clinical screens as options for medication-safety interventions.*

Goal R3.2: Design and implement quality improvement changes to the organization's medication-use system.

OBJ R3.2.1: (Synthesis) Participate in the identification of need for an evidence-based treatment guideline/protocol related to disease states and/or patient populations.

- **Utilizes appropriate data to target an appropriate disease state and/or patient population.**
- **The need identified is an important one for care of the organization's patient population**
- **The need identified is important to the organization.**

*Suggested assessment activity: Review of a proposal for a treatment guideline/protocol for which the resident identified the need*

*IO: Define treatment guidelines and protocols.*

*IO: Explain the indications/rationale for using guidelines and protocols.*

*IO: Explain guidelines/protocols as they relate to: patient care activities; provider networks; provider incentives; cost and reimbursement controls; utilization management; quality measurement; consumer incentives; accreditation; and benefit analysis (if applicable).*

OBJ R3.2.2: (Synthesis) Participate in the development of an evidence-based treatment guideline/protocol related to disease states and/or patient populations.

- **Treatment guideline reflects careful consideration of systematically developed best evidence as described in *Clinical Practice Guidelines: Directions for a New Program* published by the Institute of Medicine**
- **Treatment guideline reflects consideration of new and emerging data**
- **Treatment guideline reflects consideration of the culture of the organization**

Suggested assessment activity: Review of treatment guideline/protocol for which the resident made significant contributions to its development.

*IO: Explain the use of evidence-based medicine in the development of treatment guidelines/protocols.*

*IO: Explain the process by which criteria for treatment guidelines/protocols are developed.*

OBJ R3.2.3: (Synthesis) Participate in the implementation of an evidence-based treatment guideline/protocol related to disease states and/or patient populations.

- **Guideline/protocol is appropriately communicated to participating healthcare providers**

- **Guideline/protocol is fully implemented**
- **Where possible, guideline/protocol is incorporated into information systems**

**Suggested assessment activity:** Review of resident's involvement in the implementation plan.

*IO: Explain effective strategies for gaining necessary commitment and approval for use of a treatment guideline/protocol.*

*IO: Explain the importance of providing outcome information to the prescriber/provider as support for evaluative decisions on program continuance or revision.*

OBJ R3.2.4: (Synthesis) Participate in the evaluation of an evidence-based treatment guideline/protocol related to disease states and/or patient populations.

- **Evaluation criteria are appropriate and complete**
- **Analysis of outcome information is accurate**
- **Analysis of outcome information gives appropriate weighting to humanistic as well as clinical and economic outcomes**
- **Conclusions drawn are appropriate for the data collected**
- **Outcome information is provided to the prescribers/providers**

**Suggested assessment activity:** Review of resident's written evaluation of the evidence-based treatment guideline/protocol.

*IO: Explain methods for assessing the effectiveness/impact of guidelines and protocols.*

*IO: Explain the importance of assessing the clinical, economic and humanistic outcomes of treatment guidelines/protocols related to patient care.*

OBJ R3.2.5: (Synthesis) Design and implement pilot interventions to change problematic or potentially problematic aspects of the medication-use system with the objective of improving quality.

- **Problem identified for improvement is of significance in the medication-use system**
- **Design of intervention is practical to implement**
- **As designed, the intervention offers an approach that can be expected to remedy or minimize the problem**
- **Plan for implementation is well thought out and includes meeting the concerns of all stakeholders**
- **Assessment of outcomes of implementation accurately reflects measurement of quality indicators**

**Suggested assessment activity:** Review of resident design and implementation of a medication-use system quality improvement pilot intervention

*IO: Explain the importance of continually reassessing medication-use policies.*

OBJ R3.2.6: (Synthesis) Participate in the design or revision of an existing population-based patient medication adherence and persistence program.

- Design identifies short-comings in existing program
- Design is appropriate to improve/solve the short-comings of the existing program
- Design is practical and can be implemented

Suggested assessment activity: Review of resident written design for revision of an existing population-based patient medication adherence and persistence program

*IO: Explain the characteristics of an effective adherence and persistence program.*

Goal R3.3: Make recommendations to interdisciplinary committees for utilization management programs (e.g., prior authorization, step therapy, quantity management, formulary exception processes).

OBJ R3.3.1: (Analysis) Participate in the organization's process for determining the need for utilization management programs for a specific drug or group of drugs.

- Identifies a need that is important for the organization
- Identifies the different types of utilization management strategies that may be used
- Uses data from all appropriate sources to determine need

Suggested assessment activity: Review of resident's contribution to identifying the need for utilization management programs for a specific drug or group of drugs

*IO: Explain the concept of utilization management as used in the managed care environment.*

*IO: Explain characteristics of a situation that would justify the development of a utilization management program for a drug or class of drugs.*

OBJ R3.3.2: (Synthesis) Design a utilization management program for a drug or group of drugs.

- Design is appropriate for the drug/group of drugs
- Utilization management program is practical to implement
- Criteria for the utilization management program are supported by evidence
- Design reflects careful consideration of systematically developed best evidence

Suggested assessment activity: Review of resident's contribution to designing the utilization management programs for a specific drug or group of drugs

*IO: Explain essential components of an effective utilization management program.*

OBJ R3.3.3: (Evaluation) Assess the effectiveness of currently used utilization management programs.

- Assessment includes provider and member satisfaction with the program
- Assessment includes assessment of effect on other measures of healthcare utilization
- Criteria for assessment measure the effectiveness of the program
- Assessment uses data from all appropriate sources to measure effectiveness

Suggested assessment activity: Review of resident's contribution to assessing the effectiveness of the utilization management programs for a specific drug or group of drugs

*IO: Explain the types and sources of information that would be needed to evaluate a specific utilization management program.*

Goal R3.4: Participate in the organization's quality management activities.

OBJ R3.4.1: (Comprehension) Explain the process by which a quality improvement plan is designed and implemented.

- Discussion includes an appropriate definition of quality for the organization
- Discussion includes the purpose of a quality improvement plan
- Discussion includes accurate description of how the organization designs a quality improvement plan
- Discussion includes accurate description of how the organization implements a quality improvement plan

Suggested assessment activity: Resident discussion of the process by which a quality improvement plan is designed and implemented in the organization

*IO: Explain the purpose of a quality improvement plan.*

OBJ R3.4.2: (Synthesis) Engage in the processes specified in the organizations' quality management activities.

- Activities are selected that meet the goals of the plan and allow the resident to participate

Suggested assessment activity: Review of resident's participation in the processes specified in the organizations' quality management activities.

*IO: Explain each of the organization's quality management activities.*

OBJ R3.4.3: (Comprehension) As applicable, explain the role of pharmacy in assisting a healthcare organization in meeting accreditation and regulatory standards (e.g., NCQA, JCAHO, URAC, CMS) and improving performance on HEDIS measures.



- Discussion demonstrates understanding of the role of accrediting agencies
- Discussion demonstrates understanding of accreditation and regulatory standards
- Discussion includes role of pharmacy in meeting accreditation and regulatory standards
- Discussion includes role of pharmacy in improving performance on HEDIS measures

Suggested assessment activity: Resident discussion of the role of pharmacy in assisting a healthcare organization in meeting accreditation and regulatory standards and improving performance on HEDIS measures

OBJ R3.4.4: (Comprehension) Explain areas where pharmacy can influence and improve quality of care provided.

- Discussion includes definition of quality of care
- Discussion includes how the pharmacy can influence and improve quality of care through its role in assuring appropriate drug use
- Discussion includes the pharmacy's role in interdisciplinary care

Suggested assessment activity: Resident discussion of areas where pharmacy can influence and improve quality of care provided

Goal R3.5: Maintain confidentiality of patient and proprietary business information.

OBJ R3.5.1 (Application) Observe legal and ethical guidelines for safeguarding the confidentiality of patient information.

- **Handling of patient information follows ethical guidelines**
- **Handling of patient information follows legal guidelines**

*Suggested assessment activity: Cumulative direct observation of resident handling of patient information*

*IO: Explain issues surrounding confidentiality of patient information and the impact of HIPAA regulations on the collection and safeguarding of patient-specific information.*

OBJ R3.5.2: (Application) Observe the managed care organization's policy for the safeguarding of proprietary business information.

- **Handling of proprietary business information follows organization's policy**

*Suggested assessment activity: Cumulative direct observation of resident handling of proprietary business information*

- IO: Explain the concept of proprietary business information.*
- IO: Explain strategies for identifying what is and what is not proprietary in the view of one's own organization.*

**Outcome R4: Provide medication and practice-related information, education, and/or training.**

Goal R4.1: Collaborate with prescribers to ensure appropriate, evidence-based drug selection.

OBJ R4.1.1: (Synthesis) Design prescriber education when needed to improve prescriber choice of medications to meet patients' needs.

- IO: Explain circumstances in which prescriber education to improve prescriber choice of medications is warranted.*
- IO: Explain effective strategies (e.g., use of evidence-based resources, use of reputable references, expert opinion) for persuasive communication of desired changes in medication prescribing practices.*

- Education piece meets a need for prescriber education
- Information is accurate
- Education piece is persuasive

Assessment activity: Review of resident-designed prescriber education piece (e.g. newsletter, large group setting, one-on-one academic detailing)

Goal R4.2: Provide patients with medication-related information and education.

OBJ R4.2.1: (Analysis) Identify the need for patient medication-related information and/or education.

- IO: Explain circumstances in which patient information/education is warranted.*

- The need is important for the organization
- The need is appropriate for providing patient information and/or education

Assessment activity: Review of resident's written report or verbal discussion of a need for patient medication-related information and/or education which the resident identified or participated in identifying

OBJ R4.2.2: (Synthesis) Design effective medication-related information/education that meets a specific patient need.

- **Choice of content for instruction is based on an accurate assessment of the patient's/patients' needs**
- **Activities are based on behaviorally stated educational objectives**
- **Selection of teaching method is based on the type of learning required (cognitive, psychomotor, affective)**
- **Content selected for instruction is matched with the intent of the stated educational objectives**

- **Content of instructional materials is accurate**
- **Content selected for instruction is complete**
- **Instruction is properly organized and sequenced**
- **Education is matched to the patient's/patients' health literacy level**

***Suggested assessment activity: Review of resident written plan and instructional materials for delivery of a specific education or training program or other learning activity***

- IO: When given a patient population and a specific medication or disease state, explain the potential educational needs of patients.*
- IO: Explain the concept of learning styles and its influence on the design of instruction.*
- IO: Explain the importance of considering the learner population's reading level when designing patient education.*
- IO: Explain the importance of considering the learner population's level of health literacy.*
- IO: Explain the importance of considering the significance of any cultural variation in the member population.*
- IO: Write appropriately worded educational objectives.*
- IO: Design instruction to reflect the specified objectives for education or training.*
- IO: Explain the match between instructional delivery systems (e.g., demonstration, written materials, videotapes) and specific types of learning commonly required of patients.*
- IO: Design instruction that employs strategies, methods, and techniques congruent with the objectives for education or training.*
- IO: Explain effective teaching approaches for the various types of learning required of patients (e.g., imparting information, teaching psychomotor skills, inculcation of new attitudes).*

Goal R4.3: Provide concise, applicable, comprehensive, and timely responses to requests for drug information from patients, health care providers, and plan sponsors.

OBJ R4.3.1: (Analysis) Discriminate between the requesters' statement of need and the actual drug information need by asking for appropriate additional information.

- **Determines who the end user of the information will be in order to identify the type of answer to provide, the appropriate level of detail, etc.**
- **Secures appropriate background information for question type**
- **Accurately identifies request urgency**

***Suggested assessment activity: Direct observation of resident's communication process for clarification of a specific drug information request***

*IO: Explain the characteristics of a clearly stated clinical question.*

OBJ R4.3.2: (Synthesis) Formulate a systematic, efficient, and thorough procedure for retrieving drug information.

- Searches the scope of resources that are appropriate to answer the question
- Search strategy matches with the response time required for the request
- Search moves appropriately from the general to the specific

*Suggested assessment activity: Resident discussion of his or her search strategy for a particular information request to occur at the time the strategy is formed but prior to the search itself*

*IO: Explain the strengths and weaknesses of manual and electronic methods of retrieving biomedical literature.*

*IO: Compare the characteristics of each of the available resources for biomedical literature.*

OBJ R4.3.3: (Analysis) Determine from all retrieved biomedical literature the appropriate information to evaluate.

- Selects only potentially pertinent information
- Selects the quantity of information that is appropriate for the depth and time frame of the response

*Suggested assessment activity: Review of resident's selection of literature for review for a particular drug information request to be conducted prior to resident's evaluation of each piece's usefulness*

OBJ R4.3.4: (Evaluation) Evaluate the usefulness of biomedical literature gathered.

- Selects studies that have the following characteristics:
  1. Sound design
  2. Utilize appropriate statistics and statistical inference
  3. Conclusions are supported by results
- Selects literature that has the following characteristics only:
  1. Currency
  2. Free of bias
  3. Reputable source
  4. Pertains to the question
  5. Accuracy
  6. Appropriate referencing

*Suggested assessment activity: Review of the resident's literature review for studies selected for inclusion for a particular drug information request*

*IO: Assess the potential for bias of the author or preparer of all forms of drug information.*

*IO: Determine whether a study's methodology is adequate to support its conclusions.*

*IO: Determine whether the endpoint established for a study is appropriate.*

*IO Explain methods used to test study end point (e.g., pulmonary function studies).*

- IO: Explain the effects on study outcomes of various methods of patient selection (e.g., volunteers, patients, or patients with different disease severity).*
- IO: Explain the effects of various methods of blinding (e.g., double-blind, single-blind, open-research designs) on study outcomes.*
- IO: Explain the types of pharmacotherapy studies (e.g., kinetic, economic, dynamic) and the kind(s) of data analysis appropriate for each.*
- IO: Explain how the choice of statistical methods used for data analysis (e.g., t test, analysis of variance) affects the interpretation of study results and conclusions.*
- IO: Determine if a study's findings are clinically significant.*
- IO: Explain the strengths and limitations of different study designs.*
- IO: Explain how data from a study can be applied to expanded patient populations.*

OBJ R4.3.5: (Synthesis) Formulate responses to drug information requests based on analysis of the literature.

