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Mission: University of Arizona Medical Center-South Campus Pharmacy mission is the provision of pharmaceutical care, through participation of the medical team, to optimize therapeutic outcomes. The mission of University of Arizona Health Network is advancing health and wellness through education, research, and patient care.

Goals:
1. To ensure safe and appropriate drug therapy to our patients.
2. To ensure appropriate monitoring of drug therapy.
3. Analyze and assimilate evidence based approaches to pharmacotherapeutics.
4. Contribute to the therapeutics training for pharmacy students, medical students, medical residents, nursing personnel, and other health care providers.

Accreditation Standards:
The American Society of Health Systems Pharmacists (ASHP) standards for Postgraduate Year One (PGY1) Pharmacy Residency Programs are the accreditation standards by which this program is developed (Appendix 1). More information on accreditation by ASHP can be found online at www.ashp.org.

Program Structure:
Oversight of the PGY1 residency program includes a Residency Advisory Committee (RAC). This committee is made up of the Residency Program Director (RPD) and the preceptors for required rotations. The committee is responsible for the planning, coordination, and oversight of all aspects of the program. If the resident identifies an issue regarding their program, the resident should discuss it with the RPD or a member of RAC. If it requires the committee to act on the issue the resident will be invited to present the issue at the monthly RAC meeting. The committee will review and discuss practice experiences and resident evaluations. For a complete listing of member of the RAC committee see Appendix 4.

Purpose: There are three major purposes of this residency program. These are (1) Prepare pharmacists for inpatient care of psychiatric and medical patients; (2) Prepare pharmacists for leadership and administrative roles within hospital facilities, and (3) Prepare pharmacist for clinical staff pharmacist positions, adjunct faculty positions, or PGY2 training.

Outcomes:
Outcome R1: Manage and improve medication-use process.
Outcome R2: Provide evidence-based, patient-centered medication therapy management with interdisciplinary teams.
Outcome R3: Exercise leadership and practice management skills.
Outcome R4: Demonstrate project management skills.
Outcome R5: Provide medication and practice-related education/training.
Outcome R6: Utilize medical informatics.

Scheduling: Required month-long rotation experiences include orientation, toxicology, adult acute care I/II/III, psychiatry I/II, and emergency medicine. Required longitudinal rotation experiences include research, practice management, and service. Electives are used to customize the residency to specific learning issues. Learning experience scheduling will be made with several factors in mind. Some rotations are scheduled secondary to optimizing the experiences available (i.e. summer time for toxicology rotations as there are more envenomations) and preceptor availability (i.e. known conference attendances and therefore away from the practice site). Also, the resident feedback for learning experiences and strengths and weaknesses will be utilized to develop a customized training plan. Prior to the resident’s arrival they will be asked...
to complete a “Resident Skills Assessment Questionnaire” (See Appendix 5). The schedule will be put together by the Residency Program Director. Any changes or modifications to this schedule will need to be done in agreement with the preceptors, Residency Advisory Committee, and/or the Residency Program Director. An example of a resident schedule can be found in Appendix 6.

**Staffing Requirements:** The resident is expected to work as an inpatient pharmacist to meet their Service Learning Experience requirements. The resident will be scheduled 2 inpatient pharmacy shifts per month to be completed on a Saturday or Sunday. In addition, they may be required to process orders and facilitate patient’s medication needs during their other learning experiences. The purpose of this is to gain experience and improve skills in the medication use process. Understanding the process is an integral part of functioning as a competent pharmacist. See Service Learning Description.

**Professional Meetings:** As part of professional development it is recommended that the resident become involved with different pharmacy organizations. This will enhance leadership skills. The resident is required to attend the Annual Meeting of the Arizona Pharmacy Alliance, ASHP Midyear Clinical Meeting, and the Western States Conference for Pharmacy Residents, Fellows, and Preceptors. Funds are available to offset the travel costs to these meetings.

**Resident Benefits:**

**Time Off**
The resident will be entitled to all benefits provided to full-time, annually-appointed Clinical Assistant I at The University of Arizona. Each resident will be allowed to take up to 22 working days off. Residents will be allowed to use any part of the 22 days of leave for interviews for position of employment, advanced training or professional leave; however, no more than 10 days can be used for vacation. All time away from University Medical Center must be approved by the residency director and rotation preceptor in advance. Residents will not be allowed to take time off the last week of the residency year without special approval. Vacation days not taken before this time will be lost and not reimbursed.

**Travel Allowance**
Each resident will be provided $1750 travel allowance which may be used to attend Western States Conference, ASHP Midyear Clinical Meeting, or one other meeting of the resident’s choice. Time off to attend professional meetings listed above will be considered part of the 22 days for vacation/professional leave.

**Sick Leave**
University policy allows up to one day of sick leave per month of employment. If additional days are needed, they will be deducted from vacation days. There will be no compensation for unused sick leave. It is the desire of the program to assist residents to successfully complete the residency program. If an extended illness or other issue arises, it is possible for the resident to petition the program director and residency advisory committee to consider special arrangements allowing completion.
Resident Policy and Procedure:

Resident Selection:
1.0 Resident candidates will be required to submit a letter of intent, curriculum vitae, transcripts, and 3 letters of recommendation in order to apply for a position.
2.0 Candidates materials will be evaluated and given a score with the highest possible score being 50. Interview preference will be given to those candidates who score above 40 points on the application packet. A minimum GPA of 3.0 in the pharmacy graduate program must be achieved in order to be invited to interview. Once identified they will be asked to come on-site for an interview.
3.0 As part of the interview process, the candidates will meet with the preceptors of the program.
4.0 The candidates will be evaluated using an evaluation template.
5.0 The residency selection committee will discuss the applicants and the candidates will be ranked according to all of the measures. The rank will be submitted to the American Society of Health-System Pharmacists resident matching program.
6.0 Once the resident is matched with the facility the person will complete an application and sign a job description.

Qualifications:
1.0 The resident will be a graduate of an ACPE-accredited Doctor of Pharmacy degree program. Applicants with an ACPE-accredited Bachelor of Science pharmacy degree may be considered on a case-by-case basis, based on experience.
2.0 The applicant must be licensed, or be eligible for licensure, to practice pharmacy in the State of Arizona.
3.0 An Arizona Registered License is to be obtained by August 31 after the start of the residency. If the license is not obtained the resident will be dismissed, unless the Residency Advisory Committee grants an extension.

Duty hour standards:
1.0 Duty hour standards will comply with the Accreditation Council for Graduate Medical Education (ACGME) standards.
2.0 Duty hours will be less than 80 hours per week, averaged over a four-week period.
3.0 Residents will have a minimum of one day free of duty every week (when averaged over four weeks).
4.0 Duty periods will not exceed 16 hours in duration.
5.0 Residents will have at least 10 hours free of duty between scheduled duty periods.
6.0 Residents will not be scheduled for more than six consecutive nights of night float.
7.0 Moonlighting is strongly discouraged due to the standards set forth in the ACGME. If moonlighting occurs and interferes with duties of the residency, corrective action will occur.

Dismissal:
1.0 Each residency year runs from July 1 to June 30. Each resident will receive a certificate upon completion of the residency year and all the requirements of the learning experiences. Failure to complete the program during this timeline will constitute good cause for dismissal from the program. If unusual circumstances exist, a resident may petition the program director and Residency Advisory Committee for an extension of these dates. However, extensions are not guaranteed. Such circumstances may be related to family or personal health issues or a variety of other possibilities. If it is deemed to be in the best interest of the resident and the program, an extension may be granted to allow fulfillment of the time
requirements of the program. This extension would not provide additional funds to the position, so no additional pay would be provided.

2.0 Resident performance will be reviewed and evaluated as outlined in the Residency Learning System (RLS) managed by ASHP.

3.0 The resident may be considered for earlier dismissal if the residency requirements are not being met or violations of human resource policies occur. If termination of employment is necessary, UAMC and UA human resource policies and procedures will be followed and documented.

**Residency Advisory Committee (RAC):** Members of the RAC include preceptors for the required rotations and the Residency Program Director. The purpose of the committee is to be able to communicate issues regarding the residency or resident. The committee will meet at least monthly. These meetings will be used for program planning, discussion of resident progress, changes to schedules, and a forum for the resident to discuss concerns. The resident will present their research proposal to the committee as required by the project learning description.

**Evaluation:**
Resitrak will be used to document resident evaluations. The following 5-point scale has been developed and defined for all preceptors to use during the evaluation process to provide a consistent process.

- **5** – Resident demonstrated EXCELLENT skills in this area; was extremely effective in completing the assignments ABOVE AND BEYOND the minimum requirements.
- **4** – Resident demonstrated VERY GOOD skills in this area; was ABOVE AVERAGE in meeting the requirements of the assignment.
- **3** – Resident demonstrated SATISFACTORY skills in this area; was GENERALLY meeting the requirements.
- **2** – Resident NEEDS some IMPROVEMENT in this area; was SOMEWHAT INEFFECTIVE in meeting the assignment requirements.
- **1** – Resident needs SIGNIFICANT IMPROVEMENT in this area; was INEFFECTIVE in meeting the minimum requirements.

During the summative evaluation, the preceptor will determine whether the resident has completed the rotation satisfactorily and therefore earns a passing evaluation. If the resident does not pass the rotation, he/she may repeat it once more in an attempt to pass. If a resident does not pass 2 rotations he/she will be in danger of being unable to complete the requirements of the residency.

**Evaluation Strategy:**
Formative: Feedback will be given throughout the month by the preceptors or inpatient pharmacists. They will provide feedback about the order-entry and drug preparation processes. A snapshot will be completed at 2 weeks.
Summative: Preceptor will complete at the end of the learning experience
Summative Self-evaluation: Resident will complete at the end of the learning experience.
Preceptor: Resident will complete at end of learning experience
Learning Experience Evaluation: Resident will complete at end of learning experience
Certification

Upon successful completion of the program, an appropriate certificate shall be awarded to the resident by University of Arizona Medical Center, South Campus.

Requirements to receive a Residency Certificate:

1. Meet all ASHP PGY1 Residency Requirements including making sufficient progress towards all the required goals and objectives as evidenced by either satisfactory progress as defined below or achieved being marked for all goals.
   - At midpoint after 6 months of rotations 80% of each goals and objectives evaluated in ResiTrack must be 3, 4 or 5’s.
   - For final evaluation: After midpoint during the last 6 months 80% of the goals and objectives must be 4-5’s
   - If a resident gets a 1 or 2 on an evaluation, the goal must be re-evaluated on a minimum of 1 other further rotation and when the goal is re-evaluated on the next evaluation(s) 80% of the time score has to be 4-5. Score cannot be lower than a 3 to pass on the re-evaluation of the goal. Final evaluation of the core objectives needs to be obtained at a 4-5 level.
   - The above expectations apply for all mandatory and elective rotations.
2. Satisfactory completion of all experiences as evidenced by all required work assigned being completed to the satisfaction of the preceptor.
3. Completion of a residency project with a manuscript that is ready for publication and approved by the Residency Program Director.
4. Compliance with all institutional and departmental policies.
5. Completion of all assignments and projects as defined by the preceptors and residency program director and completion of the following projects listed. See below for further descriptions of each project.
   - One MUE or a Medication Safety Project approved by the Practice Management preceptor
   - One Drug Monograph
   - Completed Resident Notebook
   - Minimum of 2 Journal club presentations
   - Minimum of 2 formal case presentations
   - Formal presentation of a pharmacotherapy topic that includes some controversy
   - Completion of 2 formal CE presentations
     - One ACPE accredited Continuing Education presentation presented within UAMC
     - Second continuing education presentation of the residency project at Western States Conference
6. Participation in the residency evaluation process (self-evaluation, rotation evaluation, preceptor evaluation and preceptor’s resident evaluation)
7. Complete and pass ACLS certification and The University of Arizona Sexual Harassment and FERPA Training Programs. Become CITI certified.
Residency Activity Overview

• Medication Use Evaluation
  o The resident will complete one medication use evaluation during the residency year. This is assigned during the Practice Management longitudinal rotation and may be presented at the Pharmacy and Therapeutics committee. Findings are to be summarized in a written document following standard medical manuscript format (background, methods, results, etc.). The discussion section should include specify recommendations of the most appropriate course of action based on the findings. A Medication Safety Project may be substituted for the MUE if approved by the Practice Management preceptor.

