Educational Outcomes, Goals, and Objectives for Postgraduate Year Two (PGY2) Health-System Pharmacy Administration Residency Programs

Overview of PGY2 Health-System Pharmacy Administration Residencies

A PGY2 health-system pharmacy administration residency builds upon PGY1 residency graduates' competence in the delivery of patient-centered care and in pharmacy operational services to prepare residents who can assume high level managerial, supervisory, and leadership responsibilities. Areas of competence emphasized during the program include safe and effective medication-use systems, quality assurance, the management of human resources, the management of financial resources, use of technology, and advanced leadership. The residency lays the foundation for continued growth in management and leadership skills with the expectation that with fifteen years of successful pharmacy administration practice, the residency graduate should be ready to assume directorship of a large hospital or health system pharmacy.

Upon graduation, residents are prepared for a clinical or operational management/supervisory role in a variety of work settings including small to mid-size hospitals, large health systems, and pharmacy benefit management organizations.

Explanation of the Contents of This Document:

The educational outcomes, goals, objectives, and instructional objectives below are to be used in conjunction with the *ASHP Accreditation Standard for Postgraduate Year Two (PGY2) Pharmacy Residency Programs*.

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.[1]

The order in which the required educational outcomes are 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

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[1] 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.

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.

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.

Required Educational Outcomes, Goals, and Objectives for Postgraduate Year Two (PGY2) Health-System Pharmacy Administration Residencies

OutcomeR1: *Design, implement, and manage a safe and effective medication-use system.*

Goal R1.1:   Lead departmental and/or interdisciplinary teams in the design, implementation, and/or enhancement of a health system's medication-use process.

    OBJ R1.1.1:   (Synthesis) Effectively represent the pharmacy perspective on an interdisciplinary team redesigning a selected aspect of the organization's medication-use system.

        IO   *Explain the potential contributions of the following to the achievement of a safe and effective medication-use system:*
1. *Formulary systems*
2. *Medication-use guidelines*
3. *Medication-use restrictions*
4. *Evidence-based protocols*
5. *Care paths*
6. *Disease state management*
7. *Wellness management*
8. *Provider education including academic detailing*
9. *Customer education*
10. *Outcomes studies*
11. *Benchmarking*
12. *Technology and automated systems*
13. *Medication distribution systems and control*

    OBJ R1.1.2:   (Synthesis) Exercise effective leadership of a team tasked with the redesign of a selected aspect of the medication-use process.

        IO   *Explain a systematic approach to determining who should be on a particular team.*
        IO   *Explain the role and responsibilities of a team leader.*
        IO   *Explain the role and responsibilities of team members.*
        IO   *Explain strategies for effective team leadership.*
        IO   *Explain the significance of defining the project's scope.*
        IO   *Explain strategies for gaining administrative support for team recommendations.*

Goal R1.2:   Manage the medication distribution process in all locations within the health system where drugs reside.

    OBJ R1.2.1:   (Evaluation) Based on one's own assessment of the pharmacy's drug control systems, contribute any needed recommendations for improvement.

        IO   *Explain the principles underlying a safe medication distribution system.*
        IO   *Explain principles for management of medication use in procedure and perioperative areas.*
        IO   *Explain the principles for management and control of unit-dose drugs.*

> *IO   Explain the principles for management and control of sterile product preparation.*
>
> *IO   Explain the principles for management and control of chemotherapy and other hazardous substances.*
>
> *IO   Explain the principles for management and control of controlled substances.*
>
> *IO   Explain the principles for management and control of investigational drugs.*
>
> *IO   Explain the principles for management and control of medication samples.*
>
> *IO   Explain the principles for management and control of take-home medications.*
>
> *IO   Explain the principles for management and control of medication repackaging.*
>
> *IO   Explain the principles for management and control of drug compounding.*
>
> *IO   Explain the principles for management and control of self-administered medications.*
>
> *IO   Explain the principles for management and control of home infusions.*
>
> *IO   Explain the principles for management and control of non-formulary medications.*
>
> *IO   Explain the principles for management and control of pumps.*
>
> *IO   Explain the principles for management and control of emergency medication supplies.*
>
> *IO   Explain advantages and disadvantages of various medication distribution systems.*
>
> *IO   Explain how principles for management and control of medications may differ among various health-system settings (e.g., inpatient care units, ambulatory clinics, procedural areas, operative suite).*
>
> *IO   Explain medication distribution activities that can effectively be performed by pharmacy technicians.*
>
> *IO   Explain strategies used within the organization for routine review and management of non-formulary medication use.*

Goal R1.3:   Manage a pharmacy's direct patient care services.

   OBJ R1.3.1:   (Evaluation) Based on one's own assessment of the scope of the pharmacy's current services for its capacity to meet the needs of all patients served by the health system, identify any needed services.

> *IO   Explain the scope of pharmacy services that a health system should provide.*

Goal R1.4:   Participate in the development and coordination of medication-use policy initiatives.

   OBJ R1.4.1:   (Synthesis) Participate in oversight of the formulary management process.

> *IO   Identify the components of a formulary system.*
>
> *IO   Explain the approval process for establishing a formulary.*
>
> *IO   Explain the role of committees in addressing formulary issues.*
>
> *IO   Explain how formularies are revised and maintained.*

IO   *Explain strategies used by pharmaceutical manufacturers and sales representatives to influence drug formularies.*

IO   *Explain procedures regarding exceptions to the formulary.*

IO   *Explain the process of making additions and deletions to the formulary including those resulting from drug shortages.*

IO   *Explain effective methods of communicating changes to the formulary including those resulting from drug shortages.*

IO   *Explain strategies for assuring successful implementation of formulary policies.*

IO   *Explain drug policy strategies used to improve adherence to a formulary (e.g., therapeutic substitution, guideline development).*

OBJ R1.4.2:   (Synthesis) Participate in the pharmacy department's selection of, contracting for, and procurement of a product being added to the formulary.

IO   *Explain the purpose of contracting.*

IO   *Explain the types of contracts offered by pharmaceutical manufacturers.*

OBJ R1.4.3:   (Synthesis) Oversee the completion of a medication-use evaluation (MUE).

IO   *Explain the steps in the conduct of a MUE.*

IO   *Explain the purpose of conducting MUEs.*

Outcome R2: *Apply contemporary quality methodology to the management of pharmacy services.*

Goal R2.1:   Develop a quality improvement plan for the pharmacy department that integrates with the health system's quality initiatives.

OBJ R2.1.1:   (Synthesis) Participate in the development or revision of the pharmacy's quality improvement plan.