- **Draws logical and accurate conclusions**
- **Draws conclusions that focus on answering the question**
- **Written and verbal communication provides credible background to support or justify the primary theme**
- **Properly sequences ideas in written and verbal communication**
- **Depth of communications is appropriate to the individual**
- **Choice of words and terms is appropriate to the individual**
- **Communication reflects the needs of the individual**
- **Length of communication is appropriate to the situation**
- **Communication conveys expertise**

*Suggested assessment activity: Direct observation of communication of a response to a particular drug information request*

OBJ R4.3.6: (Synthesis) Provide appropriate responses to drug information questions that require the pharmacist to draw upon his or her knowledge base.

- **Appropriate response is provided - Response is correct, or when correct response is unknown, indicates appropriately and provides timely follow-up**
- **Responds confidently**

*Suggested assessment activity: Direct observation of communication of a response to a particular unanticipated impromptu drug information request that occurs during the fulfillment of regular practice responsibilities*

**Outcome R5: Collaborate with plan sponsors to design effective benefit structures to service a specific population's needs.**

Goal R5.1: Understand the interrelationship of the pharmacy benefit management company/function, the health plan and plan sponsor, and the delivery system functions of managed care.

OBJ R5.1.1: (Comprehension) Explain the elements of managed care, including benefit design and management, co-pay, formulary coverage, utilization management, prior authorization, access, and contract negotiations (medication acquisition and/or network pharmacy).

- Discussion includes benefit design and management
- Discussion includes cost share
- Discussion includes formulary coverage
- Discussion includes utilization management
- Discussion includes prior authorization
- Discussion includes access
- Discussion includes contract negotiations (medication acquisition and/or network pharmacy)

Suggested assessment activity: Resident discussion of the elements of managed care

OBJ R5.1.2: (Comprehension) Explain the relationship between the managed care organization and other entities including health plans, PBMs, plan sponsors, and providers.

- Discussion includes description of relationships between the managed care organization and other entities including health plans, PBMs, plan sponsors, and providers
- Discussion includes an explanation of why these relationships exist
- Discussion includes an explanation of how these relationships are formed

Suggested assessment activity: Resident discussion of the relationship between the managed care organization and other entities including health plans, PBMs, plan sponsors, and providers

*IO: Explain the dual role of government as both payor and regulator.*

Goal R5.2: Participate in the design of an effective benefit structure for a specific plan sponsor.

OBJ R5.2.1: (Comprehension) Explain the components of benefit design.

- Explains formulary
- Explains member cost share (co-pays/co-insurance, deductibles, maximum out-of-pocket cost)
- Explains utilization management
- Explains included/excluded drugs
- Explains pharmacy and physician networks
- Explains in- and out-of-network cost share

Suggested assessment activity: Resident discussion of the components of benefit design

OBJ R5.2.2: (Comprehension) Explain the legal requirements and business implications of benefit design options.

- Discussion includes legal requirements (state and federal)
- Discussion includes business implications to sponsor, drug plan, and individual member
- Discussion includes implications of competition on benefit design

Suggested assessment activity: Resident discussion of the legal requirements and business implications of benefit design options

OBJ R5.2.3: (Comprehension) Explain how the objectives of the managed care organization, sponsor, and patients to be served affect decisions on extent of coverage of a plan.

- Discussion describes the competing objectives of the organization, sponsor, and patients
- Discussion addresses how decisions on extent of coverage attempt to balance competing objectives

Suggested assessment activity: Resident discussion of how the objectives of the managed care organization, sponsor, and patients to be served affect decisions on extent of coverage of a plan

*IO: Explain ethical dilemmas that can occur in the design of a benefit structure when trying to balance competing objectives.*

OBJ R5.2.4: (Analysis) Participate in identifying the effects of benefit design options proposed by or for a particular plan sponsor.

- Utilizes appropriate resources
- Utilizes a systematic approach
- Identifies effects on all stakeholders

Suggested assessment activity: Review of resident's participation in identifying the effects of benefit design options proposed by or for a particular plan sponsor

*IO: Identify resources necessary to evaluate the effect of benefit design application by a particular plan sponsor.*

*IO: Explain a systematic approach to analyzing anticipated effects of various design options for a particular plan sponsor.*

Goal R5.3: Participate in analysis of the effect of a benefit design for a plan sponsor or sponsors.

OBJ R5.3.1: (Analysis) Determine the effectiveness of the formulary used by the plan sponsor.

- Utilizes appropriate data from drug utilization statistics
- Compares utilization to formulary
- Addresses formulary compliance
- Addresses financial performance
- Draws appropriate conclusions

Assessment activity: Review of the resident's written analysis of the effectiveness of the formulary used by a specific plan sponsor

*IO: Explain the organization's process for assessing formulary effectiveness.*

OBJ R5.3.2: (Analysis) Determine the impact of the financial structure of the benefit design on the sponsor and patients.

- Utilizes appropriate data
- Compares member cost share against similar plans, national/regional figures, benchmarks
- Compares current data to sponsor historical data

Assessment activity: Review of the resident's written analysis of the impact of the financial structure of the benefit design on the sponsor and patients for a specific benefit design

*IO: Explain the organization's process for assessing the impact of the financial structure of the benefit design on the sponsor and patients.*

OBJ R5.3.3: (Analysis) Identify specific drug use patterns that may require modification of the benefit design or services.

- Utilizes appropriate data
- Appropriately analyzes usage patterns
- Identifies patterns that may require modification of benefit design or services

Assessment activity: Review of the resident's written analysis of a specific drug use pattern that may require modification of the benefit design or services

*IO: Explain the organization's process for identifying drug use patterns.*

Goal R5.4: Participate in the design of clinical and reporting requirements for a plan sponsor or sponsors.

OBJ R5.4.1: (Synthesis) Participate in the design of clinical requirements for a plan sponsor or sponsors.

- Incorporates knowledge of best practices for a class of drugs
- Includes financial implications of design



- Incorporates regulatory requirements (state)

Assessment activity: Review of the resident's contribution to the design of clinical requirements for a plan sponsor or sponsors

*IO: Explain the role of clinical requirements for a plan sponsor.*

*IO: Explain typical clinical requirements employed for a plan sponsor.*

OBJ R5.4.2: (Synthesis) Participate in the design of reporting requirements for a plan sponsor or sponsors.

- Chooses appropriate reports based on the sponsor's need
- Identifies areas where the organization cannot meet sponsor's reporting need and determines how to meet that need

Assessment activity: Review of the resident's contribution to the design of reporting requirements for a specific plan sponsor

*IO: Explain the role of reporting requirements for a plan sponsor.*

*IO: Explain typical reporting requirements employed for a plan sponsor.*

Goal R5.5: Understand a process to assist plan sponsors in assessing the coverage characteristics for a specific drug or class of drugs.

OBJ R5.5.1: (Comprehension) Explain the organization's approach to educating a plan sponsor to enable the sponsor to establish the coverage characteristics for a specific drug or class of drugs.

- Discussion includes ethical issues
- Discussion includes regulatory mandates
- Discussion includes alternative products
- Discussion includes method of educating the sponsor
- Discussion includes the organization's approach to who carries out the education

Assessment activity: Resident discussion of the organization's approach to educating a plan sponsor

*IO: Explain how to identify ethical issues that might emerge when plan sponsors are considering coverage characteristics.*

***Outcome R6: Exercise leadership and practice management skills.***

Goal R6.1: Exhibit essential personal skills of a practice leader.

OBJ R6.1.1: (Characterization) Practice self-managed continuing professional development with the goal of improving the quality of one's own performance through self-assessment and personal change.

- **Makes accurate, criteria-based assessments of own ability to perform practice tasks**

- **Routinely seeks applicable new learning when performance does not meet expectations**
- **Sets realistic expectations of performance**
- **Regularly integrates new learnings into subsequent performances of a task until expectations are met**
- **Documentation of the ability to perform a practice tasks is concise and readily interpretable by a peer**
- **Evidences the assumption of responsibility for work quality**
- **System for staying current with literature includes review of literature pertinent to the area of practice**
- **System for arranging and storing pertinent literature is efficient and effective**

*Suggested assessment activity: Cumulative direct observation of practice*

*IO: Explain the systematic process by which professionals pursue expertise.*

*IO: Formulate and adhere to an integrated system for staying current with, arranging, and storing pertinent practice-related literature.*

*IO: State the literature pertinent to one's area of practice.*

*IO: State sources of information outside of pharmacy that contain ideas and/or information that may be effectively applied to one's practice.*

*IO: Explain the importance of storing practice-related information in an organized manner.*

*IO: Explain the components of an effective self-assessment system.*

**OBJ R6.1.2: (Characterization) Demonstrate pride in and commitment to the profession through appearance, personal conduct, and association membership.**

- **Stays clean and well-groomed**
- **Dresses to meet the expectations of other professionals and patients**
- **Dress meets health and safety requirements**
- **Dress conforms to the organization's and department's dress code**
- **Maintains control of own emotions**
- **Is a member of and activity participates in the local pharmacy association**
- **Is a member of and actively participates in one or more state pharmacy associations**
- **Is a member of and actively participates in one or more national pharmacy associations**
- **In discussion offers an accurate comparison of the benefit's to own practice of active participation in the array of associations at each level**
- **In discussion accurately identifies the benefits to own practice of publishing in the professional literature**

*Suggested assessment activity: Cumulative direct observation of practice*

*IO: Explain guidelines for professional dress and its importance.*

*IO: Explain strategies for maintaining personal self-control and professional decorum.*

- IO: Explain the local, state, and national organizations and the activities of each that are essential to the developing pharmacy professional.*
- IO: Explain why it is important to publish in the professional literature.*
- IO: Explain why it is important to become actively involved in the leadership of professional associations.*

OBJ R6.1.3: (Characterization) Act ethically in the conduct of all professional activities.

- **When presented in practice with an ethical dilemma, chooses a course of action that reflects accepted ethical standards for pharmacists**
- **Can explain the course of ethical reasoning that led to the ethical decision made**
- **All work prepared for publication is properly attributed**

*Suggested assessment activity: Direct observation of practice when an ethical decision is required or interview with other staff regarding choice of action when ethical decision required and preceptor not present*

- IO: Explain ethical/conflict of interest issues in business relationships.*
- IO: Explain the system of ethical reasoning (consequentialist or nonconsequentialist) employed in arriving at a particular ethical decision.*
- IO: Explain systems of ethical reasoning.*
- IO: Explain ethical principles embodied in the American Pharmacists Association's Code of Ethics for Pharmacists.*
- IO: Explain rules for attribution of sources of published work when preparing written documents or presentations.*

OBJ R6.1.4 (Application) Use knowledge of the principles of change management to achieve organizational, departmental, and/or team goals.

- **Assures that the practice environment is arranged to be conducive to the desired change**
- **Assures that staff have the opportunity to acquire any necessary new knowledge or skills in order to accommodate the change**
- **Assures that those involved in the change are motivated to exercise their roles**
- **Follows through by monitoring the progress of the planned change**
- **Keeps others informed of progress on the implemented change**

*Suggested assessment activities: Direct observation of resident performance when tasked with a significant change to be planned and executed; review of outcome of the task ---success or failure of change effort*

*IO Explain the principles of change management.*

Goal R6.2: Contribute to departmental leadership and management activities.

OBJ R6.2.1: (Synthesis) Participate in the organizational unit's planning processes.

- **Actively participates to the planning process**

- **Contributions reflect understanding of effective planning principles for the type of planning in which engaged**

*Suggested assessment activity: Direct observation of resident's contributions during an organizational unit's planning meeting; review of any written contributions prepared by the resident*

*IO: Explain the principles and application of various approaches to organizational unit planning, including the development of an organizational unit strategic plan.*

*IO: Explain the necessary relationship between the organization's and the department's vision, mission, and plans.*

OBJ R6.2.2: (Comprehension) Explain the effect of accreditation, legal, regulatory, and safety requirements on practice.

- **States current legal and regulatory requirements relevant to organization's operations (e.g. prescription drug benefits)**
- **States current accreditation requirements for the organization's operations**
- **Describes the importance of these regulations and accreditation requirements**
- **Discusses how the regulations and accreditation requirements affect practice**
  - **Discusses the process by which the regulations and accreditation requirements are implemented**
- **States which agencies or organizations are responsible for enforcing or applying these requirements and accreditation standards**

*Suggested assessment activity: Resident discussion of the effect of accreditation, legal, regulatory, and safety requirements on practice*

*IO: State current regulatory and safety requirements.*

*IO: Explain the importance of these regulations and safety requirements.*

*IO: Explain how the regulations and safety requirements affect practice.*

*IO: State the process by which the regulations and safety requirements are implemented.*

*IO: State the agencies responsible for regulating accreditation, legal, regulatory, and safety requirements.*

OBJ R6.2.3: (Comprehension) Explain the principles of the financial management of the organizational unit.