• Drug Monograph
  o The resident will complete one drug monograph during the residency year. This will be assigned during the Practice Management Longitudinal rotation. Drug monographs require review and presentation of primary literature. A written document will be prepared that focuses on the drug’s place in therapy, with a literature supported comparison and analysis of efficacy, safety and cost of the drug and its competitors. An opinion should be outlined with recommendation for formulary status. This monograph may be presented to the P&T Committee.

• Recruitment
  o Residents will assist in the resident recruitment and candidate selection process. This includes attending the COP Residency Display in October and the residency showcase at the ASHP Midyear occurring the first or second week of December. They will also be involved in the interview process by giving tours and eating lunch with the prospective candidates in February.

• Academic Responsibilities
  o Residents will assist with case discussions associated with the therapeutics courses at the College of Pharmacy.
  o Residents will assist in precepting pharmacy students during clerkship rotations.
  o Residents will participate in clinical faculty research as opportunities become available.

• Residency Notebook
  o Residents will be required to maintain a printed or electronic notebook for submission by the end of the residency year. See Guidelines for Residency Notebook for the requirements for this notebook.

• Research Project
  o Residents will complete a research project during the course of a pharmacy practice residency. A final research manuscript is to be submitted to your Project Preceptor by the end of the residency year.
• **BLS and ACLS Certification**
  o Each resident is expected to successfully complete the BLS and ACLS curriculum within the first month of the residency. The goal is to ensure the resident is familiar with and capable of providing BLS and ACLS, in the event of an emergency.

  **Presentation Overview**

• **Journal Club Presentations:**
  o Journal Clubs are held once or twice a month on Wednesday afternoons at University campus. The resident is encouraged to attend as many as possible provided that the timing does not conflict with the current rotation.
  o The resident will formally present two current pharmacotherapy related studies during the Adult Acute Care rotations I and II. The primary goal of journal club is to exercise skills in critical thinking and literature evaluation.

• **Case Presentations:**
  o The resident will formally present two case presentations during the residency year during AAC II and III. The cases presented should revolve around pharmacotherapy topics and include primary literature and be a case in which the resident was directly involved. A handout is required. Patient presentations should be about 20-25 minutes.

• **Three formal presentations by each resident will be conducted during the residency year:**
  o The first presentation should be a pharmacotherapy topic that includes some controversy and/or is a hot topic in pharmacotherapy. This is a 25-30 minute PowerPoint presentation.

  o The second formal presentation is a required ACPE Continuing Education presentation (see included ACPE presentation instructions). This is a 50 minute PowerPoint presentation with a 10 minutes question/answer session and should not just be a review of a disease state. Primary literature is to be used as a guiding force to put this presentation together. This will include a self-evaluation and a formal evaluation.

  o The third formal presentation will be a 10-15 minute Continuing Education presentation of the resident’s residency project. This includes several practice sessions then the formal presentation with feedback/evaluation from preceptors.
Residents have the opportunity to pick an article to present for journal club. Articles should be relatively recent or be a landmark trial. If you want to present a landmark trial, ask a preceptor to approve your article of choice. One week prior to your journal club, make copies of your article and make them available to CSPs, faculty, staff and residents (or you can e-mail a link to a full text article). The following questions are points you may want to address in your journal club time (20-25 minutes):

**Journal, Title, Authors, Funding, Abstract**

1. What is the journal’s reputation? Is it peer-reviewed?
2. Is the title appropriate? Is it unbiased? Does it describe the trial sufficiently?
3. Are the researchers qualified to do the trial? What are their degrees? What institutions/companies are they affiliated with? Are they well published in the area (you may do a literature search if you are not familiar with the topic)? Was a statistician involved?
4. Who funded the trial? How does that affect your conclusions?
5. Is the abstract appropriate? Is it structured or unstructured? Is all of the pertinent patient information included?

**Introduction**

6. Is the introduction appropriate? Did the authors describe all pertinent previous research (you may do a literature search if you are not familiar with the topic)? Did they state why the trial was done?
7. Was the objective or hypothesis clearly stated and appropriate? Does it reflect the methodology?

**Methods**

**Subjects**

8. How many subjects were studied?
9. How many centers were involved?
10. Were the inclusion criteria clearly stated and appropriate? Was the disease defined clearly and appropriately?
11. Were the inclusion and exclusion criteria clearly stated and appropriate? Can you identify why each exclusion criteria was made?
12. How were the subjects recruited? How does that affect the results?
13. Was the protocol approved by an investigational review board?
14. Did the subjects give informed consent?

**Treatment**

15. Were the subjects randomly assigned to groups? Was the randomization truly random?
16. Were the controls appropriate? Did the authors use a placebo control, an active control, or a historical control?
17. Were the doses of the drugs appropriate?
18. Was the design parallel or cross-over? Was a placebo run-in used? If cross-over, was an appropriate was-out period used?
19. Was the study blinded or open label? If blind, who was blinded?

**Measurements**
20. Were the measurements appropriate?
21. Who took the measurements? If multi-center, were steps taken to ensure that the measurements were done similarly? Were those who took the measurements blinded?
22. Was the duration of the trial sufficient?
23. Was compliance assessed?
24. Were the endpoints appropriate? Were surrogate endpoints used?

**Statistics**
25. Was a power analysis done? What p-value was considered statistically significant? What power was used? Did the authors anticipate drop-outs? How many patients were needed for statistical conclusions to be made?
26. Were the statistical test appropriate? How many groups were assigned? Were the data for each endpoint nominal, ordinal, or continuous? Were the data normally distributed or not normally distributed (this is usually not stated)? Refer to a table of statistical tests.
27. Were the statistical tests one-tailed or two-tailed? What does that mean?
28. Was an intention-to-treat or per-protocol analysis done? What does that mean? How does that affect your interpretation of the results?

**Results**
29. Were the groups equally matched after randomization? If not, was one group more likely to do better or worse? Refer to the table of baseline characteristics to assess the success of randomization.
30. Were the results presented clearly and accurately? Were there any table distortions, graph distortions, or statistical distortions?
31. Were all the results presented?
32. Were all drop-outs accounted for?
33. Was this an interim analysis? If so, how does that affect your conclusions?
34. Were subgroup analyses done? Were there enough patients in each subgroup for statistical conclusions to be made? Did the authors state that they were going to do subgroup analyses in the methodology?
35. Were differences statistically significant and/or clinically important?

**Discussion, Conclusions, References**
36. Did the authors compare the results of the trial to the results of similar previous trials? Did they explain any differences that were found?
37. Did the authors discuss the limitations of the trial? Did they explain how the limitations might have affected the results?
38. Were valid conclusions drawn? Were they based on the objective, methods and results?
39. Was the trial referenced with appropriate literature? Did the authors include all pertinent previous trials? Are the references up-to-date? Did the authors cite themselves excessively?
40. Who should the results be applied to? If the trial has internal validity, the inclusion and exclusion criteria will determine its external validity or generalizability (i.e., who the results should be applied to.)
Pharmacy Orientation Checklist

Name: ________________________  Employee No. __________________
Start Date: ___________________
Supervisor: ____________________  Trainer: ______________________

Upon Arrival

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### Workplace Orientation Briefing

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Newcomer’s Signature: ________________________________ Date: __________________

Supervisor’s Signature: ________________________________ Date: __________________
ACPE Continuing Education – Resident Presentation Requirements

• To be completed through Lynne Mascarella, Director of Continuing Education, at the UA COP.

• A minimum of six (6) weeks (preferably 8 weeks) prior to each CE program, the following items must be submitted to Lynne Mascarella at the College of Pharmacy (Drachman Hall, Room #B306K or Continuing Education mail basket near Dean’s Office), phone 626-3106. The preferred method of submitting this information is via email. The address for submission is continuinged@pharmacy.arizona.edu.

  o Program title
  o Date, time and location
  o Speaker’s name and title
  o Speaker’s CV
  o At least three (3) specific and measurable objectives for the program
  o Disclosure statement completed, signed and returned to CE Office.
  o Descriptive needs assessment for determination of topic selected (i.e., literature search, perceived gaps in knowledge, hospital/patient data, etc.)
  o Description of methods planned to disseminate the information (lecture plus cases, audience response, worksheet, other active learning strategies)
  o Description of proposed plan for assessment (pre/post test, testing via audience response system, etc)
  o Length of presentation (30 minutes, 45 minutes)

• CE staff will use this information for submission to ACPE and to produce an announcement.

• At least one (1) week prior (preferably 2 weeks) to the presentation, the following should be submitted:

  o Copies of PowerPoint slides and any other handout materials (Note: presentation must be a minimum of 50 minutes which can include discussion and questions). Slides should have been reviewed and approved by faculty mentor prior to submission.
  o Slides must include an acknowledgement of disclosure (e.g., Dr. X has no financial interest, arrangement, or affiliation that would constitute a conflict of interest; Dr. Y is a consultant for First Data Bank and Pfizer)
  o A minimum of 5 questions covering the specified objectives and other important points to be used by participants for self-assessment. Correct responses including descriptive rationale are to be provided to participants either as part of the program or after the fact as a handout. An audience response system is available for use through the CE Office. Note: ACPE requires that there be opportunities for self-assessment in all programming.
  o The CE Office will review the presentation materials for presence of required ACPE elements. Once approved, copies of the slide handouts and the self-assessment are to be copied presenter and provided to the audience.
• Standardized evaluation forms and a sign-in list will be prepared by CE Office and should be obtained by presenter prior to the presentation. **The presenter is then responsible for returning the completed evaluation forms and attendance records to the CE office.** A transcript of credit will be prepared and emailed to each participant at the end of the series of resident presentations.

• You are required to give one (1) formal ACPE CE presentation during your residency.
APPENDIX 1

ASHP ACCREDITATION STANDARD
FOR POSTGRADUATE YEAR ONE (PGY1)
PHARMACY RESIDENCY PROGRAMS
Part I - Introduction
Definition: Postgraduate year one of pharmacy residency training is an organized, directed, accredited program that builds upon knowledge, skills, attitudes, and abilities gained from an accredited professional pharmacy degree program. The first-year residency program enhances general competencies in managing medication-use systems and supports optimal medication therapy outcomes for patients with a broad range of disease states.
Purpose of this Standard: The ASHP Accreditation Standard for Postgraduate Year One (PGY1) Pharmacy Residency Programs (hereinafter the Standard) establishes criteria for systematic training of pharmacists for the purpose of achieving professional competence in the delivery of patient-centered care and in pharmacy operational services. Its contents delineate the requirements for ASHP-accreditation of PGY1 residencies that build upon the educational foundation provided through completion of an accredited Doctor of Pharmacy degree program. Completion of a PGY1 residency serves as the prerequisite for postgraduate year two (PGY2) residencies and fellowships. Purpose of PGY1 Residencies: Residents in PGY1 residency programs are provided the opportunity to accelerate their growth beyond entry-level professional competence in patient-centered care and in pharmacy operational services, and to further the development of leadership skills that can be applied in any position and in any practice setting. PGY1 residents acquire substantial knowledge required for skillful problem solving, refine their problem-solving strategies, strengthen their professional values and attitudes, and advance the growth of their clinical judgment. The instructional emphasis is on the progressive development of clinical judgment, a process begun in the advanced pharmacy practice experiences (APPE or clerkships) of the professional school years but requiring further extensive practice, self-reflection, and shaping of decision-making skills fostered by feedback on performance. The residency year provides a fertile environment for accelerating growth beyond entry-level professional competence through supervised practice under the guidance of model practitioners. Specifically, residents will be held responsible and accountable for acquiring these outcome competencies: managing and improving the medication-use process; providing evidence-based, patient-centered medication therapy management with interdisciplinary teams; exercising leadership and practice management; demonstrating project management skills; providing medication and practice-related education/training; and utilizing medical informatics.
Organization and Application of the Standard: Seven guiding principles provide the framework for the Standard. Each principle is restated at the beginning of the applicable segment of the Standard that outlines the specific requirements corresponding to the principle. The requirements serve as the basis for evaluating a residency program for accreditation and are followed by an interpretive narrative for those requirements needing more explanation.
Throughout the Standard use of the auxiliary verbs will and must implies an absolute requirement, whereas use of should and may denotes a recommended guideline.
The Standard sets forth the criteria used in the evaluation of practice sites that apply for accreditation. The accreditation program is conducted under the authority of the ASHP Board of Directors and is supported through formal partnerships with several other pharmacy practice associations. The ASHP Regulations on Accreditation of Pharmacy Residencies sets forth the policies governing the accreditation program and describes the procedures for seeking accreditation.
Part II - Overview of the Principles of PGY1 Pharmacy Residencies
Principle 1: The resident will be a pharmacist committed to attaining professional competence beyond entry-level practice.
Principle 2: The pharmacy residency program will provide an exemplary environment conducive to resident learning.