Goal R2.2:   Improve quality using contemporary performance improvement methodology.

OBJ R2.2.1:   (Synthesis) Participate in a formal performance improvement project utilizing the organization's process for improving quality.

IO   *Explain current quality improvement methodologies and tools, including the applicability of each.*

Goal R2.3:   Assure the health system's compliance with medication-related external quality standards.

OBJ R2.3.1:   (Comprehension) Explain the organization's process for reporting external quality data.

IO   *Explain the pharmacist's role in assuring compliance.*

IO   *Explain factors that impact the quality of performance.*

IO   *State sources of quality standards.*

IO   *Explain the meaning of various commonly used quality indicators.*

IO   *Explain sources of data for measuring compliance.*

OBJ R2.3.2   (Comprehension) Explain effective strategies for assuring pharmacy's influence on organizational decision-making on quality standards with relevance to the medication-use system.

Goal R2.4:   Understand how to assure pharmacy compliance with legal, regulatory, safety, and accreditation requirements.

    OBJ R2.4.1:   (Comprehension) Explain the components of a departmental system that would assure compliance with applicable legal, regulatory, safety, and accreditation requirements.

        IO   *Explain all of the legal, regulatory, safety, and accreditation requirements affecting pharmacy.*

            IO   *Explain the requirements for conduct of an ASHP-accredited pharmacy residency.*

        IO   *Explain how the department's regulatory management systems integrate with the organization's overall management for achieving compliance.*

Goal R2.5:   Understand how to coordinate a health system's medication safety oversight program.

    OBJ R2.5.1:   (Comprehension) Explain the components of an effective system for tracking, trending, and reporting adverse drug events (ADEs).

    OBJ R2.5.2:   (Comprehension) Explain the organization's patient safety program and how it fits with the pharmacy's medication safety program.

Goal R2.6:   Apply methods for measuring and improving internal and external customer satisfaction with pharmacy services.

    OBJ R2.6.1:   (Synthesis) Contribute to an assessment of customer satisfaction with a specific aspect of pharmacy services.

        IO   *Explain the concept of "service mentality" and its role in the pharmacy environment.*

        IO   *Explain the principles of survey research.*

        IO   *Explain rules to follow when constructing a survey tool.*

        IO   *Explain methodology for analysis of survey data.*

        IO   *State sources of research literature on customer satisfaction applicable to the health care environment.*

    OBJ R2.6.2:   (Synthesis) Create a proposal for the improvement of a specific area of pharmacy services.

Outcome R3: Lead and manage the health system pharmacy's human resources.

Goal R3.1:   Develop an overall plan for the organization and staffing of the pharmacy.

    OBJ R3.1.1:   (Analysis) Determine the minimum staff requirements that match the department's scope of services.

        IO   *Explain the necessity to consider hours and days of operation when making decisions about staffing needs.*

        IO   *Explain the affect of state regulations on staffing decisions.*

        IO   *Explain the implications (legal, operational, political) of staffing below and above the minimum in each service area of the pharmacy.*

    OBJ R3.1.2:   (Evaluation) Develop a plan to optimize departmental staffing that remains within budget and is based on productivity statistics.

        IO   *Explain the elements of a staffing plan.*

        IO   *Explain the principles and application of productivity measurement.*

IO   *Explain the need to consider human resources management policies and employee benefits when making decisions about staffing needs.*

IO   *Explain methods used to analyze variances between budgeted and actual personnel utilization.*

Goal R3.2:   Conduct recruitment and hiring activities.

OBJ R3.2.1:   (Synthesis) Use knowledge of the health system's customary practice to write a job description for a new pharmacy position.

IO   *Explain the organization's format for writing job descriptions.*

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

IO   *Explain a systematic process for writing a job description that would meet with the organization's requirements.*

IO   *State sources of prototype pharmacy job descriptions.*

OBJ R3.2.2:   (Synthesis) Design a recruitment strategy for a particular pharmacy position.

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

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

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

IO   *Explain various strategies for marketing a pharmacy position.*

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

OBJ R3.2.3:   (Analysis) Use a systematic approach to evaluating job candidates for interviews.

IO   *Explain the rationale for and process of behavioral interviewing.*

IO   *Explain laws governing interviewing and hiring.*

OBJ R3.2.4:   (Synthesis) Conduct a hiring interview that elicits information helpful for making a hiring decision.

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

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

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

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

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

OBJ R3.2.5:   (Evaluation) Draw appropriate conclusions about an interviewee's potential fit for a position.

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

Goal R3.3:   Participate in the departmental performance management system.

OBJ R3.3.1:   (Evaluation) Effectively supervise the work of pharmacy personnel.

OBJ R3.3.2:   (Evaluation) Conduct an employee's performance appraisal.

    IO   *Explain the role of goal setting in performance appraisals.*

    IO   *Explain effective ways to measure work against objective and subjective performance standards.*

    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 the role of feedback in the conduct of performance appraisals.*

    IO   *Explain the costs of employee turnover.*

OBJ R3.3.3:   (Evaluation) Participate in the health system's progressive discipline process.

    IO   *Explain the components of the progressive discipline process.*

    IO   *State the benefits of the progressive discipline process to the employer and the employee.*

Goal R3.4:   Understand how to design and implement plans for maximizing employee engagement and enhancing employee satisfaction and retention.

OBJ R3.4.1:   (Comprehension) Explain research findings regarding employee satisfaction and engagement.

    IO   *State sources of published research on employee satisfaction and retention.*

    IO   *Explain the difference between the terms "employee satisfaction" and "employee engagement".*

OBJ R3.4.2:   (Comprehension) Explain effective strategies for recognizing and rewarding employees.

Goal R3.5:   Understand labor and contract management principles.

OBJ R3.5.1:   (Comprehension) Explain the role of unions in health systems and their impact on human resources management.

OBJ R3.5.2:   (Comprehension) Explain laws affecting various aspects of human resources management (e.g., wages, family leave, disabilities, Civil Rights Act, equal employment opportunity).

Outcome R4: Manage the health system pharmacy financial performance within the context of the broader health system.

Goal R4.1:   Utilize productivity measurement in operational decision-making.

OBJ R4.1.1:   (Evaluation) When given a productivity report, draw appropriate conclusions.

OBJ R4.1.2:   (Evaluation) Effectively utilize an internal and external benchmarking and productivity system to make management decisions.

    IO   *Explain the concepts of internal and external benchmarking.*

    IO   *Provide examples of meaningful pharmacy benchmarking metrics.*

    IO   *Describe how benchmarking metrics apply to pharmacy patient care services.*

Goal R4.2:   Manage operating and capital budgets.