- **Accurately describes the elements of the organizational unit's financial plan**
- **Accurately explains the purposes of and how to access multiple sources of revenue (e.g. dues/premiums, copays)**
- **Accurately explains the data elements of productivity measurements (e.g., operational activities, budgets, FTE justification)**
- **States the impact of current regulatory and accreditation requirements on the organizational unit's financial plan**
- **Accurately explains the implications of pharmacy reimbursement in the current health care environment (regulatory issues, manpower shortages, Medicare Modernization Act, quality mandates)**

***Suggested assessment activity: Resident discussion of revenue/reimbursement, and productivity***

*IO: Explain the purposes of and how to access multiple sources of reimbursement.*

*IO: Explain the implications for pharmacy reimbursement in the current health care environment (regulatory issues, manpower shortages, Medicare Modernization Act, quality mandates).*

Goal R6.3: Exercise practice leadership.

OBJ R6.3.1: (Synthesis) Use knowledge of an organization's political and decision-making structure to influence accomplishing an organizational unit's goal.

**• Efforts obtain consensus to pursue the proposed course of action**

***Suggested assessment activity: Direct observation of the resident's strategy in achieving a practice area goal that requires policy-maker approval***

*IO: Explain the importance of networking in achieving practice area and other professional goals.*

OBJ R6.3.2: (Comprehension) Explain various leadership philosophies that effectively support patient care and managed care pharmacy practice excellence.

**• Fully describes two or more approaches to managing practice that facilitate patient-centered care and pharmacy practice excellence**

***Suggested assessment activities: Resident discussion of leadership philosophies supporting individual patient care and pharmacy practice excellence***

OBJ R6.3.3: (Application) Use group participation skills when leading or working as a member of a committee or informal work group.

- The leader keeps the group focused on meeting its purpose and responsibilities**
- The leader prepares an effective agenda for meeting**
- The leader assures that effective minutes or notes are written**
- The leader supplies information from the meeting to appropriate individuals**
- The leader, as needed, uses consensus-building skills as follows:**
  - 1. Assesses the desirability of group input**
  - 2. Identifies the type of decision needed (debatable, exploratory, negotiated, routine, emergency decisions)**
  - 3. Selects appropriate tools for group action (i.e., brainstorming, procedure setting, individual polling, etc.)**
  - 4. Provides a clear definition of the problem (What is the problem? How did we get here? What are the effects of the problem?)**
  - 5. Communicates a clear understanding of who has the responsibility for the decision**
  - 6. Uses effective communication and open-ended questions for producing ideas (What results do we want? What solutions can we think of?)**
  - 7. Selects an appropriate size of group for decision making**

8. Provides a means for effectively testing different alternatives relative to the problem (What decision is best for us?)
9. Elicits ideas from others on how to make change go smoothly
10. Facilitates commitment to the decision
11. Presents an honest commitment to the group decision-making process (Who will do what by when? Where? How?)
12. Obtains agreement on the procedures and methods for decision making prior to deliberation of the issue
13. Offers ideas
14. Asks key or clarifying questions
15. Keeps the group focused on the task
16. Summarizes the discussion and decisions
  - The leader manages group dynamics
  - The group members participate actively and positively in the meeting
  - The group members make required decisions appropriately and without hesitation
  - The group members remain focused on the main issues
  - The group members do their share of the work

*Suggested assessment activities: Direct observation of resident leading a committee and/or workgroup; direct observation of resident at work in a specific committee or informal work group; interview with other members of the committee or informal work group*

*IO: Explain effective strategies for leading a meeting.*

*IO: Explain the role of delegation for task accomplishment in effective leadership.*

**Outcome R7: Demonstrate project management skills.**

Goal 7.1: Conduct a managed care pharmacy practice-related project using effective project management skills.

OBJ R7.1.1: (Synthesis) Identify a topic for a managed care pharmacy practice-related project of significance.

- Choice of project is practice-related
- Choice of project warrants investigation
- Project can be completed in time available

*Suggested assessment activity: Review of resident's proposed project topic*

*IO: Explain the types of resident projects that will meet residency program project requirements and timeframe.*

*IO: Explain how one determines if a potential project topic is of significance in one's particular practice setting.*

*IO: Explain how to conduct an efficient and effective literature search for a project.*

OBJ R7.1.2: (Synthesis) Formulate a feasible design for a practice-related project.

- **Project proposal contains all customary elements of a proposal**
- **Each proposal element contains all necessary information**
- **Project proposal includes identification of all key stakeholders who must approve**
- **Project timeline milestones, if adhered to, would result in project completion by agreed-upon date**

*Suggested assessment activity: Review of resident's project design*

*IO: Explain the elements of a project proposal.*

*IO: When given a particular approved residency project, explain how to identify those individuals who will be affected by the conduct of the project and strategies for gaining their cooperation.*

*IO: When given a particular approved residency project, explain how to determine a timeline with suitable milestones that will result in project completion by an agreed upon date.*

OBJ R7.1.3: (Synthesis) Secure any necessary approvals, including institutional review board (IRB) and funding, for one's design of a practice-related project.

- **Appropriate strategies designed and implemented for gaining cooperation of all individuals affected by conduct of the project**
- **If required, IRB approval secured**

*Suggested assessment activity: Review of resident's project implementation strategy and documentation of approvals/agreements*

*IO: When given a particular proposed residency project, explain how to identify those key stakeholders who must approve that project.*

*IO: Explain the components that make up a budget for a practice-related project.*

*IO: Explain the role of the organization's IRB in the approval process of investigations involving human subjects.*

OBJ R7.1.4: (Synthesis) Conduct a practice-related project as specified in its design.

- **Project completed on time**
- **During conduct of project, project materials well-maintained for accessibility and efficient retrieval**
- **Project process appropriately documented**
- **Project materials well organized and maintained with documentation of the project's ongoing implementation**

*Suggested assessment activity: Review of resident's implementation strategy and project files*

*IO: Explain strategies for keeping one's work on a project at a pace that matches with the timeline plan.*

*IO: When given a particular approved residency project, explain methods for organizing and maintaining project materials and documentation of the project's ongoing implementation.*

OBJ R7.1.5: (Synthesis) Effectively present the results of a practice-related project.

- **Secures and maintains individual's or audience's attention**
- **Style of speech is appropriate to presentation of a practice-related project report**
- **Portrays credibility**
- **Does not distract with physical mannerisms**
- **Does not distract with verbal habits**
- **Presentation is well organized**
- **Uses appropriate transitions when proceeding from one topic to another**
- **Summarizes key points at the close**
- **Appears poised**
- **Uses body language to add interest**
- **Pauses appropriately to emphasize points**
- **Displays energy and enthusiasm**
- **Accurately reads the individual's or audience's body language and adjusts the presentation accordingly**
- **Answers questions with ease and confidence**
- **Utilizes appropriate visual aids**

*Suggested assessment activity: Direct observation of resident's presentation of completed project*

OBJ R7.1.6: (Synthesis) Successfully employ accepted manuscript style to prepare a final report of a practice-related project.

- **Project presentation utilizes appropriate manuscript style and meets criteria for writing with use of that style**

*Suggested assessment activity: Review of resident's completed project manuscript*

*IO: When given a particular residency project ready for presentation, explain the type of manuscript style appropriate to the project and criteria to be met when using that style.*



<p style="text-align: center;"><b>Potential Elective Educational Outcomes for Postgraduate Year One (PGY1) Managed Care Pharmacy Residencies</b></p>
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***Outcome E1: Added knowledge and skills to manage the drug distribution process for the organization's members.***

Goal E1.1: If the organization operates an in-house pharmacy, prepare and dispense medications following existing standards of practice and the organization's policies and procedures.

OBJ E1.1.1: (Evaluation) Interpret the appropriateness of a medication order before preparing or permitting the distribution of the first dose.

- Identifies, verifies, and corrects any medication order errors
- Clarifies anything incomplete in the medication order
- Identification of problems reflects consideration of complete patient-specific information
- Identifies all existing or potential drug therapy problems
- Determines an appropriate solution to an identified problem
- Secures consensus from the prescriber for modifications to therapy
- Assures that the solution is implemented
- Changes to medication orders are documented and documentation exhibits the following characteristics:
  1. Written in time to be useful
  2. Follows the organization's policies and procedures, including that entries are signed, dated, timed, legible, and concise

*Suggested assessment activity: Review of documentation of changes in medication orders*

*IO: State the elements of a complete medication order and the essentials of legibility and accuracy.*

*IO: Use effective prescriber education techniques to secure agreement on modifications to medication orders.*

*IO: Document modifications to medication orders according to the organization's policies and procedures.*

OBJ E1.1.2: (Application) Follow the organization's policies and procedures to maintain the accuracy of the patient's medication profile.

- Works only from the physician's original order or a clear duplicate
- Enters information correctly
- The information is complete according to all applicable standards

*Suggested assessment activity: Review of resident entries in a specific patient's profile*

OBJ E1.1.3: (Application) Prepare medication using appropriate techniques and following the organization's policies and procedures.

- When required, accurately calibrates equipment
- Prepares medications using appropriate technique according to the organization's policies and procedures and applicable professional standards
- Prepares medications so they are appropriately concentrated, without incompatibilities, stable, and appropriately stored
- Adheres to appropriate safety and quality assurance practices
- Prepares labels that conform to the organization's policies and procedures
- Medication contains all necessary and/or appropriate ancillary labels
- Inspects the final medication before dispensing

*Suggested assessment activity: Observation of preparation of a specific medication using a skills checklist specific to the preparation technique for the product being prepared that details the criteria listed*

*IO: Explain standards of practice for the preparation of medications.*

*IO: Explain the organization's quality assurance standards for the preparation of medications.*

*IO: Prepare intravenous admixtures using aseptic technique.*

*IO: Prepare chemotherapeutic agents observing rules for safe handling of cytotoxic and hazardous medications.*

*IO: Appraise admixture solutions for appropriate concentrations, rate, compatibilities, stability, clarity, coring, and storage.*

*IO: Formulate strategies for preparing extemporaneously compounded medications to produce the desired end products.*

*IO: Label medication products following the organization's policies and procedures.*

**OBJ E1.1.4:** (Application) Dispense medication products following the organization's policies and procedures.

- The patient receives the medication(s) as ordered
- Ensures the integrity of medication dispensed
- Provides any necessary written and/or verbal counseling
- Patient receives medication on time
- Documentation of dispensing follows the organization's policies and procedures

*Suggested assessment activity: Observation of dispensing process and review of documentation for dispensing of a specific medication*

*IO: Compare and contrast the procedures used to dispense medications across the continuum of care settings.*

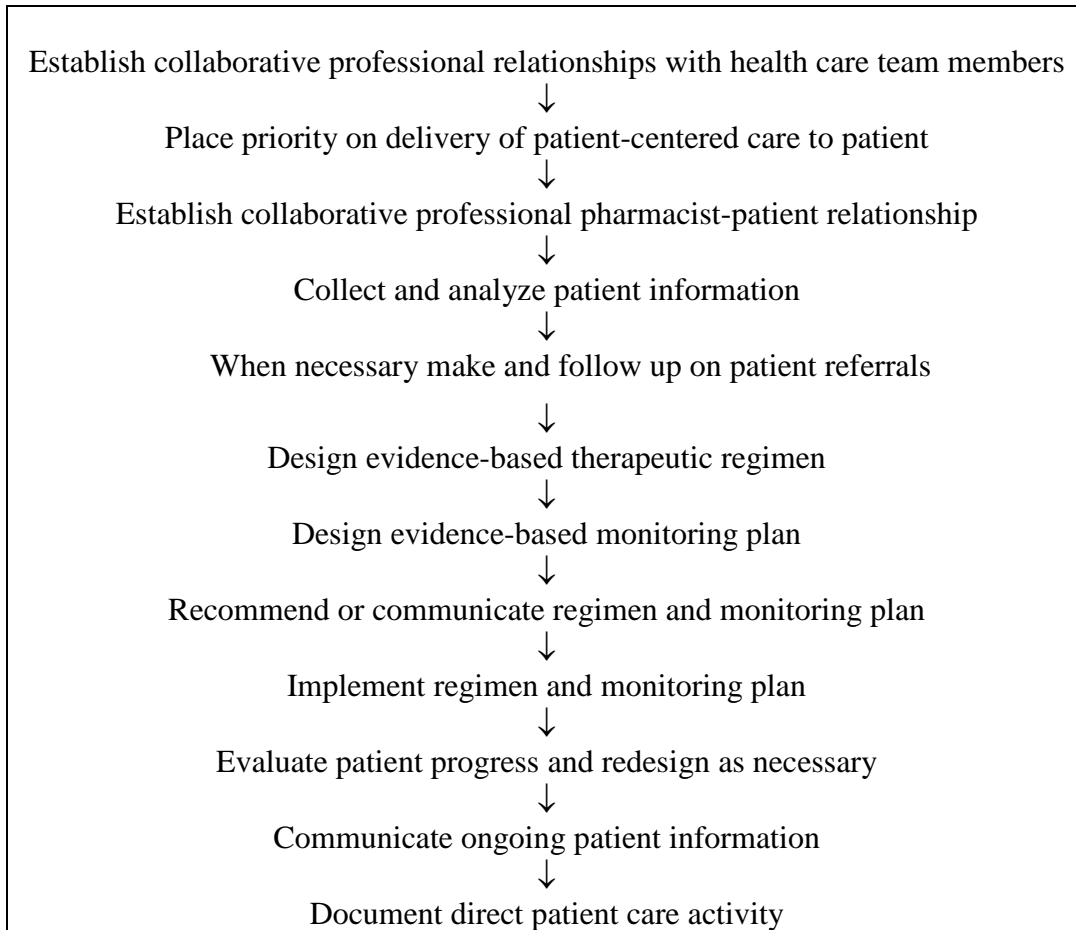
*IO: Follow a systematic procedure for checking the accuracy of medications dispensed, including correct patient identification, correct medication, correct dosage form, correct dose, correct number of doses, expiration dates, and properly repackaged and relabeled medications.*

*IO: Follow departmental procedures and standards of practice to insure the integrity of medication dispensed throughout the organization.*

*IO: Follow appropriate policies and procedures to document patients' medication refill histories.*

**Outcome E2: Provide evidence-based, patient-centered medication therapy management with interdisciplinary teams.** (When provided as part of the practice of direct patient care, this outcome always involves a series of integrated, interrelated steps.)