Principle 3: The resident will be committed to attaining the program’s educational goals and objectives and will support the organization’s mission and values.

Principle 4: The resident’s training will be designed, conducted, and evaluated using a systems-based approach.

Principle 5: The residency program director (RPD) and preceptors will be professionally and educationally qualified pharmacists who are committed to providing effective training of residents.

Principle 6: The organization conducting the residency will meet accreditation standards, regulatory requirements, and other nationally applicable standards and will have sufficient resources to achieve the purposes of the residency program.

Principle 7: The pharmacy will be organized effectively and will deliver comprehensive, safe, and effective services.

Part III - Interpretation of the Principles

Principle 1: Qualifications of the Resident (The resident will be a pharmacist committed to attaining professional competence beyond entry-level practice.)

Requirement:

1.1 Residency applicant qualifications will be evaluated by the residency program director (RPD) through an established, formal procedure that includes an assessment of the applicant’s ability to achieve the educational goals and objectives selected for the program. Further, the criteria used to evaluate applicants must be documented and understood by all involved in the evaluation and ranking process.

Interpretation of Requirement 1.1: A formal, criteria-based process to evaluate and rank program applicants must be in place. Possible criteria should include, but might not be limited to: assessment of the applicant’s academic performance; attainment of appropriate knowledge, skills, attitudes, and abilities needed to achieve the stated educational goals and objectives selected for the residency program; and, letters of recommendation from faculty and employers. On-site personal interviews should be conducted. Ultimately, it is the responsibility of the RPD to assess the applicant’s baseline knowledge, skills, attitudes, and abilities to determine that the applicant has met the qualifications for admission to the residency program.

1.2 The resident should be a graduate of an Accreditation Council for Pharmacy Education (ACPE)-accredited Doctor of Pharmacy degree program.

Interpretation of Requirement 1.2: For PGY1 pharmacy residencies it is clear that the Doctor of Pharmacy degree provides the applicant with the level of knowledge, skills, attitudes and abilities needed to meet program requirements. However, it is permissible to accept applicants who have graduated from ACPE-accredited Bachelor of Science (B.S.) in pharmacy degree programs.

1.3 The applicant must be licensed, or be eligible for licensure, in the state or jurisdiction in which the residency program is conducted. Consequences of failure to obtain appropriate licensure must be addressed as a policy issue by the organization conducting the residency.

Interpretation of Requirement 1.3: Since residency training is predicated upon accepting full responsibility and accountability for the care of patients, residents must obtain licensure to practice as a pharmacist, consistent with the requirements for pharmacists within the organization conducting the residency. Therefore, licensure must be obtained either prior to beginning the residency program or very soon afterwards.

1.4 Residents making application to residency programs that have applied for accreditation or that are accredited by ASHP must participate in and adhere to the rules of the Resident Matching Program (RMP) process.

Principle 2: Obligations of the Program to the Resident (The pharmacy residency program will provide an exemplary environment conducive to resident learning.)

Requirements:
2.1 Programs must be a minimum of twelve months and a full-time practice commitment or equivalent.

2.2 The residency program director (RPD) must ensure that neither the educational outcomes of the program nor the welfare of the resident or the welfare of patients are compromised by excessive reliance on residents to fulfill service obligations. Providing residents with a sound academic and clinical education must be planned and balanced with concerns for patient safety and resident well-being. Programs must comply with the current duty hour standards of the Accreditation Council for Graduate Medical Education (ACGME).

Interpretation of Requirement 2.2 (added April 2011): Alternatively, from July 1, 2011 through June 30, 2013, programs will be granted a temporary exemption waiver from the current ACGME standard, and allowed to follow ACGME Common Program Requirements, VI – Resident Duty Hours in the Learning and Working Environment, effective July 1, 2007.

2.3 ASHP-accredited, provisionally accredited, and application-submitted residency programs must adhere to the rules of the Resident Matching Program (RMP).

2.4 The RPD must provide residents who are accepted into the program with a letter outlining their acceptance to the program. Information on the terms and conditions of the appointment must also be provided in a manner consistent with that provided to pharmacists within the organization conducting the residency. Acceptance by residents of these terms and conditions must be documented prior to the beginning of the residency.

2.5 The residency program must provide a sufficient complement of professional and technical pharmacy staff to ensure appropriate supervision and preceptor guidance to all residents.

2.6 The residency program must provide residents an area in which to work, access to appropriate technology, access to extramural educational opportunities (e.g., Midyear Clinical Meeting, other pharmacy association meetings, a regional residency conference), and sufficient financial support to fulfill the responsibilities of the program.

2.7 Policies concerning professional, family, and sick leave and the effect such leaves would have on the resident’s ability to complete the residency program must be documented.

2.8 The RPD will award a certificate of residency to those who complete the program. Reference must be made in the residency certificate that the program is accredited by ASHP and, if appropriate, its corresponding partner. The certificate must be issued in accordance with the provisions of the ASHP Regulations on Accreditation of Pharmacy Residencies and signed by the RPD and the chief executive officer of the organization. A certificate must not be issued to anyone who does not complete the program’s requirements.

Interpretation of Requirement 2.8: For large corporate entities in which it is impractical to involve the chief executive officer in signing residency certificates, it is the intent of this requirement that an appropriate executive with ultimate authority over the residency join the RPD in signing the certificate of residency.

2.9 The RPD must ensure the program’s compliance with the provisions of the current version of the ASHP Regulations on Accreditation of Pharmacy Residencies.

**Principle 3: Obligations of the Resident to the Program** (The resident will be committed to attaining the program’s educational goals and objectives and will support the organization’s mission and values.)

**Requirements:**

3.1 Residents’ primary professional commitment must be to the residency program.

Interpretation of Requirement 3.1: A residency is a full-time obligation. Residents must manage their activities, external to the residency, so as not to interfere with the program defined in this Standard. It is permissible to admit on a part-time basis a resident who is employed by the residency site, another employer, or enrolled concurrently in a degree program, provided a clear distinction can be made between employment or academic responsibilities and the requirements of the residency. ASHP assumes no authority for evaluation of an academic program taken concurrently with a residency program. In any case, residents are responsible for making any changes necessary to meet the requirements for successful completion of the residency.
3.2 Residents must be committed to the values and mission of the organization conducting the residency program.
3.3 Residents must be committed to completing the educational goals and objectives established for the program.
3.4 Residents must seek constructive verbal and documented feedback that directs their learning.
3.5 Residents must be committed to making active use of the constructive feedback provided by residency program preceptors.

Principle 4: Requirements for the Design and Conduct of the Residency Program
(The resident’s training will be designed, conducted, and evaluated using a systems-based approach.)
To ensure training efficiency and effectiveness, the program must use a systems-based approach to training design, delivery, and evaluation. Such an approach requires that there be a direct correlation among the expectations of resident performance, the type of instruction provided, and the evaluation of resident performance. The requirements in Principle 4 specify the products of a systems-based approach that may be examined during an onsite accreditation survey but, beyond specifying broad RPD and preceptor participation in program decisions do not specify a particular process for producing these products. RPDs are free to develop their own systems-based approach to training or rely on the guidance and tools in the ASHP-endorsed Residency Learning System (RLS) and associated materials.

Requirements:
4.1 Program Design. The RPD and, when applicable, program preceptors will collaborate to design the residency program. The resulting design will include the following elements:
a. The program will document its purpose (the type of practice for which the residents are to be prepared); its outcomes (the residency graduates’ capabilities); its educational goals (broad, sweeping statements of abilities); and educational objectives (observable, measurable statements of resident performance, the sum of which ensure achievement of the educational goal) for each educational goal. The program’s purpose will be reflected in the program’s choice of outcomes. For each outcome there must be goals that further explain the capabilities specified by the outcome. For each goal there must be a set of educational objectives that specifies the resident performance to be measured.
b. Programs must select all outcomes required by this standard. The required outcomes are as follows:

(1) Manage and improve the medication-use process.
(2) Provide evidence-based, patient-centered medication therapy management with interdisciplinary teams.
(3) Exercise leadership and practice management skills.
(4) Demonstrate project management skills.
(5) Provide medication and practice-related education/training.
(6) Utilize medical informatics.

Programs must include all of the associated educational goals and educational objectives listed with these outcomes. The list of outcomes with their educational goals and educational objectives is published elsewhere. Programs may establish additional program outcomes with associated educational goals that emphasize program strengths. The same reference includes some potential additional (elective) program outcomes with associated educational goals and educational objectives.

Interpretation of Requirement 4.1.b: The published Residency Learning System (RLS) lists of outcomes, educational goals, and educational objectives also include instructional objectives to assist, when needed, in teaching. Instructional objectives are not required and are not meant to be evaluated.
c. The program will create a structure (the designation of types, lengths, and sequence of learning experiences) that facilitates achievement of the program’s educational goals and objectives. The structure must permit residents to gain experience in diverse patient populations, a variety of disease...
states, and a range of complexity of patient problems as characterized by a generalist’s practice. Residency programs that are based in certain practice settings (e.g., acute care, ambulatory care, hospice, primary care, geriatrics, pediatrics) must ensure that the program’s learning experiences meet the above requirements for diversity, variety, and complexity. No more than one-third of the twelve-month PGY1 pharmacy residency program may deal with a specific patient population or practice area (e.g., critical care, oncology, cardiology, drug information). The educational goals and objectives, including those for the project, will be assigned for teaching to a single learning experience or a sequence of learning experiences to allow sufficient practice for their achievement by residents. Programs may market the practice strengths they seek to develop as defined by their choice of program structure.

d. Preceptors will create a description of their learning experience, and a list of activities to be performed by residents in the learning experience that demonstrates adequate opportunity to learn the educational goals and objectives assigned to the learning experience.
e. The program will create a competency-based approach to evaluation of resident performance of the program’s educational goals and objectives, resident self-assessment of their performance, and resident evaluation of preceptor performance and of the program. The strategy will be employed uniformly by all preceptors. This three-part, competency-based approach will include provisions for the following:

(1) Preceptors conduct and document a criteria-based, summative assessment of each resident’s performance of each of the respective program-selected educational goals and objectives assigned to the learning experience. This evaluation must be conducted at the conclusion of the learning experience (or at least quarterly for longitudinal learning experiences), reflect the resident’s performance at that time, and be discussed by the preceptor with the resident and RPD. The resident, preceptor, and RPD must document their review of the summative evaluations.

(2) Each preceptor provides periodic opportunities for the resident to practice and document criteria-based, formative self-evaluation of aspects of their routine performance and to document criteria-based, summative self-assessments of achievement of the educational goals and objectives assigned to the learning experience. The latter will be completed on the same schedule as required of the preceptor by the assessment strategy and will include an end-of-the-year component. (3) Residents complete an evaluation of the preceptor and of the learning experience at the completion of each learning experience (or at least quarterly in longitudinal learning experiences.) Residents should discuss their evaluations with the preceptor and must provide their evaluations to the RPD.