OBJ R4.2.1: (Synthesis) Develop an operating budget for a selected aspect of the pharmacy's activities.

- *IO* *Explain the contents of an operating budget.*
- *IO* *Explain the pharmacy department's responsibilities in the budget process.*
- *IO* *Explain the organization's budget cycle.*
- *IO* *Explain a process for establishing an operating budget.*
- *IO* *Explain the process for developing an operating budget.*
- *IO* *State sources of information for constructing an operating budget.*
- *IO* *Outline a strategy for presenting a budget to senior administration.*
- *IO* *Explain the organization's process for making new personnel requests.*

OBJ R4.2.2: (Synthesis) Develop a capital budget for a selected aspect of the pharmacy's activities.

- *IO* *Explain the contents of a capital budget.*
- *IO* *Explain things to consider when constructing a capital budget.*
- *IO* *Explain the processes for developing a capital budget.*
- *IO* *State sources of information for constructing a capital budget.*
- *IO* *Explain strategies for securing capital resources.*
- *IO* *Explain the role of return on investment (ROI) analysis in obtaining new capital requests.*

OBJ R4.2.3: (Evaluation) Participate in the monitoring of financial performance and explanation of variances.

- *IO* *Explain how pharmacy's financial goals are developed by the organization.*
- *IO* *Describe the pharmacy's financial performance goals.*
- *IO* *Explain financial performance auditing systems.*
- *IO* *Explain pharmacy budget monitoring reports, data they contain, and their relationship to each other.*
- *IO* *Explain strategies for routine monitoring of the financial performance of a pharmacy department.*
- *IO* *Explain the importance of budget variance reporting and taking actions to correct variances.*

Goal R4.3: Justify new services using return on investment (ROI) analyses.

OBJ R4.3.1: (Evaluation) Uses skill in return on investment (ROI) calculations to make an accurate judgment concerning a proposed pharmacy plan.

- *IO* *Explain how to prepare an ROI template.*
- *IO* *Explain the steps in calculating a ROI.*
- *IO* *Explain how to calculate a break-even point.*
- *IO* *Explain how to determine net present value (NPV).*
- *IO* *Explain how to determine the internal rate of return (IRP).*

Goal R4.4: Understand how to oversee the pharmacy revenue cycle.

OBJ R4.4.1: (Comprehension) Explain the concept of the pharmacy revenue cycle.

- *IO* *Explain the concept of patient registration and its link to pharmacy revenue cycle management.*
- *IO* *Explain the concept of financial counseling and its link to pharmacy revenue cycle management.*

IO   *Explain the concept of collection and its link to pharmacy revenue cycle management.*

IO   *Explain the concept of payment denials and its link to pharmacy revenue cycle management.*

IO   *Explain the concept of claims reconciliation and its link to pharmacy revenue cycle management.*

IO   *Explain the concept of contracting and its link to pharmacy revenue cycle management.*

IO   *Explain the concept of coding and its link to pharmacy revenue cycle management.*

IO   *Explain the concept of price setting and its link to pharmacy revenue cycle management.*

IO   *Describe the difference between gross revenues and net revenues.*

OBJ R4.4.2:   (Comprehension) Explain various strategies for maximizing revenue capture and recovery.

IO   *Explain the concept of revenue capture.*

OBJ R4.4.3:   (Comprehension) Explain patient assistance programs and how to access them.

IO   *State sources of information on various patient assistance programs.*

IO   *Explain strategies for cost-justifying the existence of a pharmacy-run patient drug assistance program within a health-system.*

Goal R4.5:   Develop and implement cost reduction strategies.

OBJ R4.5.1:   (Comprehension) Explain societal forces that influence rising costs for medications and the provision of pharmacy services.

OBJ R4.5.2:   (Synthesis) Participate in a cost reduction project.

IO   *Explain the pharmacy department's role in resource utilization throughout the organization.*

IO   *Summarize the literature on the value of clinical pharmacists in managing the total cost of care.*

IO   *Explain a proactive approach to monitoring drug expense.*

IO   *Explain strategies for minimizing the cost of pharmaceutical waste.*

IO   *Identify operational and medication-use cost reduction opportunities in the pharmacy department.*

Goal R4.6:   Coordinate the pharmacy supply chain management process.

OBJ R4.6.1:   (Synthesis) Participate in the process of negotiating contracts with vendors.

IO   *Explain the relationships between the manufacturers of medications, group purchasing organizations (GPOs), wholesalers, and pharmacy departments.*

IO   *Explain laws and rules related to "own use" purchasing contracts.*

IO   *Explain the concept of bundling in relative to contracting.*

IO   *Explain the concept of tiers.*

IO   *Explain the concept of contract rebates.*

IO   *Explain the concept of market share.*

IO   *Explain the concept of chargebacks.*

IO   *Explain the typical bidding process for the purchase of pharmaceuticals.*
IO   *Explain the importance of effective contract analysis.*
IO   *Explain methods that group purchasing organizations use to evaluate multi-source drugs and vendor bid responses.*

OBJ R4.6.2:   (Comprehension) Explain strategies for ensuring the integrity of the supply chain.

IO   *Explain how the counterfeiting of medications is achieved and strategies for preventing counterfeited medications in the U.S. drug supply.*
IO   *Explain the meaning of the term "pedigree" as it relates to medications.*
IO   *Explain processes by which medications in U.S. appear on the black market.*
IO   *Explain current methods for detecting drug diversion in health systems.*

OBJ R4.6.3:   (Evaluation) Based on an assessment of the adequacy of the pharmacy's current system for inventory control including methods of setting inventory goals, accuracy in the receipt process, achieving higher turnover rates, handling return of merchandise, and drug recalls, make any needed recommendations for improvement.

IO   *Explain the principles of inventory control, including cycle counts, audits, physical inventory, turnover rate, and days-on-hand.*
IO   *Compare and contrast various software programs and technologies used to support inventory control systems.*
IO   *Explain the characteristics of an effective drug recall policy and procedure for pharmaceuticals and drug samples.*
IO   *Explain the pharmaceutical return process.*

OBJ R4.6.4   (Evaluation) Based on an assessment of the pharmacy's policies and procedures for the disposal of drugs, make any needed recommendations for improvement.

IO   *Explain issues involved in the disposal of drugs.*

Outcome R5: *Leverage technology and automated systems to optimize the medication-use system.*

Goal R5.1:   Design a plan that will maximize the safe and effective use of information technology and automated systems.

OBJ R5.1.1:   (Comprehension) Explain pharmacy management responsibilities relating to information systems and technology.