(Residency programs in practice environments that include the provision of acute and/or ambulatory direct patient care services may choose to substitute this outcome, E2, for goal R2.4.)



Goal E2.1: As appropriate, establish collaborative professional relationships with members of the health care team.

OBJ E2.1.1 (Synthesis) Implement a strategy that effectively establishes cooperative, collaborative, and communicative working relationships with members of interdisciplinary health care teams.

- **The relationship reflects mutual respect for the others' professional expertise**
- **The relationship reflects mutual respect for appropriate delegation of professional responsibilities in providing care for patients**

- **The relationship reflects appropriate integration of the pharmacist’s care with the contributions of other members of the interdisciplinary team**
- **The pharmacist’s work within the team reflects skillful application of group process skills such as negotiation, time management, conflict management, communication, and consensus building**

*Suggested assessment activities: Examination of the individual relationship between the resident and a particular physician and health care provider with whom he or she interacts when fulfilling practice responsibilities through a combination of direct observation, anecdotal records, and interviews with staff*

- IO: Demonstrate knowledge of other team members’ expertise, background, knowledge, and values in all interdisciplinary team interactions.*
- IO: Explain the training and expected areas of expertise of the members of the interdisciplinary with which one works.*
- IO: For each of the professions, with which one interacts on an interdisciplinary team, explain the profession’s view of its role and responsibilities in collaborations on patient-centered care.*
- IO: Exercise skill in the use of individual roles and processes required to work collaboratively on interdisciplinary teams.*
- IO: Define a collaborative professional working relationship.*
- IO: Explain the structures and content of collaborative working relationships that are possible between the pharmacist and the physician and between the pharmacist and other health care professionals.*
- IO: Explain the limits that are imposed on possible collaborative relationships by the presence or absence of guidelines, legal and regulatory requirements, and organizational policies and procedures.*
- IO: Exercise skill in the use of group techniques to include communication, negotiation, delegation, time management, assessment of group dynamics, and consensus building.*
- IO: Explain the principles and applications of negotiation as they apply to interdisciplinary team work.*
- IO: Explain the principles and applications of delegation as they apply to interdisciplinary team work.*
- IO: Explain the principles and applications of time management as they apply to interdisciplinary team work.*
- IO: Explain the principles of group dynamics and how they apply to interdisciplinary team work.*
- IO: Explain the principles of conflict management and how they apply to interdisciplinary team work.*
- IO: Explain a systematic approach to building consensus.*
- IO: Explain how interdisciplinary team members develop unique communication patterns (shared language).*
- IO: Explain the importance of adhering to use of an interdisciplinary team’s shared language*

*IO: Exercise skill in the coordination and integration of pharmacist's care with the contributions of other members of the interdisciplinary team.*

Goal E2.2: Place practice priority on the delivery of patient-centered care to patients.

OBJ E2.2.1: (Organization) Choose and manage daily activities so that they reflect a priority on the delivery of appropriate patient-centered care to each patient.

- **Daily activities consistently show a priority placed on the delivery of patient-centered care**
- **Arranges work activities so that the patient-centered care needs of patients are met**

*Suggested assessment activity: Cumulative direct observation of practice; interviews with other staff regarding choice of daily activities*

*IO: Explain the meaning of patient-centered care and the rationale for its use.*

*IO: Explain methods for prioritizing the delivery of care to patients when time or resources prohibit the delivery of full direct patient care services to all patients.*

Goal E2.3: As appropriate, establish collaborative professional pharmacist-patient relationships.

OBJ E2.3.1: (Synthesis) Formulate a strategy that effectively establishes a patient-centered pharmacist-patient relationship.

- **Patient displays acceptance of his or her role and responsibilities in the making of care decisions**
- **Patient displays understanding of the pharmacist's role and responsibilities in the making of care decisions**
- **Roles and responsibilities attributed to patient and pharmacist are appropriate for a patient-centered pharmacist-patient relationship**
- **Patient displays respect for the professional expertise of the pharmacist**
- **Pharmacist displays respect for the preferences and expressed needs of the patient**
- **Relationship reflects trust from both parties**

*Suggested assessment activities: Examination of the relationship between the resident and a specific patient in his or her care through direct observation and interviews with staff*

*IO: Explain the meaning of the term "patient-centered" and the rationale for its use.*

*IO: Explain the appropriate sharing of power and responsibility between the pharmacist, patient and caregivers in a patient-centered, pharmacist-patient relationship.*

*IO: Explain why it is important that the pharmacist communicate with the patient in a shared and fully open manner in a patient-centered, pharmacist-patient relationship.*

*IO: Explain the role of demonstrating respect for the patient's individuality, emotional needs, values, and life issues in a patient-centered, pharmacist-patient relationship.*

Goal E2.4: Collect and analyze patient information.

OBJ E2.4.1: (Analysis) Collect and organize all patient-specific information needed by the pharmacist to prevent, detect, and resolve medication-related problems and to make appropriate evidence-based, patient-centered medication therapy recommendations as part of the interdisciplinary team.

- **Information base contains all information needed (demographic, medical, medication therapy, behavioral/lifestyle, social/economic, and administrative [e.g., physician/prescriber, informed consent, pharmacy])**
- **Information base does not contain extraneous information**
- **Sources of information are the most reliable available**
- **Recording system is functional for subsequent problem solving and decision making**
- **Obtains missing or incomplete information as required**

*Suggested assessment activity: Audit of resident's information base for a specific patient or pharmacy department's patient information base*

*IO: Identify the types of patient-specific information the pharmacist requires to prevent, detect, and resolve medication-related problems and to make appropriate evidence-based, patient-centered medication therapy recommendations as part of the interdisciplinary team.*

*IO: Explain the role of collecting information regarding the patient's culture, emotional needs, preferences, values, and life issues in formulating evidence-based, patient-centered care decisions.*

*IO: Explain patient or disease specifics that would require the pharmacist to collect pharmacogenomic and/or pharmacogenetic information.*

*IO: Explain issues surrounding confidentiality of patient information and the impact of HIPAA regulations on the collection and safeguarding of patient-specific information.*

*IO: Explain signs and symptoms, epidemiology, risk factors, pathogenesis, natural history of disease, pathophysiology, clinical course, etiology, and treatment of diseases commonly encountered.*

*IO: Explain the mechanism of action, pharmacokinetics, pharmacodynamics, pharmacoeconomics, usual regimen (dose, schedule, form, route, and method of administration), indications, contraindications, interactions, adverse reactions, and therapeutics of medications in the treatment of diseases commonly encountered.*

*IO: Explain current trends and issues in nontraditional therapy.*

*IO: Use standard patient medical charts, records and/or internal electronic information databases to collect information that may be pertinent to prevent, detect, and resolve medication-related problems and to make*

*informed evidence-based, patient-centered medication therapy recommendations to an interdisciplinary team.*

*IO: Integrate effective communication techniques in interviews with patients, caregivers, health care professionals, or others so that the patient-specific information needed by the pharmacist for evidence-based, patient-centered care is collected.*

*IO: When presented with a limited time frame (e.g., ambulatory care office visit) use an interview strategy that elicits maximum pertinent information.*

*IO: Explain effective phone techniques to be used to obtain information for the patient database.*

*IO: Explain the impact of having discontinuous or fragmented patient-care information when developing an interview strategy for patients (e.g., patient seeing multiple caregivers, last visit 6 months ago).*

*IO: Distinguish the meaning of non-verbal cues in patient encounters (e.g., broken sentences in an asthmatic patient, difficult ambulation in an arthritic patient).*

*IO: When appropriate, measure patient vital signs and use appropriate physical assessment skills.*

*IO: Determine the most reputable and credible source of required patient-specific information.*

*IO: Record required patient-specific information in a manner that facilitates detecting and resolving medication-related problems and making appropriate evidence-based, patient-centered medication therapy recommendations to an interdisciplinary team.*

*IO: In a setting where none exists, create an effective organizational system for recording patient-specific data.*

**OBJ E2.4.2:** (Analysis) Determine the presence of any of the following medication therapy problems in a patient's current medication therapy:

1. Medication used with no medical indication
2. Patient has medical conditions for which there is no medication prescribed
3. Medication prescribed inappropriately for a particular medical condition
4. Immunization regimen is incomplete
5. Current medication therapy regimen contains something inappropriate (dose, dosage form, duration, schedule, route of administration, method of administration)
6. There is therapeutic duplication
7. Medication to which the patient is allergic has been prescribed
8. There are adverse drug or device-related events or potential for such events
9. There are clinically significant drug-drug, drug-disease, drug-nutrient, or drug-laboratory test interactions or potential for such interactions
10. Medical therapy has been affected by social, recreational, nonprescription, or nontraditional drug use by the patient or others
11. Patient not receiving full benefit of prescribed medication therapy

12. There are problems arising from the financial impact of medication therapy on the patient
13. Patient lacks understanding of medication therapy
14. Patient not adhering to medication regimen

- All medications used with no medical indication are identified
- All medical conditions for which there is not a medication prescribed are addressed appropriately
- All medications inappropriately prescribed for a particular medical condition are identified
- All missing immunizations are identified
- Everything inappropriate in the current medication therapy regimen (dose, dosage form, schedule, duration, route of administration, method of administration) is identified
- All therapeutic duplications are identified
- All medications in the regimen to which the patient is allergic are identified
- Any presence or potential for adverse drug events is identified
- Any presence or potential for clinically significant drug interactions is identified
- Any interference with medical therapy by social, recreational, nonprescription or nontraditional medication use is identified
- Any instance of the patient not receiving full benefit of prescribed medication therapy is identified (e.g., system failure, clinical failure)
- All problems arising from the financial impact of medication therapy on the patient are identified
- Any lack of patient (or caregiver) understanding of his/her medication therapy is identified
- Any lack of patient adherence to medication regimen is identified
- Nothing is identified as a problem that is not a problem
- If medication-use problems are found, medical record documentation exhibits the following characteristics:
  - Written in time to be useful
  - Follows the organization's policies and procedures, including that entries are signed, dated, timed, legible, and concise

*Suggested assessment activity: Audit of patient's medical record, resident's patient information base, or pharmacy department's patient information base*

*IO: Explain psychological, cultural, and economic factors that influence patient compliance with prescribed medications.*

*IO: Explain factors to consider when comparing the benefits and risks of an alternative medication therapy.*

*IO: Explain factors to consider when trying determining the likelihood that a reaction is occurring because of a medication.*

*IO: Assess criteria for assessing the severity of an adverse drug reaction.*

*IO: Explain acceptable approaches to the therapeutic management of an adverse drug reaction.*



*IO: Explain mechanisms of determining therapeutic consequence resulting from defective medications or drug products (e.g., exacerbation of asthma due to a defective inhaler).*

*IO: Use a functional format to list patients' pharmacotherapy problems.*

*IO: Prioritize patients' pharmacotherapy problems.*

OBJ E2.4.3: (Analysis) Using an organized collection of patient-specific information, summarize patients' health care needs.

- **List of needs is comprehensive**
- **Identification of health care needs integrates all relevant patient-specific and disease-specific information**
- **List of needs is concise**
- **List contains no irrelevant information**

*Suggested assessment activity: Audit of patient's medical record, resident's patient information base, or pharmacy department's patient information base.*

Goal E2.5: When necessary, make and follow up on patient referrals.

OBJ E2.5.1: (Evaluation) When presented with a patient with health care needs that cannot be met by the pharmacist make a referral to the appropriate health care provider based on the patient's acuity and the presenting problem.

- **Referral is the correct option**
- **Referral is to the most appropriate category of health care professional to meet the patient's health care need**
- **Referral contains all pertinent information required by the recipient to take appropriate action**
- **Patient is part of the decision to refer**
- **Referral is made according to the organization's policies and procedures**

*Suggested assessment activities: A combination of direct observation of practice; audit of patient's medical record, resident's patient information base, or pharmacy department's patient information base; interview of patient who has been referred; and interview of health care professional to whom the resident has referred the patient*

*IO: Explain the organization's process for making a patient referral.*

*IO: Explain the information needed to make an appropriate referral.*

*IO: Explain a systematic process for assessing the acuity of a patient's illness.*

OBJ E2.5.2: (Synthesis) Devise a plan for follow-up for a referred patient.

- **Plan specifies what the follow-up activities will be**
- **Plan provides a schedule for follow-up**
- **Plan specifies how follow-up information will be integrated into the long-term management plan**

*Suggested assessment activity: Review of the resident's plan for follow-up for a specific referred patient*

- IO: Explain the importance of following up on patients who are referred to other health care providers.*
- IO: Explain the importance of integrating follow-up information into the long-term management plan.*

Goal E2.6: Design evidence-based therapeutic regimens.

OBJ E2.6.1: (Synthesis) Specify therapeutic goals for a patient incorporating the principles of evidence-based medicine that integrate patient-specific data, disease and medication-specific information, ethics, and quality-of-life considerations.