4.2 Program Delivery. To achieve systems-based training the program’s design must be implemented fully, with ongoing attention to fulfillment of both preceptor and resident roles and responsibilities. In delivering the program the following must occur and be documented:
a. The RPD and, when applicable, preceptors will conduct essential orientation activities. Residents will be oriented to the program to include its purpose, the applicable accreditation regulations and standards, designated learning experiences, and the evaluation strategy. When necessary, the RPD will orient staff to the residency program. Preceptors will orient residents to their learning experiences, including reviewing and providing written copies of the learning experience educational goals and objectives, associated learning activities, and evaluation strategies.
b. The RPD and, when applicable, preceptors will customize the training program for the resident based upon an assessment of the resident’s entering knowledge, skills, attitudes, and abilities and the resident’s interests. Any discrepancies in assumed entering knowledge, skills, attitudes, or abilities will be accounted for in the resident’s customized plan. Similarly, if a criteria-based assessment of the resident’s performance of one or more of the required educational objectives is performed and judged to indicate full achievement of the objective(s), the program is encouraged to modify the resident’s program accordingly. This would result in changes to both the resident’s educational goals and objectives and to the schedule for assessment of resident performance. The resulting customized plan must maintain consistency with the program’s stated purpose and outcomes. Customization to account for specific interests must not interfere with achievement of the program’s educational goals
and objectives. The customized plan and any modifications to it, including the resident’s schedule, must be shared with the resident and all preceptors.
c. Preceptors will provide ongoing, criteria-based verbal and, when needed, documented feedback on resident performance. Documented feedback will be used if there is limited direct contact with the preceptor (e.g., when non-pharmacist preceptors are utilized for learning experiences late in the residency) or verbal feedback alone is not effective in improving performance.
d. Preceptors will ensure that all aspects of the program’s plan for assessment of resident performance, preceptor performance, and resident self-evaluation are completed.
e. RPDs and, when applicable, preceptors will establish a process for tracking residents’ progress toward achievement of their educational goals and objectives. Overall progress toward achievement of the program’s outcomes, through performance of the program’s educational goals and objectives, will be assessed at least quarterly, and any necessary adjustments to residents’ customized plans, including remedial action(s), will be documented and implemented.

4.3 Program Evaluation and Improvement. Program evaluation and improvement activities will be directed at enhancing achievement of the program’s choice of outcomes. RPDs will evaluate potential preceptors based on their desire to teach and their aptitude for teaching (as differentiated from formal didactic instruction) and provide preceptors with opportunities to enhance their teaching skills. Further, RPDs will devise and implement a plan for assessing and improving the quality of preceptor instruction including, but not limited to, consideration of the residents’ documented evaluations of preceptor performance. At least annually, RPDs and, when applicable, preceptors will consider overall program changes based on evaluations, observations, and other information.

4.4 Tracking of Graduates: The RPD should evaluate whether the residency produces the type of practitioner described in the program’s purpose statement. (Information tracked may include initial employment, changes in employment, board certification, etc.)

**Principle 5: Qualifications of the Residency Program Director (RPD) and Preceptors** (The RPD and preceptors will be professionally and educationally qualified pharmacists who are committed to providing effective training of residents.)

**Requirements of the residency program director:**

5.1 RPDs must be licensed pharmacists who have completed an ASHP-accredited residency and have a minimum of three years of pharmacy practice experience. Alternatively, the RPD may be a licensed pharmacist with five or more years of practice experience with demonstrated mastery of the knowledge, skills, attitudes, and abilities expected of one who has completed a residency.

5.2 RPDs serve as leaders of programs, responsible not only for precepting residents, but also for the evaluation and development of all other preceptors in their programs. Therefore, RPDs must have documented evidence of their own ability to teach effectively in the clinical practice environment (e.g., through student and/or resident evaluations).

5.3 Each residency program must have a single RPD who must be a pharmacist from a practice site involved in the program or from a sponsoring organization.

5.4 A single RPD must be designated for multiple-site residencies or for a residency offered by a sponsoring organization in cooperation with one or more practice sites. The responsibilities of the RPD must be defined clearly, including lines of accountability for the residency and to the residency training site. Further, the designation of this individual to be RPD must be agreed to in writing by responsible representatives of each participating organization.

5.5 RPDs must have demonstrated their ability to direct and manage a pharmacy residency (e.g., previous involvement as a preceptor in an ASHP-accredited residency program, management experience, previous academic experience as a course coordinator).

5.6 RPDs must have a sustained record of contribution and commitment to pharmacy practice that must be characterized by a minimum of four of the following:
a. Documented record of improvements in and contributions to pharmacy practice.
b. Appointments to appropriate drug policy and other committees of the organization.
c. Formal recognition by peers as a model practitioner (e.g., board certification, fellow status).
d. A sustained record of contributing to the total body of knowledge in pharmacy practice through publications in professional journals and/or presentations at professional meetings.
e. Serving regularly as a reviewer of contributed papers or manuscripts submitted for publication.
f. Demonstrated leadership in advancing the profession of pharmacy through active service in professional organizations at the local, state, and national levels.
g. Demonstrated effectiveness in teaching (e.g., through student and/or resident evaluations, teaching awards).

Requirements of preceptors: (The RPD should document criteria for pharmacists to be preceptors. The following requirements may be supplemented with other criteria.)
5.7 Preceptors must be licensed pharmacists who have completed an ASHP-accredited residency followed by a minimum of one year of pharmacy practice experience. Alternatively, licensed pharmacists who have not completed an ASHP-accredited residency may be preceptors but must demonstrate mastery of the knowledge, skills, attitudes, and abilities expected of one who has completed a PGY1 residency and have a minimum of three years of pharmacy practice experience.
5.8 Preceptors must have training and experience in the area of pharmacy practice for which they serve as preceptors, must maintain continuity of practice in that area, and must be practicing in that area at the time residents are being trained.
5.9 Preceptors must have a record of contribution and commitment to pharmacy practice characterized by a minimum of four of the following:
a. Documented record of improvements in and contributions to the respective area of advanced pharmacy practice (e.g., implementation of a new service, active participation on a committee/task force resulting in practice improvement, development of treatment guidelines/protocols).
b. Appointments to appropriate drug policy and other committees of the department/organization.
c. Formal recognition by peers as a model practitioner (e.g., board certification, fellow status).
d. A sustained record of contributing to the total body of knowledge in pharmacy practice through publications in professional journals and/or presentations at professional meetings.
e. Serving regularly as a reviewer of contributed papers or manuscripts submitted for publication.
f. Demonstrated leadership in advancing the profession of pharmacy through active participation in professional organizations at the local, state, and national levels.
g. Demonstrated effectiveness in teaching (e.g., through student and/or resident evaluations, teaching awards).
5.10 Preceptors must demonstrate a desire and an aptitude for teaching that includes mastery of the four preceptor roles fulfilled when teaching clinical problem solving (instructing, modeling, coaching, and facilitating). Further, preceptors must demonstrate abilities to provide criteria-based feedback and evaluation of resident performance. Preceptors must continue to pursue refinement of their teaching skills.
5.11 To develop a resident’s practice competency it is critical that learning experiences be supervised by pharmacist preceptors who model pharmacy practice skills and provide regular criteria-based feedback. However, in selected learning experiences in later stages of the residency, when the primary role of the preceptor is to facilitate resident learning experiences, it is permissible to use practitioners who are not pharmacists (e.g., physicians, physician assistants, and certified nurse practitioners) as preceptors. In these instances, a pharmacist must work closely with the non-pharmacist preceptor to select the educational goals and objectives as well as participate actively in the criteria-based evaluation of the resident’s performance. Moreover, these learning experiences must be conducted only at a point in the residency when the RPD and preceptors agree that the resident is ready for independent practice. Evaluations conducted at the end of previous learning experiences must reflect such readiness to practice independently.

Principle 6: Minimum Requirements of the Site Conducting the Residency Program (The organization conducting the residency will meet accreditation standards, regulatory requirements,
and other nationally applicable standards and will have sufficient resources to achieve the purposes of the program.)

**Requirements:**

6.1 As appropriate, residency programs must be conducted only in practice settings that have sought and accepted outside appraisal of facilities and patient care practices. The external appraisal must be conducted by a recognized organization appropriate the practice setting.12

a. A health-system (inclusive of all components of the system that provide patient care) that offers or that participates in offering a pharmacy residency must be accredited by applicable organizations [e.g., The Joint Commission, American Osteopathic Association (AOA), National Committee for Quality Assurance (NCQA), Det Norske Veritas (DNV)].

b. A college of pharmacy that participates in offering a pharmacy residency must be accredited by the Accreditation Council for Pharmacy Education (ACPE).

c. Other practice settings that offer a pharmacy residency must have demonstrated substantial compliance with applicable professionally developed and nationally applied standards.

Interpretation 6.1 (added April 2011): If a hospital is state-certified as a Medicare and/or Medicaid single provider institution, the state’s review process will meet the intent of this section.

6.2 Residency programs must be conducted only in those practice settings where management and professional staff have committed to seek excellence in patient care, demonstrated substantial compliance with professionally developed and nationally applied practice and operational standards, and have sufficient resources to achieve the educational goals and objectives selected for the residency program.

6.3 Two or more practice sites, or a sponsoring organization (e.g., college of pharmacy, health system) working in cooperation with one or more practice sites, may provide a pharmacy residency.

  a. Pharmacy residencies are dependent on the availability of a sufficient patient population base and professional practice experience to satisfy the requirements of the residency program.
  
  b. Sponsoring organizations must maintain authority and responsibility for the quality of their residency programs.
  
  c. A mechanism must be established that designates and empowers an individual to be responsible for directing the residency program and for achieving consensus regarding the evaluation and ranking of applicants for the residency.
  
  d. Sponsoring organizations and practice sites must have contractual arrangement(s) or signed agreement(s) that define clearly the responsibilities for all aspects of the residency program.
  
  e. Each of the practice sites that provide residency training must meet the requirements set forth in Requirement 6.2 and the pharmacy’s service requirements in Principle 7.

Interpretation of Requirement 6.3: Application for accreditation of a health-system or corporate-based, multiple-site pharmacy residency must be submitted in the name of the principal practice site (i.e., the practice site in which the majority of the residency program is centered). In the case of a sponsoring organization (e.g., college of pharmacy, health system) that has a contractual arrangement with one or more practice settings to provide residency training, the application must be completed by the sponsoring organization. The sponsoring organization, in making application for accreditation, must submit with the application the signed agreement(s) with the practice site(s) that define clearly the relationship, the governance, and the responsibility that will be borne by the organization and the practice site(s) for all aspects of the residency program.

Since the sponsoring organization may delegate day-to-day responsibility for the residency program to the practice site(s), the site(s) will be required to submit routine reports to the sponsoring organization. Some method of on-site inspection by a representative of the sponsoring organization must be in place to insure that the terms of the agreement are being met. All reports and inspections must be documented and signed by representatives of all parties bound by the agreement and will be made available to the accreditation survey team.
Principle 7: Qualifications of the Pharmacy (The pharmacy will be organized effectively and will deliver comprehensive, safe, and effective services.)

The most current edition of the ASHP *Best Practices for Health-System Pharmacy*, available at www.ashp.org, (and, when necessary, other pharmacy association guides to professional practice that apply to specific practices sites) will be utilized in evaluating any patient care site(s) or other practice operation (e.g., drug information service) providing pharmacy residency training.

Requirements:

7.1 The pharmacy must be led and managed by a professionally competent, legally qualified pharmacist. This person is referred to in this accreditation standard as the chief pharmacist and is responsible for insuring compliance with requirements for the pharmacy as outlined in this Principle.