IO   *Explain the role of the pharmacy department director in overseeing the full range of job responsibilities and tasks involved in automating or updating information systems used in a health system's medication-use process.*
IO   *Explain the responsibilities of a pharmacy informatics manager.*
IO   *Explain how to work with software and hardware suppliers in creating and implementing a plan for downtime procedures.*
IO   *Explain the roles of various health-hospital personnel in handling maintenance procedures and documentation of that process.*

OBJ R5.1.2: (Comprehension) Explain the importance of ensuring that information systems and data sources are integrated across the health system to facilitate appropriate medication use.

IO   *Explain the types of information that pharmacy automation and information systems communicate between one another.*

IO   *Explain the difference between interfaced and integrated systems.*

IO   *Explain the pros and cons of interfacing versus integration.*

IO   *Explain the characteristics of a good interface system.*

IO   *Explain the components of an integrated patient, medication, and evidence-based resources information system and how the components must be linked to each other to be defined as integrated (as opposed to cobbled).*

IO   *Explain the principles of a unit dose distribution system and methods for maintaining these principles in an automated medication-use system.*

IO   *Explain the potential for error when using "stand-alone" systems or when a system is not fully integrated with the organization's primary information system.*

IO   *Explain how the current drug distribution systems in one's organization are supported by information systems (software, interfaces, etc.).*

IO   *Explain why the IOM Report and other major patient safety advocates endorse the use of computerized prescriber order-entry (CPOE) systems.*

IO   *Explain why, if a CPOE system that incorporates the pharmacy's information system is not operational, a pharmacy computerized order entry system should be in place.*

OBJ R5.1.3: (Comprehension) Explain advances and limitations in technology, hardware and software available to pharmacists and other healthcare professionals in the pursuit of improving patient care.

IO   *Explain critical factors for assessing the functions, benefits, and constraints relative to safety and effectiveness of available technology and automation systems.*

IO   *Explain the relative effectiveness of the following automated systems in terms of their ability to reduce medication errors: centralized pharmacy dispensing robotics, centralized carousel dispensing technology, unit based automated dispensing cabinets, CPOE, bar code medication administration (BCMA), and "smart" IV infusion pump technology.*

IO   *Explain new sources of medication error that may follow technology implementation.*

IO   *Explain mechanisms, techniques and strategies of clinical decision support for pharmacists that can improve the safety and cost-effectiveness of patient care.*

IO   *Explain the characteristics of an effective program of alerts for a medication order entry system.*

IO   *State sources of information on emerging technology and automation systems for the tasks of the medication-use system.*

      IO   *Explain developing technology to assist in the delivery and monitoring of patient care in a virtual world.*

OBJ R5.1.4: (Evaluation) Based on one's own evaluation of the pharmacy's current automation and technology systems plan, make any needed recommendations for improvement.

OBJ R5.1.5: (Comprehension) Explain the importance of developing a long-range pharmacy information technology and automation plan that fits with the health system's plan.

Goal R5.2: Understand how to develop a plan for the implementation of new technology and automation systems.

OBJ R5.2.1: (Comprehension) Explain the components of a project plan for the implementation of new technology and automation systems.

      IO   *Explain the various disciplines that are stakeholders when implementing a new technology or automated system.*

      IO   *Explain components of an effective downtime procedure for technology and automation systems.*

      IO   *Explain how to create and implement a technology or automation system training program.*

      IO   *Explain the health system's policies and procedures governing the use of technology and automation systems.*

      IO   *Explain strategies for managing system technology and automation upgrades.*

      IO   *Explain strategies for implementing new functionality for a currently live system.*

OBJ R5.2.2: (Comprehension) Explain a systematic approach for identifying the resources that would be needed to design, build, validate, and implement a specific piece of new technology or automation system.

Goal R5.3: Develop procedures for the day-to-day management of technology and automated systems.

OBJ R5.3.1: (Comprehension) Explain how to maintain effective liaisons between the pharmacy department and information technology staff and other health care disciplines to support medication use.

      IO   *Explain the value of good peer relationships in the achievement of informatics projects.*

      IO   *Explain the health system's information systems organization and the links/matrix with pharmacy informatics professionals.*

      IO   *Explain differences in the approach to the resolution of information flow problems between clinicians and information technology professionals.*

OBJ R5.3.2: (Evaluation) Assess current policies and procedures for a particular piece of technology or automated system against current best practices and make recommendations for needed improvement.

      IO   *Explain the depth of contingency planning for the medication-use system that would be considered adequate.*

Outcome R6: ***Demonstrate personal leadership qualities and business acumen essential to operate effectively within the health system and advance the profession and practice of pharmacy.***

Goal R6.1: Demonstrate the personal leadership qualities and commitments necessary to advance the profession of pharmacy.

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.

IO *Explain the systematic process by which professionals pursue expertise.*
IO *Explain the role of formal self-assessment tools.*
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 *Describe positive and negative attributes of various journals and online resources pertinent to pharmacy administration.*
IO *Describe push news services one may subscribe to in order to stay current in health care management and leadership topics.*
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: (Organization) Demonstrate sensitivity to the perspective of the patient, caregiver, or health care colleague in all communications.

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.*
IO *Explain the importance of adjusting one's communications for the specific category of health professional (e.g., nurses, physicians, respiratory therapist, etc.).*

OBJ R6.1.3: (Organization) Demonstrate respect for differences of opinion.

IO *Explain the importance of including people with differing opinions in organizational and departmental planning.*
IO *Explain the importance of being open to differences of opinion.*
IO *Explain strategies for listening to people who have different opinions.*

OBJ R6.1.4: (Characterization) Demonstrate enthusiasm and passion for the profession of pharmacy.

OBJ R6.1.5: (Application) Establish sustained active participation in relevant professional associations.

> *IO*   *List those professional associations with relevance to the practice of management in pharmacy.*
>
> *IO*   *Explain the importance of creating a personal vision of professional organizational involvement and of determining the necessary steps to achieving that involvement.*

OBJ R6.1.6: (Application) Use listening skills effectively in performing job functions.

> *IO*   *Explain the reasons excellent listening skills are a characteristic of effective leaders.*
>
> *IO*   *Explain the function of reading written communications as a form of listening in the leadership role.*
>
> *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 R6.1.7: (Synthesis) Devise an effective plan for balancing professional and personal life.

> *IO*   *Explain the importance of balancing professional and personal life.*
>
> *IO*   *Explain potential negative consequences of failure to achieve balance in professional and personal life.*
>
> *IO*   *Explain various approaches advocated for achieving balance in one's life.*
>
> *IO*   *Explain the organization's philosophy related to home, family, and work.*

OBJ R6.1.8: (Application) Use time management skills effectively to fulfill practice responsibilities.