- **Goals reflect consideration of all relevant patient-specific information including culture and preferences**
- **Goals reflect consideration of the goals of other interdisciplinary team members**
- **Goals reflect consideration of the patient's disease state(s)**
- **Goals reflect consideration of medication-specific information**
- **Goals reflect consideration of best evidence**
- **Goals reflect consideration of ethical issues involved in the patient's care**
- **Goals reflect consideration of quality-of-life issues specific to the patient**
- **Goals reflect integration of all the above factors influencing the setting of goals**
- **Goals are realistic**
- **Goals are measurable**
- **Medical record documentation exhibits the following characteristics:**
  1. **Written in time to be useful**
  2. **Follows the organization's policies and procedures, including that entries are signed, dated, timed, legible, and concise**

*Suggested assessment activity: Audit of patient's medical record, resident's patient information base, or pharmacy department's patient information base*

- IO: Explain the use of evidence-based consensus statements and guidelines in the setting of patient-specific therapeutic goals.*
- IO: Explain how culture influences patients' perceptions of desirable outcomes.*
- IO: Explain the importance of the patient's perception of desirable outcomes when setting therapeutic goals for a patient with functional limitations.*
- IO: Explain the impact of quality-of-life issues on making decisions about therapeutic goals.*
- IO: Explain ethical issues that may need consideration when setting therapeutic goals.*
- IO: Compare and contrast the realistic limits of treatment outcomes among the various care settings.*
- IO: Explain how a patient's age or mental status might affect the setting of therapeutic goals.*
- IO: Explain how goals of others on the interdisciplinary team influence the specification and prioritization of therapeutic goals.*

*IO: Explain unique aspects of the patient's role in the ambulatory care setting in determining his/her therapeutic goals.*

OBJ E2.6.2: (Synthesis) Design a patient-centered regimen that meets the evidence-based therapeutic goals established for a patient; integrates patient-specific information, disease and drug information, ethical issues and quality-of-life issues; and considers pharmacoeconomic principles.

- **Regimen reflects the therapeutic goals established for the patient**
- **Regimen reflects the patient's and caregiver's specific needs**
- **Regimen reflects consideration of compliance**
- **Regimen is appropriate to the disease states being treated**
- **Regimen reflects consideration of any pertinent pharmacogenomic or pharmacogenetics**
- **Regimen reflects consideration of best evidence**
- **Regimen reflects consideration of pertinent ethical issues**
- **Regimen reflects consideration of pharmacoeconomic components (patient, medical, and organization's resources)**
- **Regimen reflects consideration of culture and/or language differences**
- **Regimen adheres to the organization's medication-use policies**
- **Medical record documentation exhibits the following characteristics:**
  1. **Written in time to be useful**
  2. **Follows the organization's policies and procedures, including that entries are signed, dated, timed, legible, and concise**
  3. **Recommended plan is clearly presented**

*Suggested assessment activity: Audit of patient's medical record, resident's patient information base, or pharmacy department's patient information base*

*IO: Explain the use of evidence-based consensus statements and guidelines in the design of patient-specific therapeutic regimens.*

*IO: Accurately interpret best evidence for use in the design of a patient-centered regimen for a specific patient.*

*IO: Explain where and how to find the best possible sources of evidence for a specific patient case.*

*IO: Explain how to conduct a search for relevant answers to a specific clinical question, including searches of resources that evaluate or appraise the evidence for its validity and usefulness with respect to a particular patient or population.*

*IO: Explain how to integrate seemingly applicable findings of best evidence with clinical judgment to arrive at an optimal evidence-based regimen for a specific patient.*

*IO: Explain how culture influences patients' perception of disease and how this affects responses to various symptoms, diseases, and treatments.*

*IO: Explain how patient-specific pharmacogenomics and pharmacogenetics may influence the design of patients' medication regimens.*

*IO: Explain additional concerns with compliance, cost, and route of administration when making decisions on medication regimens.*

Goal E2.7: Design evidence-based monitoring plans.

OBJ E2.7.1: (Synthesis) Design a patient-centered, evidenced-based monitoring plan for a therapeutic regimen that effectively evaluates achievement of the patient-specific goals.

- Parameters are appropriate measures of therapeutic goal achievement
- Plan reflects consideration of best evidence
- Selects the most reliable source for each parameter measurement
- Value ranges selected are appropriate for the patient
- Parameters measure efficacy
- Parameters measure potential adverse drug events
- Parameters are cost-effective
- Measurement of the parameters specified is obtainable
- Plan reflects consideration of compliance
- Plan includes strategy for assuring patient returns for needed follow-up visit(s)
- Plan reflects preferences and needs of the patient
- Medical record documentation exhibits the following characteristics:
  1. Written in time to be useful
  2. Follows the organization's policies and procedures, including that entries are signed, dated, timed, legible, and concise
  3. Recommended plans are clearly presented

*Suggested assessment activity: Audit of patient's medical record, resident's patient information base, or pharmacy department's patient information base*

- IO: Explain the use of evidence-based consensus statements and guidelines in the design of patient-specific monitoring plans.*
- IO: Explain cultural and social issues that should be considered when designing a monitoring plan.*
- IO: Explain the importance of considering what is feasible and useful when designing a monitoring plan.*
- IO: Compare and contrast various methods for monitoring patient adherence (e.g., refill rates, questioning, and return demonstration).*
- IO: Determine monitoring parameters that will measure achievement of goals for a therapeutic regimen.*
- IO: State customary drug-specific monitoring parameters for medical regimens commonly prescribed.*
- IO: Explain the relationship between what are normal value ranges for parameters and the influence on those ranges by a given disease state.*
- IO: Identify the most reliable sources of data for measuring the selected parameters.*
- IO: Define a desirable value range for each selected parameter, taking into account patient-specific information.*
- IO: Explain factors that should influence the frequency and timing of parameter measurements in monitoring plans.*

*IO: Explain effective approaches to assuring patient return for follow-up visits in the ambulatory setting.*

*IO: Identify the most appropriate person to collect monitoring data (e.g., family member, nurse, patient).*

Goal E2.8: Recommend or communicate regimens and monitoring plans.

OBJ E2.8.1: (Application) Recommend or communicate a patient-centered, evidence-based therapeutic regimen and corresponding monitoring plan to other members of the interdisciplinary team and patients in a way that is systematic, logical, accurate, timely, and secures consensus from the team and patient.

- **Recommendation is persuasive**
- **Presentation of recommendation accords patient's right to refuse treatment**
- **If patient refuses treatment, resident exhibits responsible professional behavior**
- **Creates an atmosphere of collaboration**
- **Skillfully defuses negative reactions**
- **Communication conveys expertise**
- **Communication is assertive, but not aggressive**
- **Where the patient has been directly involved in the design of the plans, communication appropriately reflects previous collaboration**
- **Medical record documentation exhibits the following characteristics:**
  1. **Written in time to be useful**
  2. **Follows the organization's policies and procedures, including that entries are signed, dated, timed, legible, and concise**
  3. **Recommended plans are clearly presented**

*Suggested assessment activity: Audit of patient's medical record, resident's patient information base, or pharmacy department's patient information base where recommendation to the caregiver is done in writing; direct observation of communication process to a specific patient*

*IO: Explain the right of patients to refuse a treatment.*

*IO: Explain the importance of explicitly citing the use of best evidence when recommending or communicating a patient's regimen and monitoring plan.*

*IO: Explain what would be a pharmacist's responsible professional behavior in the circumstance that a patient refuses a proposed treatment.*

*IO: Differentiate between circumstances where documenting in the chart is sufficient and when communication to team members requires immediacy.*

Goal E2.9: Implement regimens and monitoring plans.

OBJ E2.9.1: (Application) When appropriate, initiate the patient-centered, evidence-based therapeutic regimen and monitoring plan for a patient according to the organization's policies and procedures.

- **Activity complies with the organization's policies and procedures**
- **Therapy corresponds with the recommended regimen**
- **Regimen is initiated at the appropriate time**
- **Medication orders are clear and concise**

- Tests correspond with the recommended monitoring plan
- Tests are ordered and performed at the appropriate time
- Test orders are clear and concise
- Medical record documentation follows the organization's policies and procedures including that entries are signed, dated, timed, and legible

*Suggested assessment activity: Audit of patient's medical record, resident's patient information base, or pharmacy department's patient information base for initiation of therapy and ordering of tests for a specific patient*

*IO: Explain the requirements for a situation in which it is appropriate for the pharmacist to initiate a medication-therapy regimen.*

*IO: Explain the organization's policies and procedures for ordering tests.*

OBJ E2.9.2: (Application) Use effective patient education techniques to provide counseling to patients and caregivers, including information on medication therapy, adverse effects, compliance, appropriate use, handling, and medication administration.

- Session appropriately reflects the designed plan for patient counseling
- Clearly conveys the purpose of the counseling session
- Demonstrates skill in execution of each teaching method employed during the counseling session
- During the session, adjusts the instruction to appropriately accommodate the patient's or caregiver's previous knowledge of the medication
- During the session, adjusts the instruction to appropriately accommodate the patient's or caregiver's responses
- Assures that the information or skills required are learned before ending the session

*Suggested assessment activity: Direct observation of resident counseling session with a specific patient and/or caregiver*

Goal E2.10: Evaluate patients' progress and redesign regimens and monitoring plans.

OBJ E2.10.1: (Evaluation) Accurately assess the patient's progress toward the therapeutic goal(s).

- Accounts for all patient data specified in the monitoring plan
- Interprets each monitoring parameter measurement accurately
- Accounts for the patient's current status
- Properly judges the reliability of data (e.g., timing or site of collection, differences in test sites)
- Where monitoring data are incomplete, makes sound judgments in determining if there are sufficient data upon which to base a conclusion
- Conclusions drawn reflect consideration of any significant trends in laboratory values or clinical endpoints
- Conclusions drawn reflect consideration of the safety and effectiveness of the current medication therapy

- **Conclusions drawn reflect consideration of any ineffectiveness in patient counseling**
- **Overall conclusions about reasons for patient’s progress or lack of progress toward each stated goal is appropriate**
- **Medical record documentation exhibits the following characteristics:**
  1. **Warrants documentation**
  2. **Written in time to be useful**
  3. **Follows the organization’s policies and procedures, including that entries are signed, dated, timed, legible, and concise**

*Suggested assessment activity: Audit of patient’s medical record, resident’s patient information base, or pharmacy department’s patient information base for resident’s interpretation of monitoring data for a specific patient*

*IO: Gather data as specified in a monitoring plan.*

*IO: Explain factors that may contribute to the unreliability of monitoring results (e.g., patient-specific factors, timing of monitoring tests, equipment errors, and outpatient versus inpatient monitoring.)*

*IO: Determine reasons for a patient’s progress or lack of progress toward the stated health care goal.*

*IO: Explain the importance of the analysis of trends over time in monitoring parameter measurements.*

*IO: Accurately assess the effectiveness of a patient-specific education program.*

*IO: Explain methods for assessing the effects of patient-specific education.*

OBJ E2.10.2: (Synthesis) Redesign a patient-centered, evidence-based therapeutic plan as necessary based on evaluation of monitoring data and therapeutic outcomes.

- **Modifications to the regimen and/or monitoring plan are appropriate (See criteria above for building the information base, designing therapeutic regimens, and designing monitoring plans)**
- **Modifications to the plan are effectively communicated to the patient, caregivers, prescriber, and other relevant health care professionals in a timely manner**
- **Conditions of urgency for communicating results to the prescriber are honored**

*Suggested assessment activity: Audit of patient’s medical record, resident’s patient information base, or pharmacy department’s patient information base for resident communication of modifications to a specific patient’s plan*

Goal E2.11: Communicate ongoing patient information.

OBJ E2.11.1: (Application) When given a patient who is transitioning from one health care setting to another, communicate pertinent pharmacotherapeutic information to the receiving health care professionals.

- **Conveys all necessary data in a timely manner**

- **Transfers information to all concerned health professionals**
- **Is available to clarify any related issues**
- **If a medical record entry is made, it exhibits the following characteristics:**
  1. **Warrants documentation**
  2. **Written in time to be useful**
  3. **Follows the organization's policies and procedures, including that entries are signed, dated, timed, legible, and concise**

*Suggested assessment activity: Direct observation of resident communication of continuity of care information of a specific patient and, if medical record entry is made, review of documentation of communication of information*

OBJ E2.11.2: (Application) Ensure that accurate and timely medication-specific information regarding a specific patient reaches those who need it at the appropriate time.

- **Information conveyed at the time it is needed**
- **Information conveyed is accurate**
- **Information conveyed in a format that is usable by the receiver**
- **Information is transmitted by means that are accessible to the receiver**

*Suggested assessment activity: Review of resident's communication of patient-specific information at various stages of a patient's care*

- IO: Explain the importance of effective communication of modifications of the therapeutic plan to the patient and members of the interdisciplinary team.*
- IO: Determine instances in which there is urgency in communicating the results of monitoring to the interdisciplinary team.*

Goal E2.12: Document direct patient care activities appropriately.

OBJ E2.12.1: (Analysis) Appropriately select direct patient-care activities for documentation.

- **Activity selected for documentation is one that will effectively contribute to establishing direct patient care outcomes**
- **All patient care activities that should be documented are documented**

*Suggested assessment activity: Review of resident documentation of his or her direct patient care activities for a specific period of time*

OBJ E2.12.2: (Application) Use effective communication practices when documenting a direct patient-care activity.