7.2 The pharmacy must be an integral part of the health-care delivery system at the practice site in which the residency program is offered, as evidenced by the following:
   a. The scope of pharmacy services provided to patients at the practice site is based upon an assessment of pharmacy functions needed to provide care to all patients served by the practice site.
   b. The services are of a scope and quality commensurate with identified patient needs.
   c. The pharmacy is involved in the overall planning of patient care services for the practice setting.
   d. Pharmacy services extend to all areas of the practice site in which medications for patients are prescribed, dispensed, administered, and monitored.
   e. Pharmacists are responsible around-the-clock for the procurement, preparation, distribution, and control of all medications used, including those that are investigational.

7.3 The chief pharmacist must provide effective leadership and management for the achievement of short- and long-term goals of the pharmacy and the organization relating to medication use and medication-use policies. The chief pharmacist must ensure that the following elements associated with a well-managed pharmacy are in place (as appropriate to the practice setting):
   a. A pharmacy mission statement.
   b. A written document describing the scope and depth of pharmacy services.
   c. A well-defined pharmacy organizational structure.
   d. A description of pharmacy services provided.
   e. Documented short- and long-term pharmacy goals.
   f. Current policies and procedures that are readily available to staff participating in service provision.
   g. Position descriptions for all categories of pharmacy personnel.
   h. Systems to document pharmacy workload, financial performance, and patient care outcomes data.
   i. Pharmacy involvement with key committees involving medications and patient care.
   j. A quality improvement plan.

7.4 The pharmacy:
   a. Complies with all applicable federal, state, and local laws, codes, statutes, and regulations governing pharmacy practice.
   b. Demonstrates substantial compliance with national practice standards and guidelines.
   c. Regularly reviews and develops plans to conform to new practice standards or guidelines.
   d. Has sought and accepted outside appraisals of its facilities and patient care practices.

7.5 The pharmacy must provide a safe and effective drug distribution system for all medications used within the practice site. This system must include the following components (as applicable to the practice setting):
   a. A unit-dose drug distribution service.
   b. An intravenous admixture and sterile product service.
   c. An investigational drug service.
   d. An extemporaneous compounding service.
   e. A system for the safe use of drug samples.
   f. A system for the safe use of emergency medications.
   g. A controlled substance floor-stock system.
h. A controlled floor-stock system.
i. An outpatient drug distribution service.

7.6 The pharmacy must provide the necessary patient care services in a manner consistent with practice site and patient needs.

a. The following patient care services or activities must be provided in collaboration with other health-care professionals to optimize medication therapy for patients:
   (1) Membership on interdisciplinary teams in the patient care areas associated with the residency program.
   (2) Development of treatment protocols, critical pathways, order sets, and other systems approaches involving medications for patients on involved services.
   (3) Participation in collaborative practice agreements with other providers and management of patients following collaborative practice agreements, treatment protocols, critical pathways, etc.
   (4) Prospective participation in the development of individualized treatment plans for patients of involved services.
   (5) Identification of medication-related problems.
   (6) Review of the appropriateness and safety of medication orders.
   (7) Design and implementation of medication-therapy monitoring plans.
   (8) Documentation of all significant patient care recommendations and resulting actions, treatment plans, and/or progress notes in the appropriate section of the patient’s medical record or the organization’s clinical information system.
   (9) Written and oral consultations regarding medication-therapy selection and management.
   (10) Patient disease and/or medication management consistent with laws, regulations, and practice site policy.
   (11) Medication administration consistent with laws, regulations, and practice site policy.
   (12) Preventive and wellness programs.
   (13) A system to ensure and support continuity-of-care.

b. Essential drug information activities that must be provided by pharmacy staff and the residents include, but are not limited to, the following (as applicable to the practice setting):
   (1) Developing and maintaining a formulary.
   (2) Publishing periodic newsletters or bulletins for health-care providers on timely medication-related matters and medication policies.
   (3) Preparing medication therapy monographs based on an analytical review of pertinent biomedical literature, including a safety assessment and a comparative therapeutic and economic assessment of each new agent for formulary addition or deletion.
   (4) Establishing and maintaining a system for retrieving drug information from the literature.
   (5) Responding to drug information inquiries from health-care providers.
   (6) Conducting educational programs about medications, medication therapy, and other medication-related matters for health-care providers.
   (7) Participating in the development or modification of policies related to: (a) medications; (b) medication-use evaluation; (c) adverse drug event prevention, monitoring, and reporting; and (d) appropriate methods to assess ongoing compliance with such policies.

7.7 The pharmacy must provide leadership and participate with other health professionals in the following systems to ensure safe and effective patient care outcomes and to continuously improve the medication-use system used by the practice site (as applicable to the practice setting):

a. A system to support and actively participate in decision-making concerning the pharmacy and therapeutics function, including the preparation and presentation of drug-therapy monographs.
   b. A system to review medication-use evaluations and to implement new policies or procedures to improve the safe and effective use of medications.
   c. A system to review adverse drug event reports and to implement new policies and procedures to improve medication safety.
   d. A system to evaluate routinely the quality of pharmacy services provided.
7.8 The pharmacy must have personnel, facilities, and other resources to carry out a broad scope of pharmacy services (as applicable to the practice setting). The pharmacy’s:
   a. Facilities are constructed, arranged, and equipped to promote safe and efficient work.
   b. Packaging equipment is adequate to prepare medications for unit-dose dispensing or compliance packaging.
   c. Automated medication systems and software support a safe medication-use system.
   d. Computerized systems support a safe medication-use system.
   e. Professional and technical staff is sufficient in number and of the diversity to ensure that the department can provide the level of service required by all patients served. In instances where resources limit the delivery of pharmacy services to all patients receiving medication therapy, mechanisms are in place to identify those patients who might benefit most from these services, and a plan is in place to work toward meeting these needs.
   f. Professional staff members seek professional enrichment and demonstrate their interest in continuing competence.
   g. Technical and clerical staff complement is sufficient to handle all functions that can be assigned appropriately to them.

GLOSSARY

Certification. A voluntary process by which a nongovernmental agency or an association grants recognition to an individual who has met certain predetermined qualifications specified by that organization. This formal recognition is granted to designate to the public that the individual has attained the requisite level of knowledge, skill, or experience in a well defined, often specialized, area of the total discipline. Certification usually requires initial assessment and periodic reassessments of the individual’s qualifications.\textsuperscript{6}

Chief Pharmacist. The person who has ultimate responsibility for the residency practice site/pharmacy in which the residency program is conducted. (In some settings this person is referred to, for example, as the director of pharmacy, the pharmacist-in-charge, the chief of pharmacy services, etc.) In a multiple-site residency, a sponsoring organization must be identified to assume ultimate responsibility for coordinating and administering the program.

Customization. The process by which a residency’s generic plan for training (program outcomes; educational goals; educational objectives; structure; learning activities; extent of modeling, coaching, and facilitation; and, assessment strategy for preceptor and self-evaluation) are modified to account for the strengths, weaknesses, and interests of the resident to help ensure that each resident’s training is optimal.

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 Academy Press; 2001.)

Multiple-site residency. A residency site structure in which multiple organizations or practice sites are involved in the residency program. Examples include programs in which: residents spend greater than 25% of the program away from the sponsoring organization/main site at another single site; or there are multiple residents in a program and they are home-based in separate sites.
   1. To run a multiple-site residency there must be a compelling reason for offering the training in a multiple-site format (that is, the program is improved substantially in some manner). For example: a. RPD has expertise, however the site needs development (for example, site has a good variety of patients, and potentially good preceptors, however the preceptors may need some oversight related to the residency program; or services need to be more fully developed);
   b. quality of preceptorship is enhanced by adding multiple sites;
   c. increased variety of patients/disease states to allow wider scope of patient interactions for residents;
   d. increased administrative efficiency to develop more sites to handle more residents across multiple sites/geographic areas;
   e. synergy of the multiple sites increases the quality of the overall program;
   f. allows the program to meet all of the requirements (that could not be done in a single site alone); and
   g. ability to increase the number of residents in a quality program.

   2. A multiple-site residency program conducted in multiple hospitals that are part of a health-system that is considering CMS pass-through funding should conduct a thorough review of 42CFR413.85 and have a discussion with the finance department to ensure eligibility for CMS funding.
   3. In a multiple-site residency program, a sponsoring organization must be identified to assume ultimate responsibility for coordinating and administering the program. This includes: a. designating a single residency program director (RPD);
b. establishing a common residency purpose statement to which all residents at all sites are trained;
c. assuring a core program structure and consistent required learning experiences;
d. assuring the core required learning experiences are comparable in scope, depth, and complexity for all residents, if home based at separate sites;
e. assuring a uniform evaluation process and common evaluation tools are used across all sites;
f. assuring there are consistent requirements for successful completion of the program;
g. designating a site coordinator to oversee and coordinate the program’s implementation at each site that is used for more than 25% of the learning experiences in the program (for one or more residents) and;
h. assuring the program has an established, formalized approach to communication that includes at a minimum the RPD and site coordinators to coordinate the conduct of the program across all sites

Preceptor. an expert pharmacist who gives practical experience and training to a pharmacy resident. Preceptors have responsibility for the evaluation of resident performance.

Residency program director. the pharmacist responsible for direction, conduct, and oversight of the residency program. In a multiple-site residency, the residency program director is a pharmacist designated in a written agreement between the sponsoring organization and all of the program sites.

Service commitments. Clinical and operational practice activities. May be defined in terms of the number of hours, types of activities, or a set of educational goals and objectives.

Single-site residency. A residency site structure in which the practice site assumes total responsibility for the residency program. In a single-site residency, the majority of the resident’s training program occurs at the site; however, the resident may spend assigned time in short elective learning experiences off-site.

Site. The actual practice location where the residency experience occurs.

Site Coordinator. a preceptor in a multiple-site residency program who is designated to oversee and coordinate the program’s implementation at an individual site that is used for more than 25% of the learning experiences. This individual may also serve as a preceptor in the program. A site coordinator must:
1. be a licensed pharmacist who meets the minimum requirements to serve as a preceptor (meets the criteria identified in Principle 5.9 of the appropriate pharmacy residency accreditation standard);
2. practice at the site at least ten hours per week;
3. have the ability to teach effectively in a clinical practice environment; and
4. have the ability to direct and monitor residents’ and preceptors’ activities at the site (with the RPD’s direction).

Sponsoring organization. The organization assuming ultimate responsibility for the coordination and administration of the residency program. The sponsoring organization is charged with ensuring that the resident experiences are educationally sound and are conducted in a quality practice environment. The sponsoring organization is also responsible for submitting the accreditation application and ensuring periodic evaluations are conducted. If several organizations share responsibility for the financial and management aspects of the residency (e.g., school of pharmacy, health-system, and individual site), the organizations must mutually designate one organization as the sponsoring organization.

References
APPENDIX 2

| Required and Elective Educational Outcomes, Goals, Objectives, and Instructional Objectives for Postgraduate Year One (PGY1) Pharmacy Residency Programs | 2nd Edition – effective July 2008 |

Explanation of the Contents of This Document:

The educational outcomes, goals, and objectives below are to be used in conjunction with the *Accreditation Standard for Postgraduate Year One (PGY1) Pharmacy Residency Programs*. Users of this document will want to refer to the accompanying glossary to assure a shared understanding of terms.

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.

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 educational outcomes 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.

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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. Each objective is classified by taxonomy (cognitive, affective, or psychomotor) and level of learning within that taxonomy to facilitate teaching and assessment of performance.

Instructional Objectives IO: Instructional objectives (text written in unbolded italics) 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 By PGY1 Pharmacy Residency Accreditation Standard

Outcome R1: Manage and improve the medication-use process.
Goal R1.1: Identify opportunities for improvement of the organization’s medication-use system.
OBJ R1.1.1 (Comprehension) Explain the organization’s medication-use system and its vulnerabilities to adverse drug events (ADEs).
IO Explain the central concepts of systems theory.
IO Explain the concept of system error.
IO Explain the definitions of the various terms associated with adverse drug events (e.g., medication misadventure, medication error, adverse drug reaction, error, accident, systems error, individual error, latent error).
IO State sources of information on the design, implementation, and maintenance of safe medication-use systems.
IO From both the pharmacy department perspective and the organization perspective explain the potential for contribution to the occurrence of adverse drug events by the use of automation and information technology.
IO From both the pharmacy department perspective and the organization perspective 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 R1.1.2 (Analysis) Analyze the structure and process and measure outcomes of the medication-use system.
IO Explain methods for analyzing a medication-use system’s structure.
IO Explain how inputs to the medication-use system such as patients, staff, and environment make up its structure.
IO Explain methods for analyzing processes within a medication-use system (e.g., root cause analysis, failure mode and effect analysis).
IO Explain how the interactions between clinicians and patients constitute processes in the medication-use system.
IO Exercise skill in process-mapping, a type of flowchart depicting the steps in a process, with identification of responsibility for each step and the key measures.