> *IO*   *Explain an effective system for the management of one's time in professional practice.*
>
> *IO*   *Explain strategies for preventing procrastination.*
>
> *IO*   *Explain the effect of effective time management on the reduction of stress.*
>
> *IO*   *Explain the importance in time management of prioritizing according to level of importance and rapid adaptation to change.*

OBJ R6.1.9: (Characterization) Evidence integrity in professional relationships and actions.

> *IO*   *Explain ethical dilemmas that may confront the pharmacy leader.*
>
> *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 Code of Ethics for Pharmacists.*

OBJ R6.1.10: (Characterization) Consistently use good judgment in the conduct of professional relationships.

> *IO*   *Explain the types of situations that can lead one to use poor judgment in the conduct of a professional relationship.*

OBJ R6.1.11: (Synthesis) Create a personal vision statement that reflects commitment to the advancement of the profession of pharmacy.

> *IO*   *Explain the contents of a personal vision statement.*
>
> *IO*   *For one's own personal vision statement, explain actions that would be required of one to attain the vision.*
>
> *IO*   *Explain the impact on one's own vision statement if it is not consistent with the vision of the organization.*

OBJ R6.1.12: (Evaluation) Accurately assess the level of one's emotional intelligence.

> *IO*   *Explain the meaning of the term "emotional intelligence."*
>
> *IO*   *Identify resources for evaluation and interpretation of level of emotional intelligence.*
>
> *IO*   *Explain the use of emotional intelligence in promoting one's strengths and achieving one's goals.*

OBJ R6.1.13: (Comprehension) Explain various leadership styles and when each is appropriate to use.

> *IO*   *Explain how an effective leaders tailors his/her management style to specific situations and individuals.*
>
> *IO*   *Explain the importance of utilizing flexibility in management style.*

Goal R6.2:   Make effective management decisions.

OBJ R6.2.1: (Synthesis) Utilize a systematic approach to making management decisions.

> *IO*   *Explain the principles of good decision-making.*
>
> *IO*   *Explain the role of risk-taking in effective decision-making.*
>
> *IO*   *Explain the application of management reports that are utilized to good effect in the organization.*

OBJ R6.2.2: (Evaluation) Make departmental decisions that align with the organization's goals and priorities.

> *IO*   *Explain the importance of seeking and considering input from those who will be impacted by the decision.*
>
> *IO*   *Explain the organization's current goals and priorities.*

Goal R6.3:   Demonstrate business skills required to advance the practice of pharmacy.

OBJ R6.3.1: (Synthesis) Speak clearly and distinctly in grammatically correct English at the level of complexity appropriate for the intended audience.

OBJ R6.3.2: (Application) Use correct grammar, punctuation, spelling, style, and formatting conventions in preparing all written communications.

OBJ R6.3.3: (Synthesis) Contribute to the development of a business plan for a new or enhanced pharmacy service or program.

> *IO*   *Accurately identify unmet customer (i.e., patient, physicians, and other health care providers) needs.*
>
> *IO*   *Explain the organization's desired format for a proposal for a new or enhanced pharmacy service.*
>
> *IO*   *Explain the components of a new service (e.g., disease state management program).*
>
> *IO*   *Explain the role of other healthcare providers in meeting the needs of patients involved in a new service (e.g., disease state management programs).*
>
> *IO*   *Explain how to identify the stakeholders for a specific proposal.*

      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   *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.*

OBJ R6.3.4:   (Application) Use effective negotiation skills to resolve conflicts.

      IO   *Explain how negotiation skills are employed in human resource management situations.*

      IO   *Explain specific negotiation techniques that are useful in contract negotiations.*

OBJ R6.3.5:   (Synthesis) Effectively lead committees including the conduct of meetings.

      IO   *Explain strategies for effectively chairing a committee.*

      IO   *Explain the role of a committee chair versus participant in terms of facilitating discussion and ensuring committee member participation and active involvement.*

OBJ R6.3.6:   (Synthesis) Demonstrate effective delegation strategies for accomplishing one's job.

      IO   *Explain various strategies for delegating work.*

Goal R6.4:   Demonstrate political skills necessary to advance the practice of pharmacy.

OBJ R6.4.1:   (Analysis) When confronted with a barrier to the accomplishment of a particular project, analyze the organizational environment, including its structure, network of resources, and politics, to determine a strategy for achieving success.

      IO   *Explain the health system's organizational structure including the function of each of its departments and key individuals.*

      IO   *Explain the importance of effective networking in barrier removal.*

      IO   *Explain how to identify key stakeholders of a given project.*

      IO   *Explain the importance of persuasion as a skill of effective leaders.*

      IO   *Compare and contrast the types of persuasive arguments that are potentially effective with customers, pharmacists, health care providers, health-system executives, and decision-makers outside of the health system.*

      IO   *Identify formal and informal medical staff leaders and how they can help achieve your goal.*

OBJ R6.4.2:   (Analysis) Determine senior administrator (e.g., CEO, COO, CFO) expectations of the pharmacy's leaders.

      IO   *Explain sources of information that can be used to determine administrator expectations.*

| | *IO* | *Explain effective relationship-building strategies to maximize success in working with senior leadership.* |

OBJ R6.4.3: (Synthesis) Create an effective professional network.
    IO   Explain formal and informal techniques for networking.

OBJ R6.4.4: (Comprehension) Explain the role and importance of pharmacist active engagement in the political and legislative process.
    IO   Explain current national health care policy issues.
    IO   Explain current regional health care policy issues.
    IO   Explain current local health care policy issues.

OBJ R6.4.5: (Analysis) Identify health system committees where pharmacist participation is essential.

Goal 6.5:   Design, execute, and report results of a project related to pharmacy management.

OBJ R6.5.1: (Analysis) Identify potential management-related issues that need to be studied.
    IO   Identify sources of inspiration for determining management issues to be studied.
    IO   Explain the importance of prioritizing potential issues for study when making a selection.
    IO   Explain the importance of considering the feasibility and scope of a potential project before making a selection.

OBJ R6.5.2: (Application) Use a systematic procedure for performing a comprehensive literature search.
    IO   Describe the steps in conducting a comprehensive literature search.

OBJ R6.5.3: (Analysis) Draw appropriate conclusions based on a summary of a comprehensive literature search.

OBJ R6.5.4: (Synthesis) Generate a research question(s) to be answered by an investigation.