- **Medical record documentation exhibits the following characteristics:**
  1. **Warrants documentation**
  2. **Written in time to be useful**
  3. **Follows the organization's policies and procedures, including that entries are signed, dated, timed, legible, and concise**
  4. **Content includes pertinent subjective and objective data**



**5. Assessment reflects accurate interpretation of the objective and subjective data**

**6. Recommended plans are clearly presented and relate to the conclusion**

- Reports of medication-related problems (e.g., ADRs, medication errors, drug interactions) adhere to the organization's policies and procedures

*Suggested assessment activity: Review of resident documentation of his or her direct patient care activities and of reports of medication-related problems for a specific period of time*

OBJ E2.12.3: (Comprehension) Explain the characteristics of exemplary documentation systems that may be used in the organization's environment.

- Discussion reflects a grasp of the significance of documentation
- Discussion reflects clear understanding of all relevant criteria

*Suggested assessment activity: Discussion by resident of documentation systems*

**Outcome E3: Added knowledge and skills to provide medication and practice-related information, education, and/or training.**

Goal E3.1: Provide effective medication and practice-related education, training, or counseling to patients, caregivers, healthcare professionals, and the public.

OBJ E3.1.1: (Synthesis) Design an assessment strategy that appropriately measures the specified objectives for education or training and fits the learning situation.

- Plan for assessment will accurately measure the participants' attainment of the educational objectives

*Suggested assessment activities: Review of resident assessment instrument(s) designed to accompany a specific education or training program; review of data collected by the resident through use of the assessment instruments and the resident's conclusions about the level of achievement of learners on the stated objectives*

*IO: Explain appropriate assessment techniques for assessing the learning outcomes of pharmacist-provided educational or training programs.*

OBJ E3.1.2: (Application) Use skill in the four preceptor roles employed in practice-based teaching (direct instruction, modeling, coaching, and facilitation).

- Provides effective, focused direct instruction when warranted
- Models problem solving by talking out loud about problem-solving process
- Coaches according to the learner's current need for degree of intensity
- Selects appropriate problem-solving situations for independent work by the learner
- Moves with ease between the four preceptor roles as learner needs change

*Suggested assessment activity: Cumulative direct observations of resident when engaged in practice-based teaching*

*IO Explain the stages of learning that are associated with each of the preceptor roles.*

OBJ E3.1.3: (Application) Use skill in case-based teaching.

- **Case selection is accurately matched with learner needs**
- **Case development reflects accurate identification of critical decision points for learner problem-solving**
- **Delivery of instruction employs effective use of open-ended and probing questioning strategies**
- **Delivery of instruction includes ongoing assessment of learner understanding and corresponding adjustment in instruction**

*Suggested assessment activity: Cumulative direct observations of resident when engaged in case-based teaching*

OBJ E3.1.4: (Application) Use public speaking skills to speak effectively in large and small group situations.

- **Secures audience attention at the beginning**
- **Style of the speech is matched to its intent (persuasion, information giving, entertainment)**
- **Relates remarks to those of previous speakers (if appropriate)**
- **Portrays credibility**
- **Does not distract with physical mannerisms**
- **Does not distract with verbal habits**
- **Speech is well organized**
- **Uses appropriate transitions when proceeding from one topic to another**
- **Summarizes key points at the close**
- **Uses phrases, facts, or stories to increase audience interest**
- **Paints mental images or pictures to increase audience understanding**
- **Uses humor appropriately**
- **Appears poised**
- **Uses body language to add interest**
- **Pauses appropriately to emphasize points**
- **Displays energy and enthusiasm**
- **Accurately reads the audience's body language and adjusts the speech accordingly**
- **Answers questions with ease and confidence**

*Suggested assessment activity: Direct observation of a resident presentation to a large group; direct observation of a resident presentation to a small group*

*IO: Explain techniques that can be used to enhance audience interest.*

*IO: Explain techniques that can be used to enhance audience understanding of one's topic.*

*IO: Explain speaker habits that distract the audience.*

OBJ E3.1.5: (Application) Use knowledge of audio-visual aids and handouts to enhance the effectiveness of communications.

- **Uses visual aids when appropriate**
- **Operates equipment skillfully**
- **Uses visual aids of an acceptable quality for the situation**
- **Follows accepted conventions for designing visual aids**

*Suggested assessment activities: Direct observation of resident during a formal presentation; direct observation of resident during an informal presentation*

*IO: Use a systematic and educationally sound method for determining when it is appropriate to use handouts or visual aids and for selecting the appropriate aid.*

*IO: Explain accepted conventions for the design of visual aids and handouts.*

*IO: Exercise skill in the operation of audio-visual equipment.*

Goal E3.2: Design and deliver programs that contribute to public health efforts.

OBJ E3.2.1: (Comprehension) Explain the pharmacist's role in public health, including specific contributions to public health efforts that can be made by health-system pharmacists.

- **Accurately describes the overall role of pharmacists in public health**
- **Accurately describes specific contributions that can be made to public health by the organization's pharmacists**

*Suggested assessment activity: Discussion by resident of pharmacist's role in public health*

OBJ E3.2.2: (Synthesis) Design and deliver programs for health care consumers that center on disease prevention and wellness promotion.

- **Topic is appropriate to the needs of the target audience**
- **Objectives are matched to the learning needs of the target audience**
- **Content development matches objectives**
- **Instruction is matched to the audiences' level of health literacy**
- **Delivery reflects choice of appropriate educational methods**

*Suggested assessment activity: Review of a resident-designed and delivered disease prevention and wellness promotion program*

*IO: State target audiences for prevention and wellness promotion and the relative priority of programming for each of these audiences.*

*IO: State the data required to justify a program.*

*IO: Explain the support needed to establish a program.*

*IO: Explain potential problems and shortcomings associated with the maintenance of a wellness promotion program.*

OBJ E3.2.3: (Synthesis) Participate in the development of organizational plans for emergency preparedness.

- **Identifies elements that need to be updated**
- **Suggests appropriate changes**

*Suggested assessment activity: Review of resident's review of the organization's emergency preparedness/business continuity plan*

**Outcome E4: Exercise added leadership and practice management skills.**

Goal E4.1: Contribute to the development of a new pharmacy service or to the enhancement of an existing service.

OBJ E4.1.1: (Evaluation) Appraise a current pharmacy service or program to determine if it meets the stated goals.

- **Accurately identifies if stated goals are being addressed by a service or program**
- **Accurately identifies the effectiveness with which goals are being met**
- **Accurately judges the efficiency of delivery**

*Suggested assessment activity: Review of resident's written appraisal of the effectiveness of a specific pharmacy service or program*

OBJ E4.1.2: (Synthesis) Participate in the writing of a proposal for a marketable, new or enhanced pharmacy service.

- **Proposal identifies the components that are essential to the new service**
- **Proposal identifies necessary stake holders in the new service**
- **Proposal identifies how to assess the effectiveness of and value of the new service for the department, organization, and patients**
- **Proposal provides an accurate assessment of the business case for the new or enhanced service**

*Suggested assessment activity: Review of a proposal for a new or enhanced pharmacy service to which the resident has contributed*

*IO: Accurately identify unmet customer (i.e., patient, physicians, and other health care providers) needs.*

*IO: Use modeling to predict the financial outcome(s) of implementing a proposed new or enhanced service on meeting unmet customer needs.*

*IO: Accurately predict system and human resource needs for developing and implementing a new or enhanced service.*

*IO: Accurately predict the outcome(s) for patients of implementing a new or enhanced service.*

*IO: Accurately predict financial benefit to the organization of implementing a new or enhanced service.*

*IO: Explain the components of a new service (e.g., disease state management program).*

*IO: Explain the role of other health care providers in meeting the needs of patients involved in a new service (e.g., disease state management programs).*

*IO: Explain the process by which pharmacy databases are used to develop a new service (e.g., disease state management programs).*

*IO: Explain why and how potential shifts in market share should be factored into decisions on the marketability of a service.*

*IO: Explain the organization's desired format for a proposal for a new or enhanced pharmacy service.*

OBJ E4.1.3: (Synthesis) Formulate an effective strategy for promoting a proposal for a new service.

- **Identifies correct target audience**
- **Utilizes effective mechanisms to address target audience**
- **Demonstrates understanding of the concerns of the target audience and addresses the concerns effectively**

*Suggested assessment activity: Review of resident's strategy (written or verbal) for promoting a proposal for a new service.*

*IO Explain how to identify the stakeholders for a specific proposal.*

Goal E4.2: Manage the use of investigational drug products (medications, devices, and biologicals).

OBJ E4.2.1: (Application) Manage the use of investigational drug products (medications, devices, and biologicals) according to regulatory requirements, established protocols and the organization's policies and procedures.

- **Identifies the appropriate protocol**
- **Determines if a patient meets study criteria**
- **Confirms that an informed consent has been signed before proceeding**
- **Documents all necessary patient data**
- **Accurately follows policies and procedures for storing and dispensing**
- **Monitors the patient's progress according to the protocol**
- **Takes appropriate action toward rectifying any problem**
- **Accurately completes all documentation**

*Suggested assessment activity: Direct observation of the resident's management of the use of a specific investigational drug product*

Goal E4.3: Understand the principles of a systematic approach to staff development in pharmacy practice.

OBJ E4.3.1: (Comprehension) Explain the steps in a systematic approach to staff development.

- **Accurately describes each of the steps in systematic staff development**

*Suggested assessment activity: Resident discussion of the principles of a systematic approach to staff development*

OBJ E4.3.2: (Comprehension) Explain the importance of approaching staff development systematically.

- **Reflects understanding of the use of a systematic approach as critical to doing a good job**

*Suggested assessment activity: Resident discussion of the principles of a systematic approach to staff development*

Goal E4.4: Resolve conflicts through negotiation.

OBJ E4.4.1: (Application) Use effective negotiation skills to resolve conflicts.

- **Negotiation focuses on intended purpose**
- **Negotiation includes consideration of the other person's position**
- **Negotiator separates feelings about the people or the situation from the problem**
- **Position is based on objective criteria**
- **Opinions are expressed positively and without making accusations**
- **Negotiator suggests options that lead to mutual gain**
- **Settlement is acceptable to both sides**

*Suggested assessment activity: Direct observation of resident negotiating process occurring during the fulfillment of a specific practice responsibility*

Goal E4.5: Understand the process of managing the practice area's human resources.

OBJ E4.5.1: (Comprehension) Explain recruitment strategies for a specific position.

- **Describes how to determine the duties of a specific position**
- **Discusses how to advertise for a new position, whether it is to be filled by an internal or external candidate**
- **Discusses factors to consider when determining the individual's qualifications for a position**
- **Discusses factors to consider when deciding to hire internally versus externally**
- **Describes the information to be included in an advertisement for a position**
- **Discusses the organization's policy regarding EEO/Affirmative Action**
- **Describes how to decide where to advertise and for how long**

*Suggested assessment activity: Resident discussion of recruitment strategies for a specific position*

*IO: Explain how to determine the duties of a specific position.*

*IO: Explain differences in the advertising approach for a position to be filled internally versus externally.*

*IO: Explain factors to consider when determining the individual's qualifications for a position.*

*IO: Explain factors to consider when deciding to hire internally versus externally.*

*IO: State the information to be included in an advertisement for a position.*

*IO: Explain the organization's policy regarding equal employment opportunity and affirmative action.*

OBJ E4.5.2: (Comprehension) Explain the process used to interview and recommend personnel for employment.

- **Describes the organization's and department's policies and procedures for screening and interviewing applicants**
- **Discusses considerations in determining how many times to interview an applicant**
- **Discusses what should be discussed and not discussed in an interview**
- **Discusses considerations in determining with whom candidates should interview**
- **Discusses considerations in determining how many candidates to interview**
- **Discusses actions to pursue when none of the candidates interviewed is acceptable**
- **Discusses considerations of how many references to require and how to check references**
- **Describes information to be included in an "offer to hire" letter**
- **Discusses the impact of the Americans with Disabilities Act on interviews**

*Suggested assessment activity: Resident discussion of the organization's process to interview and recommend personnel for employment*

*IO: State the organization's and department's policies and procedures for screening and interviewing applicants.*

*IO: Explain considerations in determining how many times to interview an applicant.*

*IO: State what should be discussed and not discussed in an interview.*

*IO: Explain considerations in determining with whom candidates should interview.*

*IO: Explain considerations in determining how many candidates to interview.*

*IO: State actions to pursue when none of the candidates interviewed is acceptable.*

*IO: Explain considerations of how many references to require and how to check references.*

*IO: State information to be included in an "offer to hire" letter.*

*IO: Explain the impact of the American Disabilities Act on interviews.*

OBJ E4.5.3: (Comprehension) Explain the importance of orientation and training for practice area personnel.

- **Describes the purposes of orientation and training**
- **Discusses the roles of the organization and of the department in orientation and training**
- **Describes the subjects that should be covered in the department's orientation**

- Describes the subjects that should be covered in training for a specific position
- Discusses how to determine the length of training for a specific position
- Describes an effective measure for determining that a new employee is sufficiently trained for his/her position
- Describes the organization's probationary period

*Suggested assessment activity: Resident discussion of the importance of orientation and training for practice area personnel and how it is handled in the resident's organization*

*IO: State the purposes of orientation and training.*

*IO: State the roles of the organization and of the department in orientation and training.*

*IO: State the subjects that should be covered in the department's orientation.*

*IO: State the subjects that should be covered in training for a specific position.*

*IO: Explain how to determine the length of training for a specific position.*

*IO: Explain an effective measure for determining that a new employee is sufficiently trained for his or her position.*

*IO: Explain the impact of the Family Medical Leave Act and union contract on human resources policy.*

*IO: Describe the organization's probationary period.*

OBJ E4.5.4: (Comprehension) Explain the components of an employee performance evaluation system.