IO Exercise skill in cause-and-effect diagramming.

IO Explain the organization’s policies and procedures for handling a drug recall.

IO Explain the role of medication-use evaluation (MUE) in measuring medication-use processes.

IO Explain methods for measuring outcomes of the medication-use system.

IO Generate examples of the outcomes of a medication-use process which are changes in patients’ health status (e.g. length of stay; acuity).

IO Explain the characteristics of a clinically significant ADE.

IO Explain various methods, including decision trees, for determining the significance of adverse drug events.

IO Explain how to categorize medication errors using the ASHP Guidelines on Preventing Medication Errors in Hospitals.

IO Explain how to categorize medication errors using the National Coordinating Council for Medication Error Reporting and Prevention’s medication error index for categorizing errors.

IO Explain how to categorize medication errors using one’s own institution’s categorization methodology.

IO When a clinically significant ADE is identified, report the event following the organization’s policies and procedures.

IO Explain the role of the MUE in measuring outcomes of the medication-use process.

OBJ R1.1.3 (Evaluation) Identify opportunities for improvement in the organization’s medication-use system by comparing the medication-use system to relevant best practices.

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

IO Participate in the pharmacy department’s ongoing process for tracking and trending ADEs.

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 selecting and securing alternative medications when shortages occur and for adjusting the formulary and notifying prescribers.

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

IO Use the results of an MUE to identify opportunities for improvement in the medication-use process.

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.

Goal R1.2: Design and implement quality improvement changes to the organization’s medication-use system.
OBJ R1.2.1  (Comprehension) Explain the process for developing, implementing, and maintaining a formulary system.
1O  Identify the components of a formulary system.
1O  Explain the approval process for establishing a formulary.
1O  Explain the role of committees in addressing formulary issues.
1O  Explain how formularies are revised and maintained.
1O  Explain procedures regarding exceptions to the formulary.
1O  Explain the process of making additions and deletions to the formulary including those resulting from drug shortages.
1O  Explain how to customize an existing drug monograph for use at your site (e.g., the FIX)
1O  Explain effective methods of communicating changes to the formulary including those resulting from drug shortages.

OBJ R1.2.2  (Evaluation) Make a medication-use policy recommendation based on a comparative review (e.g., drug class review, drug monograph).
1O  State the elements of a comparative review.
1O  State sources to consult in the preparation of a comparative review.
1O  Explain the importance of including consideration of medication-use safety in the preparation of a comparative review.

OBJ R1.2.3  (Synthesis) Participate in the identification of need for, development of, implementation of, and evaluation of an evidence-based treatment guideline/protocol related to individual and population-based patient care.
1O  Define treatment guidelines and protocols.
1O  Explain the indications/rationale for using guidelines and protocols.
1O  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).
1O  Explain the use of evidence-based medicine in the development of treatment guidelines/protocols.
1O  Explain the process by which criteria for treatment guidelines/protocols are developed.
1O  Explain effective strategies for gaining necessary commitment and approval for use of a treatment guideline/protocol.
1O  Explain the importance of providing outcome information to the prescriber/provider as support for evaluative decisions on program continuance or revision.
1O  Explain methods for assessing the effectiveness/impact of guidelines and protocols.
1O  Explain the importance of assessing the clinical, economic and humanistic outcomes of treatment guidelines/protocols related to patient care.

OBJ R1.2.4  (Synthesis) Design and implement pilot interventions to change problematic or potentially problematic aspects of the medication-use system with the objective of improving quality.
1O  Explain the importance of continually reassessing medication-use policies.
1O  Exercise skill in the revision of a policy or procedure when necessitated by the implementation of a change in a medication-use process.

Goal R1.3: Prepare and dispense medications following existing standards of practice and the organization’s policies and procedures.

OBJ R1.3.1  (Evaluation) Interpret the appropriateness of a medication order before preparing or permitting the distribution of the first dose.
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 R1.3.2  (Application) Follow the organization's policies and procedures to maintain the accuracy of the patient’s medication profile.

OBJ R1.3.3  (Application) Prepare medication using appropriate techniques and following the organization's policies and procedures.

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 R1.3.4  (Application) Dispense medication products following the organization's policies and procedures.

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.

Goal R1.4: Demonstrate ownership of and responsibility for the welfare of the patient by performing all necessary aspects of the medication-use system.

OBJ R1.4.1  (Characterization) Display initiative in preventing, identifying, and resolving pharmacy-related patient-care problems.

IO Explain the role of the pharmacist in preventing, identifying, and resolving pharmacy-related patient-care 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.
Goal R1.5: Provide concise, applicable, comprehensive, and timely responses to requests for drug information from patients and health care providers.

OBJ R1.5.1 (Analysis) Discriminate between the requesters’ statement of need and the actual drug information need by asking for appropriate additional information.

IO Explain the characteristics of a clearly stated clinical question.

OBJ R1.5.2 (Synthesis) Formulate a systematic, efficient, and thorough procedure for retrieving drug information.

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

IO State sources of evidence-based meta-analysis reviews.

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

OBJ R1.5.3 (Analysis) Determine from all retrieved biomedical literature the appropriate information to evaluate.

OBJ R1.5.4 (Evaluation) Evaluate the usefulness of biomedical literature gathered.

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 effects on study outcomes of various methods of drug assay and quality assurance procedures (e.g., high performance liquid chromatography, assay coefficient of variations).

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 Determine whether a study’s conclusions are supported by the study results.

IO Explain how data from a study can be applied to expanded patient populations.

OBJ R1.5.5 (Synthesis) Formulate responses to drug information requests based on analysis of the literature.

OBJ R1.5.6 (Synthesis) Provide appropriate responses to drug information questions that require the pharmacist to draw upon his or her knowledge base.

OBJ R1.5.7 (Evaluation) Assess the effectiveness of drug information recommendations.

IO Explain all factors that must be assessed to determine the effectiveness of a response.
**Outcome R2: 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.)

- Establish collaborative professional relationships with health care team members
- Place priority on delivery of patient-centered care to patient
- Establish collaborative professional pharmacist-patient relationship
- Collect and analyze patient information
- When necessary make and follow up on patient referrals
- Design evidence-based therapeutic regimen
- Design evidence-based monitoring plan
- Recommend or communicate regimen and monitoring plan
- Implement regimen and monitoring plan
- Evaluate patient progress and redesign as necessary
- Communicate ongoing patient information
- Document direct patient care activity

**Goal R2.1:** As appropriate, establish collaborative professional relationships with members of the health care team.

**OBJ R2.1.1** (Synthesis) Implement a strategy that effectively establishes cooperative, collaborative, and communicative working relationships with members of interdisciplinary health care teams.

1. IO Demonstrate knowledge of other team members’ expertise, background, knowledge, and values in all interdisciplinary team interactions.
2. IO Explain the training and expected areas of expertise of the members of the interdisciplinary with which one works.
3. 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.
4. IO Exercise skill in the use of individual roles and processes required to work collaboratively on interdisciplinary teams.
5. IO Define a collaborative professional working relationship.
6. 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 R2.2: Place practice priority on the delivery of patient-centered care to patients.

OBJ R2.2.1 (Organization) Choose and manage daily activities so that they reflect a priority on the delivery of appropriate patient-centered care to each patient.

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 R2.3: As appropriate, establish collaborative professional pharmacist-patient relationships.

OBJ R2.3.1. (Synthesis) Formulate a strategy that effectively establishes a patient-centered pharmacist-patient relationship.

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 R2.4: Collect and analyze patient information.

OBJ R2.4.1 (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.
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.

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.

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

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

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

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.

Explain current trends and issues in nontraditional therapy.

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.

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.

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

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

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).

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

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

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

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 R2.4.2  (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 interfered with 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

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 to determine 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 R2.4.3  (Analysis) Using an organized collection of patient-specific information, summarize patients' health care needs.

Goal R2.5: When necessary, make and follow up on patient referrals.

OBJ R2.5.1  (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.

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 R2.5.2  (Synthesis) Devise a plan for follow-up for a 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 R2.6: Design evidence-based therapeutic regimens.

OBJ R2.6.1 (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.

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 R2.6.2 (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.

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 R2.7: Design evidence-based monitoring plans.

OBJ R2.7.1 (Synthesis) Design a patient-centered, evidenced-based monitoring plan for a therapeutic regimen that effectively evaluates achievement of the patient-specific goals.
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, 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 R2.8: Recommend or communicate regimens and monitoring plans.

OBJ R2.8.1 (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.

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 R2.9: Implement regimens and monitoring plans.

OBJ R2.9.1 (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.

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

OBJ R2.9.2 (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.

Goal R2.10: Evaluate patients’ progress and redesign regimens and monitoring plans.
OBJ R2.10.1  (Evaluation) Accurately assess the patient’s progress toward the therapeutic goal(s).

- **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 R2.10.2  (Synthesis) Redesign a patient-centered, evidence-based therapeutic plan as necessary based on evaluation of monitoring data and therapeutic outcomes.

Goal R2.11:  Communicate ongoing patient information.

OBJ R2.11.1  (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.

OBJ R2.11.2  (Application) Ensure that accurate and timely medication-specific information regarding a specific patient reaches those who need it at the appropriate time.

- **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 R2.12:  Document direct patient care activities appropriately.

OBJ R2.12.1  (Analysis) Appropriately select direct patient-care activities for documentation.

OBJ R2.12.2  (Application) Use effective communication practices when documenting a direct patient-care activity.

OBJ R2.12.3  (Comprehension) Explain the characteristics of exemplary documentation systems that may be used in the organization’s environment.

Outcome R3:  Exercise leadership and practice management skills.

Goal R3.1:  Exhibit essential personal skills of a practice leader.

OBJ R.3.1.1  (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** 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 R3.1.2 (Characterization) Demonstrate pride in and commitment to the profession through appearance, personal conduct, and association membership.

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 R3.1.3 (Characterization) Act ethically in the conduct of all job-related activities.

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.

Goal R3.2: Contribute to departmental leadership and management activities.

OBJ R3.2.1 (Synthesis) Participate in the pharmacy department’s planning processes.

IO Explain the principles and application of various approaches to pharmacy department planning, including the development of a departmental strategic plan.

IO Explain the necessary relationship between the organization’s and the department’s vision, mission, and plans.

OBJ R3.2.2 (Comprehension) Explain 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 R3.2.3 (Comprehension) Explain the principles of financial management of a pharmacy department.

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

IO Explain the data elements of a productivity matrix (e.g., clinical activities, budgets, FTE justification).

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

IO Explain sources of revenue for the pharmacy and health system.

OBJ R3.2.4 (Synthesis) Prioritize the work load, organize the work flow, and check the accuracy of the work of pharmacy technical and clerical personnel or others.

IO Explain the principles of work delegation.

IO Explain systematic approaches to organizing and keeping track of the work of multiple participants in a given work activity.
Explain the importance of routine checks on accuracy of the work of pharmacy technical and clerical personnel or others under one’s supervision.

Goal R3.3: Exercise practice leadership.

OBJ R3.3.1 (Synthesis) Use knowledge of an organization's political and decision-making structure to influence accomplishing a practice area goal.

OBJ R3.3.2 (Comprehension) Explain various leadership philosophies that effectively support direct patient care and pharmacy practice excellence.

OBJ R3.3.3 (Application) Use group participation skills when leading or working as a member of a committee or informal work group.