OBJ R6.5.5: (Synthesis) Develop specific aims and design study methods that will answer the question(s) identified.
    IO   Explain the ethics of research on human subjects and the role of the IRB.
    IO   Explain the purpose of courses that provide training in the protection of human research subjects.
    IO   Identify the pros and cons of several study designs for a particular issue.
    IO   Identify the characteristics of an appropriately narrow aim for a study of a management issue.

OBJ R6.5.6: (Application) Use a systematic procedure to collect and analyze data.

OBJ R6.5.7: (Evaluation) Draw valid conclusions through evaluation of the data.
    IO   Explain the importance of drawing conclusions based only on data collected.
    IO   Explain the importance of having conclusions precisely match the aim of a study.

OBJ R6.5.8: (Synthesis) Use effective communication skills to prepare the results and recommendations of a project related to pharmacy management for publication.

OBJ R6.5.9:   (Synthesis) Use effective presentation skills to orally report the results of a project related to pharmacy management at a professional conference.

Goal 6.6:   Assume responsibility for the management of the pharmacy.

OBJ R6.6.1:   (Synthesis) Successfully perform all management functions for a designated area of pharmacy services.

IO   Explain the principle of span of control and how it affects the achievement of the pharmacy mission.

IO   Explain the principles of empowerment and delegation and how they affect the achievement of goals in organizations.

IO   Explain the use of available data in making management decisions.

Elective Educational Outcomes, Goals, and Objectives for Postgraduate Year Two (PGY2) Health-System Pharmacy Administration Residencies

Outcome E1: Utilize added knowledge and skills to design, implement, and manage a safe and effective medication-use system.

Goal E1.1: Lead departmental teams in the design, implementation, and/or enhancement of a health system's medication-use process.

    OBJ E1.1.1: (Synthesis) Develop a systematic plan for implementing needed changes.

        IO Explain the roles of communication and education in implementing change.

    OBJ E1.1.2: (Synthesis) Implement a change in the medication-use system according to the plan.

        IO Explain the role of policies and procedures in the implementation of changes in the medication-use system.

    OBJ E1.1.3: (Evaluation) Assess the impact of the implemented change.

        IO Explain what to look for when assessing the effects of changes in the medication-use system.

        IO Explain the importance of utilizing a monitoring plan to sustain a desired change.

    OBJ E1.1.4: (Analysis) Identify organizational needs resulting from a change in the organization's medication-use system.

Goal E1.2: Manage a pharmacy's direct patient care services.

    OBJ E1.2.1: (Synthesis) Create a strategy for the implementation of a needed improvement in some aspect of pharmacy's direct patient care services.

    OBJ E1.2.2: (Synthesis) Implement the needed improvement according to the plan.

Goal E1.3: Influence the design of medication administration and documentation systems.

    OBJ E1.3.1: (Evaluation) Based on one's own assessment of the design of the health system's medication administration and documentation systems, identify any needed improvements.

        IO (Comprehension) Explain the principles of safe medication administration.

        IO (Comprehension) Explain the principles governing effective documentation of the administration of medications.

Goal E1.4: Assure pharmacy facilities are planned for safe and effective workflow.

    OBJ E1.4.1: (Comprehension) Explain the steps in the organization's process for facilities design and improvement.

        IO Explain the role of a health care planner in facilities design and improvement.

        IO Explain the role of an architect in facilities design and improvement.

        IO Explain the role of an engineer in facilities design and improvement.

        IO Explain the role of a construction manager in facilities design and improvement.

        IO Explain the role of an interior designer in facilities design and improvement.

OBJ E1.4.2: (Evaluation) Based on one's own comparison of the pharmacy's facilities with contemporary facilities guidelines and regulations, make recommendations for any needed improvements.

    IO   *State resources for facilities design guidelines and regulations.*

Goal E1.5: Design and deliver programs that contribute to public health efforts.

OBJ E1.5.1: (Comprehension) Explain the pharmacist's role in public health, including specific contributions to public health efforts that can be made by health-system pharmacists.

OBJ E1.5.2: (Synthesis) Design and deliver programs for health care consumers that center on disease prevention and wellness promotion.

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

    IO   *Explain the data that would be required to justify a specific 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 E1.5.3: (Synthesis) Participate in the development of organizational plans for emergency preparedness.

    IO   *State the different types of emergencies that would affect the pharmacy.*

    IO   *For each type of emergency, explain the appropriate roles of the pharmacy and individual pharmacists.*

    IO   *Explain the existing health-system emergency preparedness plan.*

Outcome E2: Utilize added knowledge and skills to enable the application of contemporary quality methodology to the management of pharmacy services.

Goal E2.1: Coordinate the health system's medication safety oversight program.

OBJ E2.1.1: (Synthesis) Participate in a systematic assessment of the organization's compliance with best practices for medication-use safety.

    IO   *Explain the standards of practice relevant to medication-use safety.*

    IO   *Explain formal assessment tools for evaluating an organization's culture of safety.*

    IO   *Explain the impact of the organization's culture of safety on its safe medication practice.*

Goal E2.2: Participate in clinical and economic outcomes analyses.

OBJ E2.2.1: (Comprehension) Explain the principles and methodology of prospective clinical, humanistic, and economic outcomes analysis.

    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 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 E2.2.2   (Comprehension) Explain the principles and methodology of retrospective clinical, humanistic, and economic outcomes analysis.

      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.*

OBJ E2.2.3:   (Evaluation) Contribute to a retrospective clinical or economic outcomes analysis.

Outcome E3: Utilize added knowledge and skills to lead and manage the health system pharmacy human resources.

Goal E3.1:   Develop an overall plan for the organization and staffing of the pharmacy.

    OBJ E3.1.1:   (Evaluation) Develop a staffing plan that would meet the pharmacy's future needs.

      IO   *Explain the factors to consider when projecting future pharmacy manpower needs.*

Goal E3.2:   Conduct recruitment and hiring activities.

    OBJ E3.2.1:   (Synthesis) Participate in the development or enhancement of a long-term pharmacy workforce plan.

      IO   *Explain the impact of the role of the pharmacists in your organization on workforce planning.*

      IO   *Explain the role of partnering with external organizations on workforce planning.*

      IO   *Explain the role of organizational image on the role of workforce planning.*

IO Explain how skill mix fits into workforce planning.

Goal E3.3: Design and conduct departmental training and orientation activities for new employees.

  OBJ E3.3.1: (Synthesis) Manage the orientation of a new employee.

    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.

  OBJ E3.3.2: (Evaluation) Utilize the pharmacy department's established process to assess the competence of a new employee.