- Describes the performance standards for a specific position
- Discusses effective methods for communicating performance standards and evaluation of performance to employees
- Describes effective ways to measure work against performance standards
- Discusses the role of subjective criteria in evaluating performance

*Suggested assessment activity: Resident discussion of the components of an employee performance evaluation system*

*IO: State the performance standards for a specific position.*

*IO: State effective methods for communicating performance standards and evaluation of performance to employees.*

*IO: Explain effective ways to measure work against objective and subjective performance standards.*

OBJ E4.5.5: (Comprehension) Explain the principles and application of a progressive discipline process.

- Describes the components of the progressive discipline process
- Describes the advantages of the progressive discipline process to the employer and the employee

*Suggested assessment activity: Resident discussion of the principles and application of a progressive discipline process*



*IO: Explain the components of the progressive discipline process.*

*IO: State the advantages of the progressive discipline process to the employer and the employee.*

Goal E4.6: Understand the process of establishing a pharmacy residency program.

OBJ E4.6.1: (Comprehension) Explain the steps involved in establishing a pharmacy residency program at a particular site.

- **Accurately identifies the resources required to establish a pharmacy residency program**
- **Accurately describes each of the steps in establishing a pharmacy residency program**
- **Accurately describes the residency accreditation process**

*Suggested assessment activity: Resident discussion of how to establish a pharmacy residency program*

*IO: Explain the sources of published information to be used when establishing a residency program (i.e., accreditation regulations, accreditation standards, ASHP website).*

***Outcome E5: Participate in the process by which managed care organizations contract with pharmaceutical manufacturers.***

Goal E5.1: Understand the organization's process for contracting with pharmaceutical manufacturers.

OBJ E5.1.1: (Comprehension) Explain the purpose of contracting.

- Discussion includes relationship of contracting to the competitive market for pharmaceuticals
- Discussion includes relationship with formulary process
- Discussion includes fiscal goals

Suggested assessment activity: Resident discussion of the purpose of contracting

OBJ E5.1.2: (Knowledge) State the types of contracts possible with pharmaceutical companies.

- Discussion includes access, market share, performance-based, and risk-based contracts

Suggested assessment activity: Resident discussion of the types of contracts possible with pharmaceutical companies

OBJ E5.1.3: (Comprehension) Explain what affects drug pricing in the marketplace.

- Discussion includes relationship between drug pricing in the marketplace and overall disease cost

- Discussion includes relationship between drug pricing in the marketplace and payer attributes
- Discussion includes relationship between drug pricing in the marketplace and competition
- Discussion includes relationship between drug pricing in the marketplace and chemical attributes of product
- Discussion includes relationship between drug pricing in the marketplace and legislation/regulation
- Discussion includes relationship between drug pricing in the marketplace and target population of disease
- Discussion includes relationship between drug pricing in the marketplace and IP protection
- Discussion includes relationship between drug pricing in the marketplace and attributes of the manufacturer
- Discussion includes relationship between drug pricing in the marketplace and primacy/ fulfilling an unmet need

Suggested assessment activity: Resident discussion of components of drug pricing in the marketplace

OBJ E5.1.4: (Comprehension) Explain the managed care organization's process for negotiating the price of medications with a manufacturer.

- Discussion includes the timing of negotiations
- Discussion include how the organization determines if it is appropriate to negotiate (e.g. cost effective)

Suggested assessment activity: Resident discussion of the organization's process for negotiating the price of medications with a manufacturer.

Goal E5.2: Contribute to the organization's negotiations with pharmaceutical manufacturers.

OBJ E5.2.1: (Analysis) Identify the implications for the company and the customer of a particular contract.

- Includes appropriate recommendation of whether to accept contract
- Incorporates knowledge of other drug options for customer
- Addresses costs and risks to organization to meet requirements of the contract

Assessment Activity: Resident written analysis of a contract proposal within a competitive product area.

OBJ E5.2.2: (Comprehension) Explain reporting requirements to evaluate customer performance.

- Discussion includes utilization reports of products within a competitive market basket

- Discussion includes analysis of individual product market share
- Discussion includes timeliness
- Discussion includes appropriate format and data elements

Assessment activity: Resident discussion of reporting requirements to evaluate customer performance

***Outcome E6: Conduct outcomes-based research.***

Goal E6.1: Design and conduct outcomes-based research.

OBJ E6.1.1: (Evaluation) Contribute to a prospective clinical, humanistic and/or economic outcomes analysis.

- **Perspective of the study is appropriate for the study's intended use**
- **Study design is appropriate for answering the research questions**
- **Data collection adheres to the plan specified in the study design**
- **Presentation of data analysis is clear and understandable**
- **Conclusions drawn are appropriate for the data collected and the analysis performed**

*Suggested assessment activity: Review of a prospective outcomes study to which the resident contributed*

OBJ E6.1.2: (Evaluation) Contribute to a retrospective clinical, humanistic, and/or economic outcomes analysis.

- **Perspective of the study is appropriate for the study's intended use**
- **Study design is appropriate for answering the research questions**
- **Data collection adheres to the plan specified in the study design**
- **Presentation of data analysis is clear and understandable**
- **Conclusions drawn are appropriate for the data collected and the analysis performed**

*Suggested assessment activity: Review of a retrospective outcomes study to which the resident contributed*

***Outcome E7: Conduct pharmacy practice research.***

Goal E7.1: Design, execute, and report results of investigations of pharmacy practice-related issues.

OBJ E7.1.1: (Analysis) Identify potential practice-related issues that need to be studied.

- **Topic is relevant to pharmacy practice**
- **Topic is appropriate for organization**
- **Topic is sufficiently focused to be manageable for study**

*Suggested assessment activity: Review of resident's written topic statement*

OBJ E7.1.2: (Application) Use a systematic procedure for performing a comprehensive literature search.

- **Literature search is comprehensive**
- **Methods used to conduct search are efficient**
- **Methods used to conduct search are effective**

*Suggested assessment activity: Review of resident literature search and resident explanation of search strategy employed*

OBJ E7.1.3: (Analysis) Draw appropriate conclusions based on a summary of a comprehensive literature search.

- **Interpretation of the literature is correct**
- **Conclusion is applicable to the research question**

**Suggested assessment activity: Review of written conclusions drawn by the resident from literature search**

OBJ E7.1.4: (Synthesis) Generate a research question(s) to be answered by an investigation.

- **Investigation question(s) is/are appropriate for the hypothesis**

*Suggested assessment activity: Review of resident's written investigation questions*

OBJ E7.1.5: (Synthesis) Develop specific aims and design study methods that will answer the question(s) identified.

- **Study methodology is appropriate**
- **Design is adequate to answer the questions**
- **Complexity of design is equal to executor's expertise**
- **Design specifies the type of data to be collected**
- **Study schedule identifies each step and accurately estimates the amount of time, personnel, and resources needed**
- **Investigation can be completed in the time allotted**
- **Obtains appropriate approvals**

*Suggested assessment activity: Review of resident's written description of investigation methodology*

OBJ E7.1.6: (Analysis) Develop a realistic timeline and budget for completing the study.

- Timeline is realistic
- If timeline is followed, project will be completed on time
- Budget is realistic

Suggested assessment activity: Review of resident's written timeline and budget for project

OBJ E7.1.7: (Application) For a research study involving human subjects, successfully apply the process for securing IRB approval.

- **Appropriate strategies designed and implemented for gaining cooperation of all individuals affected by conduct of the project**
- **IRB approval secured, if required.**

*Suggested assessment activity: Review of resident's project implementation strategy and documentation of approvals/agreements*

*IO: Explain the ethics of research on human subjects and the role of the IRB.*

*IO: Explain the steps in the IRB approval process.*

OBJ E7.1.8: (Application) Use a systematic procedure to collect and analyze data.

- **Study designs specifies a systematic procedure for data collection**
- **Data collected reflects adherence to procedure specified**
- **Appropriate statistical analyses are utilized and justified**

*Suggested assessment activities: Review of resident's written procedure for data collection; inspection of data collected for evidence of adherence to specified procedure*

OBJ E7.1.9: (Evaluation) Draw valid conclusions through evaluation of the data.

- **Data analysis is accurate**
- **Data analysis is efficient**
- **Conclusions are based on the results**
- **Results of statistical analysis are accurately interpreted**

*Suggested assessment activities: Review of resident's written results; review of resident's written conclusions*

OBJ E7.1.10: (Synthesis) Use effective communication skills to report orally and in writing, using accepted manuscript style, the results and recommendations of an investigation into a pharmacy practice-related issue.

- **Report is effectively written**
- **Report is written in an accepted style**
- **Report is effectively delivered verbally**

*Suggested assessment activities: Review of resident's final written report of investigation; direct observation of resident's oral delivery of investigation*

Goal E7.2: Participate in clinical, humanistic and economic outcomes analyses.

OBJ E7.2.1: (Evaluation) Contribute to a prospective clinical, humanistic and/or economic outcomes analysis.

- **Perspective of the study is appropriate for the study's intended use**
- **Study design is appropriate for answering the research questions**
- **Data collection adheres to the plan specified in the study design**
- **Presentation of data analysis is clear and understandable**
- **Conclusions drawn are appropriate for the data collected and the analysis performed**

*Suggested assessment activity: Review of a prospective outcomes study to which the resident contributed*

*IO: Explain the principles and methodology of basic pharmacoeconomic analyses.*

*IO: Explain the purpose of a prospective clinical, humanistic or economic outcomes analysis.*

*IO: Explain study designs appropriate for a prospective clinical, humanistic and economic outcomes analysis.*

*IO: Explain the technique and application of modeling.*

*IO: Explain the types of data that must be collected in a prospective clinical, humanistic and economic outcomes analysis.*

*IO: Explain possible reliable sources of data for a clinical, humanistic and economic outcomes analysis.*

*IO: Explain methods for analyzing data in a prospective clinical, humanistic and economic outcomes analysis.*

*IO: Explain how results of a prospective clinical, humanistic and economic outcomes analysis can be applied to internal business decisions and modifications to a customer's formulary or benefit design.*

OBJ E7.2.2: (Evaluation) Contribute to a retrospective clinical, humanistic, and/or economic outcomes analysis.

- **Perspective of the study is appropriate for the study's intended use**
- **Study design is appropriate for answering the research questions**
- **Data collection adheres to the plan specified in the study design**
- **Presentation of data analysis is clear and understandable**
- **Conclusions drawn are appropriate for the data collected and the analysis performed**

*Suggested assessment activity: Review of a retrospective outcomes study to which the resident contributed*

*IO: Explain the purpose of a retrospective clinical, humanistic or economic outcomes analysis.*

*IO: Explain study designs appropriate for a retrospective clinical, humanistic and economic outcomes analysis.*

- IO: *Explain the types of data that must be collected in a retrospective clinical, humanistic and economic outcomes analysis.*
- IO: *Explain the content and utilization of reports and audits produced by the pharmacy department.*
- IO: *Explain possible reliable sources of data for a retrospective clinical, humanistic and economic outcomes analysis.*
- IO: *Explain methods for analyzing data in a retrospective clinical, humanistic and economic outcomes analysis.*
- IO: *Explain the impact of limitations of retrospective data on the interpretation of results.*
- IO: *Explain how results of a retrospective clinical, humanistic and economic outcomes analysis can be applied to internal business decisions and modifications to a customer's formulary or benefit design.*

**Outcome E8: Participate in the management of business continuity.**

Goal E8.1: Evaluate organizational plans for business continuity.

OBJ E8.1.1: (Evaluation) Participate in an assessment of the organization's business continuity plan for disruption caused by a natural disaster.

- **Identifies elements that need update, if any**
- **Suggests appropriate changes, if needed**

***Suggested assessment activity: Review of resident's participation in the assessment of the organization's business continuity plan for disruption caused by a natural disaster***

- IO: *Explain the organization's policies and procedures for business continuity for a natural disaster that affects a primary business location.*
- IO: *Explain the organization's policies and procedures for assuring patient access to necessary medications if a natural disaster affects the patient.*
- IO: *Explain the functional department's roles and responsibilities in carrying out the current plan.*

OBJ E8.2.1: (Evaluation) Participate in the assessment of the organization's business continuity plan for disruption caused by a pandemic or epidemic disease process.

- **Identifies elements that need update, if any**
- **Suggests appropriate changes, if needed**

***Suggested assessment activity: Review of resident's participation in the assessment of the organization's business continuity plan for disruption caused by a pandemic or epidemic disease process***

- IO: *Explain the organization's policies and procedures for business continuity in the face of pandemic illness.*
- IO: *Explain the organization's policies and procedures for procuring medications necessary to mitigate the impact of the pandemic on its employee population.*
- IO: *Explain the organization's policies and procedures for establishing adequate operational capabilities to fulfill patient medication needs in the*

*event a pandemic illness affects a large percentage of the employee population.*

*IO: Explain the functional department's roles and responsibilities for carrying out the plan.*

***Outcome E9: Demonstrate additional competencies that contribute to working successfully in the health care environment.***

Goal E9.1: Use approaches in all communications that display sensitivity to the cultural and personal characteristics of patients, caregivers, and health care colleagues.

OBJ E9.1.1: (Organization) Demonstrate sensitivity to the perspective of the patient, caregiver, or health care colleague in all communications.