OBJ R3.3.4 (Application) Use knowledge of the principles of change management to achieve organizational, departmental, and/or team goals.

Outcome R4: Demonstrate project management skills.

Goal R4.1: Conduct a practice-related project using effective project management skills.

OBJ R4.1.1: (Synthesis) Identify a topic for a practice-related project of significance for pharmacy practice.

OBJ R4.1.2: (Synthesis) Formulate a feasible design for a practice-related project.

OBJ R4.1.3: (Synthesis) Secure any necessary approvals, including IRB and funding, for one’s design of a practice-related project.

OBJ R4.1.4: (Synthesis) Implement a practice-related project as specified in its design.
OBJ R4.1.5: (Synthesis) Effectively present the results of a practice-related project.
OBJ R4.1.6: (Synthesis) Successfully employ accepted manuscript style to prepare a final report of a practice-related project.

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.

OBJ R4.1.7: (Evaluation) Accurately assess the impact, including sustainability if applicable, of the residency project.

Outcome R5: Provide medication and practice-related education/training.
Goal R5.1 Provide effective medication and practice-related education, training, or counseling to patients, caregivers, health care professionals, and the public.
OBJ R5.1.1 (Application) Use effective educational techniques in the design of all educational activities.

IO Design instruction that meets the individual learner’s needs.

IO When given a particular patient database, therapeutic regimen, and monitoring plan, explain the educational needs of the patient for successful implementation of the therapeutic regimen and monitoring plan.

IO Explain the concept of learning styles and its influence on the design of instruction.

IO Explain the importance of considering the learner’s reading level when designing patient education.

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).

OBJ R5.1.2 (Synthesis) Design an assessment strategy that appropriately measures the specified objectives for education or training and fits the learning situation.

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

OBJ R5.1.3 (Application) Use skill in the four preceptor roles employed in practice-based teaching (direct instruction, modeling, coaching, and facilitation).

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

OBJ R5.1.4 (Application) Use skill in case-based teaching.

OBJ R5.1.5 (Application) Use public speaking skills to speak effectively in large and small group situations.

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 R5.1.6 (Application) Use knowledge of audio-visual aids and handouts to enhance the effectiveness of communications.
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.

**Outcome R6: Utilize medical informatics.**

Goal R6.1: Use information technology to make decisions and reduce error.

OBJ R6.1.1 (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.

OBJ R6.1.2 (Application) Exercise skill in basic use of databases and data analysis software.

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

IO Perform statistical analysis of data for the purposes of evaluating the significance of data.

OBJ R6.1.3 (Evaluation) Successfully make decisions using electronic data and information from internal information databases, external online databases, and 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’s drug and medical information on the Internet.

**Potential Electives for PGY1 Pharmacy Residency Programs**

**Outcome E1: Conduct pharmacy practice research.**

Goal E1.1: Design, execute, and report results of investigations of pharmacy practice-related issues.

OBJ E1.1.1 (Analysis) Identify potential practice-related issues that need to be studied.

OBJ E1.1.2 (Application) Use a systematic procedure for performing a comprehensive literature search.

OBJ E1.1.3 (Analysis) Draw appropriate conclusions based on a summary of a comprehensive literature search.

OBJ E1.1.4 (Synthesis) Generate a research question(s) to be answered by an investigation.

OBJ E1.1.5 (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.

OBJ E1.1.6 (Application) Use a systematic procedure to collect and analyze data.

OBJ E1.1.7 (Evaluation) Draw valid conclusions through evaluation of the data.

OBJ E1.1.8 (Synthesis) Use effective communication skills to report orally and in writing the results and recommendations of an investigation into a pharmacy practice-related issue.
Goal E1.2  Participate in clinical, humanistic and economic outcomes analyses.

**OBJ E1.2.1**  (Evaluation) Contribute to a prospective clinical, humanistic and/or 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 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 E1.2.2**  (Evaluation) Contribute to a retrospective clinical, humanistic, and/or 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 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.

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**Outcome E2:**  Exercise added leadership and practice management skills.

Goal E2.1:  Contribute to the development of a new pharmacy service or to the enhancement of an existing service.

**OBJ E2.1.1**  (Evaluation) Appraise a current pharmacy service or program to determine if it meets the stated goals.

**OBJ E2.1.2**  (Synthesis) Participate in the writing of a proposal for a marketable, new or enhanced pharmacy service.

**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 E2.1.3 (Synthesis) Formulate an effective strategy for promoting a proposal for a new service.

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

Goal E2.2: Understand the pharmacy procurement process.

OBJ E2.2.1 (Comprehension) Explain the processes and contractural relationships that form the structure of the department’s medication procurement system.

IO Explain the role of wholesalers and GPOs in the supply of medications.

IO Explain the role of competitive contracting.

IO Explain principles of inventory management.

IO Explain special procedure for unique drug entities (e.g., controlled substances, refrigerated medications.)

IO Explain issues surrounding the return or disposal of medications.

Goal E2.3: Manage the use of investigational drug products (medications, devices, and biologicals).

OBJ E2.3.1 (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.

Goal E2.4: Understand the principles of a systematic approach to staff development in pharmacy practice.

OBJ E2.4.1 (Comprehension) Explain the steps in a systematic approach to staff development.

OBJ E2.4.2 (Comprehension) Explain the importance of approaching staff development systematically.

Goal E2.5: Resolve conflicts through negotiation.

OBJ E2.5.1 (Application) Use effective negotiation skills to resolve conflicts.

Goal E2.6: Understand the process of managing the practice area's human resources.

OBJ E2.6.1 (Comprehension) Explain 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.
IO  Explain the impact of the American Disabilities Act on interviews.

OBJ E2.6.2  (Comprehension) Explain the process used 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.

OBJ E2.6.3  (Comprehension) Explain the importance of orientation and training for practice area personnel.
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 E2.6.4  (Comprehension) Explain 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 E2.6.5  (Comprehension) Explain the principles and application of a 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 E2.7: Understand the process of establishing a pharmacy residency program.
OBJ E2.7.1  (Comprehension) Explain the steps involved in establishing a pharmacy residency program at a particular site.
IO  Explain the sources of published information to be used when establishing a residency program (i.e., accreditation regulations, accreditation standards, ASHP website).
**Outcome E3: Demonstrate knowledge and skills particular to generalist practice in the home care practice environment.**

Goal E3.1: Understand the scope of services that might be provided in a typical home care practice.

**OBJ E3.1.1** (Comprehension) Compare and contrast the scope of services that might be provided by a typical home care practice for a variety of health systems or stand-alone organizations.

**OBJ E3.1.2** (Comprehension) Explain the relationship between the scope of services offered by a home care practice and the applicable legal, regulatory, and accreditation issues.

Goal E3.2: Determine the suitability of individual patients for home care.

**OBJ E3.2.1** (Analysis) Collect and organize all patient-specific information needed by the home care pharmacist to determine the suitability of individual patients for home care.

**IO** Identify the types of information the home care pharmacist requires to determine the suitability of individual patients for home care.

**OBJ E3.2.2** (Evaluation) Assess patients’ suitability for home care.

**IO** Explain criteria for acceptance into home care.

**IO** Explain factors to consider when determining the ability and willingness of a patient or caregiver to fulfill the tasks of home care.

**IO** Explain factors to consider when evaluating a potential home care patient’s psychosocial and family support.

Goal E3.3: Understand unique aspects of providing evidence-based, patient-centered medication therapy management with interdisciplinary teams in the home care environment.

**OBJ E3.3.1:** (Comprehension) Explain those aspects of providing evidence-based, patient-centered medication therapy management with interdisciplinary teams that are unique to the home care environment.

**IO** Explain the rights and responsibilities of a home care patient.

**IO** Explain strategies for getting information from unwilling or inaccessible participants.

**IO** Explain additional concerns with compliance, cost, route of administration, and vascular access and medication devices when making decisions on medication regimens for home care patients.

**IO** Explain how to determine whether the first dose of medication should be administered at home or in a controlled-care setting.

**IO** State customary monitoring parameters for the effects of the use of access and administration devices.

Goal E3.4: Understand unique aspects of preparing and dispensing medications for home care patients.

**OBJ E3.4.1:** (Comprehension) Explain those aspects of preparing and dispensing medications that are unique to the home care environment.

**IO** Select appropriate supplies for the patient’s method of administration, access device and medication.

**IO** Explain appropriate technique for care of a catheter and a catheter site.

**IO** Explain procedures for administering medications used in the home care environment.

**IO** Explain procedures for managing complications resulting from the administration of medications.
IO Use knowledge of alternative delivery methods to determine the best way to get supplies and medications to the patient’s home.

Goal E3.5: Understand unique aspects of participating in the management of medical emergencies occurring in the home care environment.

OBJ E3.5.1 (Comprehension) Explain those aspects of participating in the management of medical emergencies that are unique when the medical emergency occurs in a home care setting.

IO Explain what constitutes a medical emergency in the home care setting.

Goal E3.6: Manage the use, maintenance, and troubleshooting of medication administration equipment and medication-related equipment used in the management of home care patients.

OBJ E3.6.1 (Synthesis) Solve operational problems related to the use and maintenance of medication administration equipment and medication-related equipment used in the management of home care patients.

IO Explain proper maintenance procedures for medication administration equipment and medication-related equipment used in the management of home care patients.

IO Devise effective troubleshooting strategies for medication administration equipment and medication-related equipment that is not working properly.

IO Skillfully operate medication administration equipment and medication-related equipment used in the home.

OBJ E3.6.2 (Analysis) Participate in the development of criteria for selection of medication administration and medication-related equipment.

Goal E3.7: Understand the appropriate relationship between the home care pharmacist and home care suppliers.

OBJ E3.7.1 (Comprehension) Explain the role of the home care pharmacist in establishing policies for working with the pharmaceutical industry.

IO State the home care practice's policies for working with the pharmaceutical industry.

IO Explain the importance of establishing policies and procedures for working with the pharmaceutical industry.

IO Explain an appropriate working relationship with the pharmaceutical industry including ethical considerations.

OBJ E3.7.2 (Comprehension) Explain the role of the home care pharmacist in establishing policies for working with the manufacturers of medication-use related equipment and supplies used in home care.

IO State the home care practice's policies for working with manufacturers of medication-use related equipment and supplies used in home care.

IO Explain the importance of establishing policies and procedures for working with manufacturers of medication-use related equipment and supplies used in home care.

IO Explain an appropriate working relationship with manufacturers of medication-use related equipment and supplies used in home care, including ethical considerations.

Goal E3.8: Appreciate the complexity of the financial environment of home care practice.

OBJ E3.8.1 (Comprehension) Explain various factors that affect the financial environment of home care practice.

OBJ E3.8.2 (Comprehension) Explain the different types of payers in home care and the effect of that mix on the finances of the home care practice.

OBJ E3.8.3 (Comprehension) Explain the ethical and pharmaceutical issues involved in providing home care to patients with little or no insurance coverage.
OBJ E3.8.4  (Comprehension) Explain the effect of patient mix (therapy type) on profitability.

OBJ E3.8.5  (Knowledge) Identify resources for financial and reimbursement advice when working in the home care environment.

Goal E3.9: Conduct ethical informational and marketing visits to payers, potential referral sources, and patients of the home care organization.

OBJ E3.9.1  (Synthesis) Formulate effective strategies for conducting ethical informational and marketing visits to payers, potential referral sources, and patients of the home care organization.

IO   Explain ethical issues involved in providing information about and marketing of home care services.

OBJ E3.9.2  (Application) Use effective presentation techniques to conduct ethical informational or marketing visits to payers, potential referral sources, and patients of the home care organization.

Outcome E4: Demonstrate knowledge and skills particular to generalist practice in the managed care practice environment.

Goal E4.1: Maintain confidentiality of patient and proprietary business information.

OBJ E4.1.1  (Application) Observe legal and ethical guidelines for safeguarding the confidentiality of patient information.

IO   Explain patient confidentiality issues related to data collection, transmission, and storage by pharmacy information systems and by electronic medical records.