    IO Explain the concept of competence.
    IO Explain the concept of proficiency.
    IO Explain an effective measure for determining that a new employee is sufficiently trained for his or her position.
    IO Describe the organization's probationary period.

Goal E3.4: Design and implement plans for maximizing employee engagement and enhancing employee satisfaction and retention.

  OBJ E3.4.1: (Comprehension) Explain the process of conducting a compensation and benefits analysis in collaboration with human resources management staff.

    IO Explain the components of a compensation and benefits analysis.
    IO Explain the political concerns when doing a compensation analysis.
    IO Identify internal and external resources that are helpful when conducting a compensation analysis.

Goal E3.5: Understand how to establish a program for staff and leadership development.

  OBJ E3.5.1: (Comprehension) Explain the components of an effective staff development program.

    IO Explain the functions of staff development.
    IO Explain the requirements of health-system accrediting bodies for staff development plans.
    IO Explain the responsibility of the pharmacy and of the individual in staff development.
    IO Explain methods for efining the training needs of staff.
    IO Explain organizational resources available to assist with staff and leadership development.

  OBJ E3.5.2: (Comprehension) Explain approaches to the development of leaders within the pharmacy department.

    IO Explain how to assess the talent of departmental staff.

  OBJ E3.5.3: (Comprehension) Explain the components of a career ladder.

  OBJ E3.5.4: (Comprehension) Explain the role of succession planning in enabling a consistent and growing level of service.

    IO Explain the pharmacy director's role in succession planning.

Outcome E4: Utilize added knowledge and skills to manage the health system pharmacy's financial performance within the context of the broader health system.

Goal E4.1: Justify new services using return on investment (ROI) analyses.

OBJ E4.1.1: (Synthesis) Develop an appropriate financial management plan for a selected aspect of a pharmacy plan.
- *IO*   *Explain the components of a financial management plan.*

Goal E4.2: Understand how to oversee the pharmacy revenue cycle.
OBJ E4.2.1: (Comprehension) Explain the organization's billing cycle.

Goal E4.3: Coordinate the pharmacy supply chain management process.
OBJ E4.3.1: (Evaluation) Use effective strategies to maximize the performance of a specific contract.
- *IO*   *Explain reasons for inconsistency in the accuracy of drug contract price documentation throughout the supply chain for medications.*
- *IO*   *Explain systems for monitoring vendor compliance with contract terms.*
- *IO*   *Explain manual and automated systems for assuring the correct pharmaceutical contract prices are invoiced and paid.*
- *IO*   *Summarize strategies for continuously identifying contract savings opportunities and for assuring that contract savings and terms are maximized.*
- *IO*   *Explain a pharmaceutical manufacturer's "unable to supply" credit request process.*

OBJ E4.3.2: (Synthesis) Employ an effective system for purchasing pharmaceuticals.
- *IO*   *Explain the "order-to-pay" process for pharmaceutical procurement.*
- *IO*   *Compare and contrast various software programs and technologies used to support purchasing systems.*
- *IO*   *Describe the department's loan/borrow system.*
- *IO*   *Explain the organization's emergency drug procurement systems.*

Outcome E5: ***Utilize added knowledge and skills to leverage technology and automated systems to optimize the medication-use system.***

Goal E5.1: Measure the outcomes associated with technology and automated systems implementation.
OBJ E5.1.1: (Synthesis) Create a plan for measuring the outcomes of implementing new technology or automated system.
- *IO*   *Explain financial (including cost-benefit analysis), clinical, regulatory, user satisfaction and patient safety performance indicators that will satisfactorily measure the effects of implementing new automation and information technology.*
- *IO*   *Compare strategies for measuring the impact of technology on medication error and adverse drug event rates.*

Goal E5.2: Develop sound assessment principles for the evaluation and selection of technology.
OBJ E5.2.1: (Evaluation) Based on one's own evaluation of an existing request for proposal (RFP) for technology and automation systems, make any needed recommendations for improvement.
- *IO*   *Explain terms and concepts used in the selection and evaluation of pharmacy technology and automation systems.*

IO   Explain the characteristics of safe and effective utilization of technology and automation systems in the medication-use process.
IO   Explain typical components of a technology or automation systems RFP.
IO   Explain the categories for which selection criteria should be developed for a technology or automation systems RFP.
IO   Explain typical criteria for software functionality.
IO   Explain typical criteria for financial analysis of an RFP.
IO   Explain typical criteria for technical requirements.
IO   Explain typical criteria for safety.
IO   Explain typical criteria for evaluating vendor qualifications.

Outcome E6:   *Utilize added personal leadership qualities and business acumen essential to operate effectively within the health system and advance the profession and practice of pharmacy.*

Goal E6.1:   Demonstrate the personal leadership qualities and commitments necessary to advance the profession of pharmacy.

OBJ E6.1.1:   (Synthesis) Capitalize on personal skills and interests to offer community service.

IO   List several community service organizations in one's area.
IO   Explain for a couple of the above organizations the potential match between skills and knowledge needs of the organization and one's skills and knowledge.

Goal E6.2:   Make effective management decisions.

OBJ E6.2.1:   (Evaluation) Assess a business decision for its conformance with the health system's corporate compliance policy.

IO   Explain the organization's corporate compliance policy.
IO   Explain the role of the health system's corporate compliance officer.

Goal E6.3:   Demonstrate business skills required to advance the practice of pharmacy.

OBJ E6.3.1:   (Synthesis) Contribute to the department's planning process including review and/or revision of the department's vision and mission statements.

IO   Explain the purpose of departmental vision and mission statements.
IO   Explain the contents of departmental vision and mission statements.
IO   Explain who should be involved in the writing of departmental vision and mission statements.
IO   Explain typical approvals required of pharmacy vision and mission statements.

OBJ E6.3.2:   (Synthesis) Effectively achieve a change in practice among health system staff through application of the principles of change management.

IO   Explain the principles of change management.

OBJ E6.3.3:   (Synthesis) Participate in the negotiation and execution of a business agreement.

IO   Explain how the particular negotiation techniques employed when negotiating a business agreement may affect the final contract.

OBJ E6.3.4:   (Synthesis) Proactively and effectively market the value of pharmacy services throughout the health system.

          IO   *Explain the concept of marketing.*
          IO   *Explain various marketing methods.*
          IO   *Explain factors to consider when developing a marketing approach for the value of pharmacists' contributions within the health system.*

OBJ E6.3.5:   (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.

          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.*
          IO   *Explain the role of the executive summary in conveying information to decision-makers.*
          IO   *Explain an appropriate format for an executive summary.*
          IO   *Explain the importance of researching the preferred format for a report to a given decision-maker.*

Goal E6.4:   Demonstrate political skills necessary to advance the practice of pharmacy.