- **Communications reflect awareness of cultural differences**
- **Communications reflect skill in the use of a pattern of communication that is effective with the patient's culture**
- **Communication style/method is adjusted as needed for the patient's level of health literacy**

*Suggested assessment activity: Cumulative direct observation of resident when communicating with patients/caregivers/colleagues from other cultures and of varying degrees of health literacy*

*IO: Explain the importance of adjusting one's communications according to the level of health literacy of the patient.*

*IO: Explain common situations in the practice of pharmacy which can produce a difficult communications encounter.*

*IO: Explain effective communications strategies that could be used in a difficult encounter including the use of active listening.*

*IO: Explain the meaning of cultural competence.*

*IO: Explain communication strategies that are appropriate for patients who are non-English speakers or who are impaired.*

*IO: Explain ways in which communication strategy can be modified to accommodate the individual's personal characteristics.*

Goal E9.2: Communicate effectively.

OBJ E9.2.1: (Analysis) Use an understanding of effectiveness, efficiency, customary practice and the recipient's preferences to determine the appropriate type of, and medium and organization for, communication.

- **Choice of method reflects consideration of efficiency**
- **Choice of method reflects consideration of any requirements for documentation**
- **Choice of method reflects consideration of customary practice**
- **Choice of method reflects consideration of recipient's preferences**

*Suggested assessment activities: Direct observation of communication as it occurs during practice; review of a written communication generated as part of practice duties*



- IO: Accurately identify the primary theme or purpose of one's written or oral communication.*
- IO: Accurately determine what information will provide credible background to support or justify the primary theme of one's written or oral communication.*
- IO: Properly sequence ideas in written and oral communication.*
- IO: Accurately determine the depth of communication appropriate to one's audience.*
- IO: Accurately determine words and terms that are appropriate to one's audience.*
- IO: Accurately determine one's audience's needs.*
- IO: Accurately identify the length of communication that is appropriate to the situation.*
- IO: Explain the importance of assessing the listener's understanding of the message conveyed.*
- IO: Explain how to assess the level of health literacy of a patient.*
- IO: State sources of patient information that are adjusted for various levels of health literacy.*
- IO: Explain techniques for persuasive communications.*
- IO: Explain guidelines for the preparation of statements to be distributed to the media.*

OBJ E9.2.2: (Complex Overt Response) Speak clearly and distinctly in grammatically correct English or the alternate primary language of the practice site.

- **Voice quality is appropriate to the situation**
- **Volume is appropriate**
- **Sentence breaks are distinct**
- **Words are pronounced correctly**
- **Speed of delivery is appropriate**

*Suggested assessment activity: Direct observation of oral communication as it occurs in practice*

OBJ E9.2.3: (Application) Use listening skills effectively in performing job functions.

- **Accurately paraphrases the speaker's ideas**
- **Responses show respect for the speaker's attitudes and feelings**
- **Maintains eye contact with the speaker**
- **Body language reflects an open and nonjudgmental attitude**

*Suggested assessment activity: Direct observation of resident in a practice activity that requires listening*

- IO: Explain the use of body language in listening to others.*
- IO: Explain verbal techniques that can be used to enhance listening to others.*

OBJ E9.2.4: (Application) Use correct grammar, punctuation, spelling, style, and formatting conventions in preparing all written communications.

- **Style is appropriate for the audience**
- **Punctuation, spelling and formatting conventions are observed in written communication**
- **Correct grammar is employed in written communication**

*Suggested assessment activities: Review of a written communication generated as part of practice duties*

Goal E9.3: Balance obligations to oneself, relationships, and work in a way that minimizes stress.

OBJ E9.3.1: (Synthesis) Devise an effective plan for minimizing stress while attending to personal needs, maintaining relationships, and meeting professional obligations.

- **Sets realistic expectations for self when confronted by unrealistic expectations from others**
- **Behavior demonstrates use of stress management techniques research has proven to be effective**
- **Seeks counsel of others (e.g., mentor, preceptor, employee assistance programs) if needed**
- **Behavior reflects understanding of expectations placed on self**
- **Practices “time for self” on a routine basis**

*Suggested assessment activity: Resident and preceptor discussion of work-life balance.*

*IO: Explain various approaches advocated for achieving balance in one’s life.*

Goal E9.4: Manage time effectively to fulfill practice responsibilities.

OBJ E9.4.1: (Application) Use time management skills effectively to fulfill practice responsibilities.

- **When insufficient time is available to meet all practice responsibilities, gives preference to those of the highest priority**
- **Meets work responsibilities within the confines of a reasonable workday**

*Suggested assessment activity: Direct observation of job performance for a specific time period*

*IO: Explain an effective system for the management of one's time in professional practice.*

Approved by the ASHP Commission on Credentialing March 10, 2007. Endorsed by the ASHP Board of Directors April 18, 2007. Approved by the Academy of Managed Care Pharmacy Board of Directors April 11, 2007. Developed by the ASHP Commission on Credentialing and an AMCP advisory panel comprised of managed care pharmacy practitioners, residency program directors, and AMCP and ASHP staff: Carey C. Cotterell, R.Ph., FAMCP, FCSHP, Pharmacy Quality Leader California Regions, Kaiser Permanente Medical Care Program; Raulo S. Frear, Pharm.D., Vice President, Health-System Services, Visante, Inc.; Lydia Neemann, Pharm.D., Administrative Director of Clinical and Part D Services, MediSun; Mark N. Brueckl, R.Ph., MBA, Assistant Director of Pharmacy Affairs, Academy of Managed Care Pharmacy; Marissa Schlaifer, R.Ph., Director of Pharmacy Affairs, Academy of Managed Care Pharmacy; Bruce A. Nelson, R.Ph., M.S., Director, Operations, ASHP Accreditation Services Division; and ASHP Accreditation Services Division Standards Development and Training Director, Christine M. Nimmo, Ph.D. This set of educational outcomes, goals, objectives, and instructional objectives replaces the *Accreditation Standard and Learning Objectives for Residency Training in Managed Care Pharmacy Practice* (Prepared jointly by the American Society of Health-System Pharmacists and the Academy of Managed Care Pharmacy) approved by the ASHP Board of Directors on April 21, 1999 and by the AMCP Board of Directors on April 29, 1999. The contribution of reviewers is gratefully acknowledged.

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The effective date for implementation of these educational outcomes, goals and objectives is commencing with the entering resident class for 2008.

## Glossary

Adverse drug event (ADE) -- an injury from a medicine (or lack of an intended medicine). (ASHP. Suggested definitions and relationships among medication misadventures, medication errors, adverse drug events, and adverse drug reactions. *AJHP*, 1998; 55:165-6.)

Culture -- an integrated system of learned behavior patterns that are characteristic of the members of any particular group. It is more than race or ethnicity. Culture includes race or customs, rituals, food, religion, and music; and, in addition, it includes health beliefs and practices, death and birth rituals, structure, and dynamics, social practices and beliefs that define personal space, eye contact, time orientation, and nonverbal communication behaviors. (Randall-David E. Culturally competent HIV counseling and education. Material & Child Health Clearinghouse: McLean, VA: 1994)

Cultural competency -- is more than cultural awareness or cultural sensitivity, competency implies skills and expertise to work with and within diverse cultural groups with sensitivity and effectiveness. In its most developed meaning cultural competence includes advocacy. (Randall-David E. Culturally competent HIV counseling and education. Material & Child Health Clearinghouse: McLean, VA: 1994)

Evidence-based medicine -- the integration of best research evidence, clinical expertise, and patient values in making decisions about the care of individual patients (Institute of medicine, 2001; Straus and Sackett, 1998). *Best research evidence* includes evidence that can be quantified, such as that from randomized controlled trials, laboratory experiments, clinical trials, epidemiological research, and outcomes research and evidence derived from the practice knowledge of experts, including inductive reasoning (Guyatt et al., Higgs et al., 2001). *Clinical expertise* is derived from the knowledge and experience developed over time from practice, including inductive reasoning. *Patient values and circumstances* are the unique preferences, concerns, expectations, financial resources, and social supports that are brought by each patient to a clinical encounter. (Institute of Medicine. Health professions education: a bridge to quality. Washington, DC: The National Academies Press; 2001.)

Interdisciplinary team -- a team composed of members from different professions and occupations with varied and specialized knowledge, skills, and methods. The team members integrate their observations, bodies of expertise, and spheres of decision making to coordinate, collaborate, and communicate with one another in order to optimize care for a patient or group of patients. (Institute of Medicine. Health professions education: a bridge to quality. Washington, DC: The National Academies Press; 2001.)

Leadership -- leadership practices include scanning, focusing, aligning/mobilizing, and inspiring.

### Scanning:

- ✓ Identify client and stakeholder needs and priorities.
- ✓ Recognize trends, opportunities, and risks.
- ✓ Look for best practices.
- ✓ Identify staff capacities and constraints.

- ✓ Know yourself, your staff, and your organization – values, strengths, and weaknesses.

Focusing:

- ✓ Articulate the organizations' mission and strategy.
- ✓ Identify critical challenges.
- ✓ Link goals with the overall organizational strategy.
- ✓ Determine key priorities for action
- ✓ Create a common picture of desired results.

Aligning/Mobilizing:

- ✓ Ensure congruence of values, mission, strategy, structure, systems and daily actions.
- ✓ Facilitate teamwork.
- ✓ Unite key stakeholders around an inspiring vision.
- ✓ Link goals with rewards and recognition.
- ✓ Enlist stakeholders to commit resources.

Inspiring:

- ✓ Match deeds to words.
- ✓ Demonstrate honesty in interactions.
- ✓ Show trust and confidence in staff, acknowledge the contributions of others.
- ✓ Provide staff with challenges, feedback and support.
- ✓ Be a model of creativity, innovation, and learning

(Management and Leadership Program. Leading and managing framework. Management Sciences for Health, Ballston, VA. 2004.)

Management -- management practices include planning, organizing, implementing, and monitoring and evaluating.

Planning:

- ✓ Set short-term organizational goals and performance objectives.
- ✓ Develop multi-year and annual plans
- ✓ Allocate adequate resources (money, people, and materials).
- ✓ Anticipate and reduce risks.

Organizing:

- ✓ Ensure a structure that provides accountability and delineates authority.
- ✓ Ensure that systems for human resource management, finance, logistics, quality assurance, operations, information, and marketing effectively support the plan.
- ✓ Strengthen work processes to implement the plan.
- ✓ Align staff capacities with planned activities.

Implementing:

- ✓ Integrate systems and coordinate work flow.
- ✓ Balance competing demands.
- ✓ Routinely use data for decision making.
- ✓ Coordinate activities with programs and sectors.
- ✓ Adjust plans and resources as circumstances change.

Monitoring and Evaluating:

- ✓ Monitor and reflect on progress against plans.
- ✓ Provide feedback.

- ✓ Identify needed changes
- ✓ Improve work processes, procedures, and tools.

(Management and Leadership Program. Leading and managing framework. Management Sciences for Health, Ballston, VA. 2004.)

Medical informatics -- the development and application of information technology systems to problems in health care, research, and education. (Institute of Medicine. Health professions education: a bridge to quality. Washington, DC: The National Academies Press; 2001.)

Medication-use system - Medication use is a complex process that comprises the sub-processes of medication prescribing, order processing, dispensing, administration, and effects monitoring. The key elements that most often affect the medication use process...are...., patient information; drug information, communication of drug information; drug labeling, packaging and nomenclature; drug storage, stock and standardization; drug device acquisition, use and monitoring; environmental factors; competency and staff education; patient education; and quality processes and risk management. (Institute of Safe Medication Practices web site accessed May 31, 2005 [http://www.ismp.org/Pages/ismp\\_faq.html#Question%207](http://www.ismp.org/Pages/ismp_faq.html#Question%207).)

Patient-centered care -- identify, respect, and care about patients' differences, values, preferences, and expressed needs; relieve pain and suffering; coordinate continuous care; listen to, clearly inform, communicate with, and educate patients; share decision making and management; and continuously advocate disease prevention, wellness, and promotion of healthy lifestyles, including a focus on population health. (Institute of Medicine. Health professions education: a bridge to quality. Washington, DC: The National Academies Press; 2001.)

Pharmacy practice research – includes all forms of scholarly scientific inquiry that may be performed by pharmacy residents. Broad in scope, it may include prospective or retrospective clinical studies, pharmacokinetic or pharmacodynamic studies, outcome studies, or evaluation of some aspect of pharmacy practice (e.g., impact of a new program or service). Typically, research projects should be applied in nature, using human data, but exceptions may occur.

Plan sponsor -- The company that assumes financial responsibility for an insured group. A plan sponsor can be an insurance company, third-party administration, or the company itself, if the company is self-insured. (AMCP. Glossary of managed care terms. AMCP web site accessed October 19, 2006, <http://amcp.org/amcp.ark?c=stu&sc=glossary>.)

Professional -- the active demonstration of the 10 traits of a professional.

1. Knowledge and skills of a profession.
2. Commitment to self-improvement of skills and knowledge.
3. Service orientation.
4. Pride in the profession.
5. Covenantal relationship with the client.
6. Creativity and innovation.
7. Conscience and trustworthiness.
8. Accountability for his/her work.
9. Ethically sound decision making.
10. Leadership.

(Ten marks of a professional working smart. New York, NY: National Institute of Business Management, March 11, 1991;17[5].)

Quality -- the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge. (Institute of Medicine. Health professions education: a bridge to quality. Washington, DC: The National Academies Press; 2001.)

Quality improvement -- identify errors and hazards in care; understand and implement basic safety design principles, such as standardization and simplification; continually understand and measure quality of care in terms of structure, process, and outcomes in relation to patient and community needs; and design and test interventions to change processes and systems of care, with the objective of improving quality.” (Institute of Medicine. Health professions education: a bridge to quality. Washington, DC: The National Academies Press; 2001.)