IO   Explain situations unique to managed care that may raise the issue of confidentiality of patient information.

OBJ E4.1.2  (Application) Observe health system policy for the safeguarding of proprietary business information.

IO   Explain the concept of "proprietary business information" and its importance in the conduct of business activities.

IO   Explain the role of written policy and tacit knowledge in the development of normative procedure for the disclosure of business information within a specific health system.

Goal E4.2: Understand the interrelationship of the pharmacy benefit management company, the health plan, and the delivery system functions of managed care.

OBJ E4.2.1  (Comprehension) Explain the health-plan functions of managed care, including benefit design and management, co-pay, formulary coverage, prior authorization, access, and contract negotiations (medication acquisition and/or network pharmacy).

IO   Explain the difference between pharmacy risk and capitation.

OBJ E4.2.2  (Comprehension) Explain the effect that the health plan has on the delivery functions of managed care.

OBJ E4.2.3  (Comprehension) Explain the interrelationship of the health plan and the delivery system functions of managed care.

Goal E4.3: Understand unique aspects of providing evidence-based, patient-centered medication therapy management with interdisciplinary teams in the managed care environment.

OBJ E4.3.1:  (Comprehension) Explain ways in which the provision of medication therapy management may differ when occurring in the managed care environment.

IO   Explain strategies for getting information from unwilling or inaccessible participants.
**Outcome E5: Participate in the management of medical emergencies.**

Goal E5.1: Participate in the management of medical emergencies.

**OBJ E5.1.1** (Evaluation) Exercise skill as a team member in the management of medical emergencies according to the organization’s policies and procedures.

**IO** 
- Explain the organization’s policies and procedures for medical emergencies.
- Explain appropriate medication therapy in medical emergency situations.
- Explain unique considerations when preparing and dispensing medications and calculating doses during a medical emergency.
- Explain the importance of anticipating needs during a medical emergency.

**Outcome E6: Provide drug information to health care professionals and/or the public.**

Goal E6.1: Identify a core library, including electronic media, appropriate for a specific practice setting.

**OBJ E6.1.1** (Application) Use knowledge of standard resources to select a core library of primary, secondary, and tertiary references appropriate for a specific practice setting.

**IO** 
- Explain the contributions and limitations that use of internet accessible resources (e.g., the World Wide Web) can make to the acquisition and dissemination of drug information.
- Explain the importance of evaluating the reliability and validity of information accessed through the World Wide Web.

Goal E6.2: Design and deliver programs that contribute to public health efforts.

**OBJ E6.2.1** (Comprehension) Explain the pharmacist’s role in public health, including specific contributions to public health efforts that can be made by health-system pharmacists.

**OBJ E6.2.2** (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.
- State the data required to justify a program.
- Explain the support needed to establish a program.
- Explain potential problems and shortcomings associated with the maintenance of a wellness promotion program.

**OBJ E6.2.3** (Synthesis) Participate in the development of organizational plans for emergency preparedness.

**Outcome E7: Demonstrate additional competencies that contribute to working successfully in the health care environment.**

Goal E7.1: Use approaches in all communications that display sensitivity to the cultural and personal characteristics of patients, caregivers, and health care colleagues.

**OBJ E7.1.1** (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.
- Explain common situations in the practice of pharmacy which can produce a difficult communications encounter.
- Explain effective communications strategies that could be used in a difficult encounter including the use of active listening.
- Explain the meaning of cultural competence.
Explain communication strategies that are appropriate for patients who are non-English speakers or who are impaired.

Explain ways in which communication strategy can be modified to accommodate the individual’s personal characteristics.

Goal E7.2: Communicate effectively.

**OBJ E7.2.1** (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.

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 E7.2.2** (Complex Overt Response) Speak clearly and distinctly in grammatically correct English or the alternate primary language of the practice site.

**OBJ E7.2.3** (Application) Use listening skills effectively in performing job functions.

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 E7.2.4** (Application) Use correct grammar, punctuation, spelling, style, and formatting conventions in preparing all written communications.

Goal E7.3: Balance obligations to oneself, relationships, and work in a way that minimizes stress.

**OBJ E7.3.1** (Synthesis) Devise an effective plan for minimizing stress while attending to personal needs, maintaining relationships, and meeting professional obligations.

IO Explain various approaches advocated for achieving balance in one’s life.

Goal E7.4: Manage time effectively to fulfill practice responsibilities.

**OBJ E7.4.1** (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.

Goal E7.5: Make effective use of available software and information systems.

**OBJ E7.5.1** (Application) Successfully search, retrieve, and manage electronic data from internal information databases, external online databases, and the Internet.

IO Explain strategies for storing electronically-accessed information.
Explain the strengths and weaknesses of various search engines.

OBJ E7.5.2 (Application) Exercise skill in the use of the organization’s word-processing, spreadsheet, and presentation software.

Explain the applicability of individual software programs to performing specific tasks.

OBJ E7.5.3 (Comprehension) Explain how an effectively functioning organizational information system is structured.

Explain the meaning of various terms necessary to understand in order to communicate with those involved in the design, development and use of informatics in the organization.

Explain the concept of interface as it relates to various informatics tools within an organization.

Explain the use of standards in the evolution of informatics tools.

Explain how the introduction of a new informatics tool affects policies and procedures.

Approved by the Commission on Credentialing of the American Society of Health-System Pharmacists March 11, 2007. Endorsed by the ASHP Board of Directors April 18, 2007. This document is a revision of a set of educational outcomes, goals and objectives approved by the Commission on Credentialing of the American Society of Health-System Pharmacists August 20, 2005 and endorsed by the ASHP Board of Directors September 23, 2005. This earlier version developed by an ASHP working group comprised residency program directors, preceptors, and ASHP staff: Frank E. Briggs, Pharm.D., Assistant Director of Pharmacy, West Virginia University Hospitals; Mary M. Hess, Pharm.D., Clinical Coordinator, Greenville Hospital System; Carolyn G. Kowalchik, R.Ph., M.S., Director, Pharmacy Practice Residency Program, University of Utah Hospitals and Clinics; Bruce A. Nelson, R.Ph., M.S., Operations Director, Accreditation Services Division, ASHP; and Christine M. Nimmo, Ph.D., Standards Development and Training Director, Accreditation Services Division, ASHP.

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2nd Edition: The effective date for implementing these changes will be concurrent with the class of residents entering programs in July 2008.

This document supersedes the required and elective educational outcomes, goals and objectives for postgraduate year one (PGY1) pharmacy residencies approved by the COC in August 2005, and endorsed by ASHP Board of Directors September 2005.

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 honest 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 -- 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.


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.)

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.

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.
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.


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.)
Resident Duty Hours Tracking Form

Month: Year: RPD Initials:

Name: __________________________________________

Residents: Use this form to track your hours worked each month. Hours worked on UA/UAMC property count towards duty hours. Any work on residency-related issues done off campus does not count. Time spent moonlighting (anywhere) should be included (and specified). If you were OFF on a particular day please enter “OFF” in time in and out and put a zero in the hours.

Forms are due to the RPD the first day of the each month after the previous month.

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Total Hours

Days OFF
# Residency Advisory Committee

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<th>Contact Info.</th>
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<tr>
<td>Residency Program Director</td>
<td>William Fritz, RPh</td>
<td>694-7015 (office)</td>
</tr>
<tr>
<td></td>
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<td><a href="mailto:William.Fritz@uahealth.com">William.Fritz@uahealth.com</a></td>
</tr>
<tr>
<td>Service Preceptor</td>
<td>Tara Montgomery, PharmD, MBA/MPH</td>
<td>874-4190 (office)</td>
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<td><a href="mailto:Tara.Montgomery@uahealth.com">Tara.Montgomery@uahealth.com</a></td>
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<tr>
<td>Practice Management Preceptor</td>
<td>Al Cortese, PharmD, Tara Montgomery, PharmD, MBA/MPH</td>
<td>874-2510 (office)</td>
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<tr>
<td></td>
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<td><a href="mailto:Albert.Cortese@uahealth.com">Albert.Cortese@uahealth.com</a></td>
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<tr>
<td>Adult Acute Care I/II/III Preceptor</td>
<td>Jamie Natkowski, PharmD, BCPS; Georgina Rubal-Peace, PharmD, BCPS; Kateryna Yenina, PharmD, BCPS</td>
<td>874-2453 (4th floor) and 874-2282 (ICU)</td>
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<tr>
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<td><a href="mailto:Jamie.Natkowski@uahealth.com">Jamie.Natkowski@uahealth.com</a></td>
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<tr>
<td>Psychiatry I/II</td>
<td>Lisa Goldstone, PharmD, BCPS</td>
<td>874-2530 (office)</td>
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<td>626-4826(UA office)</td>
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<td><a href="mailto:goldstone@pharmacy.arizona.edu">goldstone@pharmacy.arizona.edu</a></td>
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<tr>
<td>Toxicology Preceptor</td>
<td>Keith Boesen, PharmD</td>
<td>626-6230 (office)</td>
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<td>331-4988 (cell)</td>
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<td><a href="mailto:boesen@pharmacy.arizona.edu">boesen@pharmacy.arizona.edu</a></td>
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<tr>
<td>Infectious Disease Preceptor</td>
<td>Rona Peters, PharmD, Jamie Natkowski, PharmD, BCPS</td>
<td>874-2453 (4th floor)</td>
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<td><a href="mailto:Rona.Peters@uahealth.com">Rona.Peters@uahealth.com</a></td>
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<tr>
<td>Cardiology Preceptor</td>
<td>Robert Lawson, PharmD</td>
<td><a href="mailto:Robert.Lawson@uahealth.com">Robert.Lawson@uahealth.com</a></td>
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APPENDIX 5

Resident Skills Assessment and Questionnaire

Resident Name: _________________________________________________________

Are you certified in any of the following? If so, please indicate expiration date:

- CPR or BLS
- ACLS

Other:

What is your experience in participating or observing cardiac resuscitation? Please indicate frequency of attendance and role.

What experience have you had counseling patients on the use of their medications?

What experience have you had providing inpatient staff pharmacy services? Please address the following: unit dose, preparation of IVs, chemotherapy and parenteral nutrition.

What experience have you had providing pharmacokinetic consultations? Specify involved medications (aminoglycosides, vancomycin, theophylline, digoxin, phenytoin).

Describe your experiences with the following computer applications. Include examples of projects and frequency of use.

- MS Word
- MS Excel
- MS PowerPoint
- MS Access
- HMM
- Pyxis
- Pyxis Connect
- PharmaServe

What experience have you had providing drug information and education?

What experience have you had with formulary review?

What experience have you had performing DUEs, DURs and MUSEs?
What experience have you had relating to performance improvement, continuous quality improvement and/or quality assurance?

What experience have you had related to pharmacy management, such as inventory management, handling of controlled substances and budget or workload calculations?

Please list 3 professional and/or personal strengths:

Please list 3 areas you would like to improve upon or strengthen:

State your career goals, both short term (5 year) and long term (10-15 years).
- Short Term:
- Long Term:

Describe your current practice interests.

List areas of weakness that you would like to improve on during the residency.

Given your listed career goals, interests, strengths, and weaknesses, list at least three (3) goals that you wish to accomplish during your residency.

Describe activities/experiences that have contributed to your skills in the following areas:
- Written communication
- Verbal communication
- Public speaking
- Time management
- Supervisory skills

What areas of residency training (read and refer to the ASHP standard found in the ASHP Residency Directory or on the ASHP web site at www.ashp.org) would you like to concentrate on during the residency program? (List in order of importance).
20. What are your areas of interest in regard to completing a project? Do you have any ideas already?

Describe the frequency and type of preceptor interaction you feel to be ideal. Where do you see the preceptor fitting into your professional development and maturity?

What roles do see professional organizations having in your career?
# APPENDIX 6

## PGY1 Sample Schedule

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**Service:** 2 weekend days a month

**Practice management:**
- P&T committee Meeting Attendance (monthly) 2nd Wednesday
- Medication Safety Subcommittee (monthly)