OBJ R6.4.1:   (Characterization) Consistently exhibit executive presence.

          IO   *Explain appropriate dress for executive presence.*
          IO   *Explain the importance of using appropriate social skills.*
          IO   *Explain the principles of business etiquette.*

Outcome E7: Demonstrate skills required to function in an academic setting.

Goal E7.1   Understand faculty roles and responsibilities.

OBJ E7.1.1   (Comprehension) Explain variations in the expectations of different colleges/schools of pharmacy for teaching, practice, research, and service.

          IO   *Discuss how the different missions of public versus private colleges/schools of pharmacy can impact the role of faculty members.*

> IO   *Discuss maintaining a balance between teaching, practice, research and service.*
>
> IO   *Discuss the relationships between scholarly activity and teaching, practice, research and service.*

OBJ E7.1.2   (Analysis) Explain the role and influence of faculty in the academic environment.

> IO   *Explain the responsibilities of faculty in governance structure (e.g. the faculty senate, committee service).*
>
> IO   *Describe the responsibilities of faculty (e.g. curriculum development and committee service) related to teaching, practice, research, and service roles.*

OBJ E7.1.3   (Comprehension) Describe the academic environment.

> IO   *Describe how the decisions by university and college administration impact the faculty.*
>
> IO   *Discuss outside forces (e.g. change in the profession, funding source, accreditation requirements) that impact administrator and faculty roles.*

OBJ E7.1.4   (Comprehension) Describe the types and ranks of faculty appointments.

> IO   *Explain the various types of appointments (e.g. non-tenure, tenure-track, and tenured faculty).*
>
> IO   *Differentiate among the various ranks of faculty (e.g. instructor, assistant professor, associate professor, full professor).*
>
> IO   *Discuss the role and implications of part-time and adjunct faculty as schools continue to expand and faculty shortages occur.*

OBJ E7.1.5   (Comprehension) Discuss the promotion and tenure process for each type of appointment.

> IO   *Identify the types of activities that are considered in the promotion process.*
>
> IO   *Identify the types of activities that are considered for tenure.*

OBJ E7.1.6   (Application) Identify resources available to help develop academic skills.

> IO   *Explain the role of academic-related professional organizations (e.g. AACP) in faculty professional development.*
>
> IO   *Identify resources to help develop teaching skills and a teaching philosophy.*

OBJ E7.1.7   (Comprehension) Explain the characteristics of a typical affiliation agreement between a college of pharmacy and a practice site (e.g., health system, hospital, clinic, retail pharmacy).

> IO   *Explain how the political environments of either a college or a practice site may affect the other.*

Goal E7.2   Exercise teaching skills essential to pharmacy faculty.

OBJ E7.2.1   (Synthesis) Develop an instructional design for a class session, module, or course.

> IO   *Construct a student-centered syllabus.*
>
> IO   *Construct educational objectives for a class session, module, or course that is appropriate to the audience.*

IO   Identify appropriate instructional strategies for the class session, module, or course to achieve the objectives.

IO   Consider assessment tools that measure student achievement of the educational objectives.

OBJ E7.2.2   (Synthesis) Prepare and deliver didactic instruction on a topic relevant to the specialized area of pharmacy residency training.

IO   Identify educational technology that could be used for a class session, module, or course (e.g., streaming media, course management software, audience response systems).

IO   Create instructional materials appropriate for the topic and audience.

IO   Identify strategies to deal with difficult learners.

IO   Given feedback from teaching evaluations (e.g. student and or peer), devise a plan to incorporate improvements in future instruction.

OBJ E7.2.3   (Application) Develop and deliver cases for workshops and exercises for laboratory experiences.

IO   Identify the appropriate level of case-based teachings for small group instruction.

IO   Identify appropriate exercises for laboratory experiences.

IO   Provide appropriate and timely feedback to improve performance.

OBJ E7.2.4   (Application) Serve as a preceptor or co-preceptor utilizing the four roles employed in practice-based teaching (direct instruction, modeling, coaching and facilitation).

IO   Assess the learner's skill level to determine the appropriate preceptor strategy for providing practice-based teaching.

IO   Given performance-based criteria, identify ways to provide constructive feedback to learners.

IO   Develop strategies to promote professional behavior.

IO   Identify strategies to deal with difficult learners in the practice setting.

IO   Given a diverse learner population, identify strategies to interact with all groups with equity and respect.

OBJ E7.2.5   (Analysis) Develop a teaching experience for a practice setting (e.g., introductory or advanced pharmacy experience).

IO   Create educational goals and objectives to be achieved.

IO   Develop activities that will allow achievement of identified educational goals and objectives.

IO   Identify how and when feedback should be provided.

IO   Identify other preceptors for the experience, if appropriate.

IO   Determine training that might be needed for the preceptors to deliver student education.

IO   Identify potential challenges of precepting and providing patient care services simultaneously.

OBJ E7.2.6   (Synthesis) Design an assessment strategy that appropriately measures the specified educational objectives for the class session, module, course, or rotation.

IO   Identify appropriate techniques for assessing learning outcomes in various educational settings [e.g., written examinations, oral examinations,

practical examinations, Objective Structured Clinical Examination (OSCE)].

IO   *Develop examination questions to assess the knowledge, skills, attitudes and behaviors that are appropriate to the learner's level and topic.*

IO   *Discuss the various methods for administering examination questions (e.g., computerized testing, paper testing).*

OBJ E7.2.7   (Evaluation) Create a teaching portfolio.

IO   *Define the concept of a teaching portfolio and describe its primary purpose*

IO   *Outline the steps in building a teaching portfolio.*

IO   *Develop a personal teaching philosophy to guide one's teaching efforts and facilitate student learning.*

OBJ E7.2.8   (Evaluation) Compare and contrast methods to prevent and respond to academic and profession dishonesty.

IO   *Evaluate physical and attitudinal methods to prevent academic dishonesty.*

IO   *Discuss methods of responding to incidents of academic dishonesty.*

IO   *Discuss the role of academic honor committees in cases of academic dishonesty.*

IO   *Identify examples and methods to address unprofessional behavior in learners.*

OBJ E7.2.9   (Comprehension) Explain the relevance of copyright laws to developing teaching materials.

IO   *Discuss copyright regulations as related to reproducing materials for teaching purposes.*

IO   *Discuss copyright regulations as related to linking and citing on-line materials.*

The effective date for implementation of these educational outcomes, goals and objectives is commencing with the entering resident class for 2008.