



## **Required and Elective Educational Outcomes, Goals, Objectives, and Instructional Objectives for Postgraduate Year Two (PGY2) Pharmacy Residencies in Pain Management and Palliative Care**

### **Overview of PGY2 Pain Management and Palliative Care Pharmacy Residencies**

PGY2 pharmacy residencies in pain management and palliative care are designed to transition PGY1 pharmacy residency graduates from generalist practice to specialized practice focused on the pain management and palliative care needs of patients. Residency graduates are equipped to participate as essential members of interdisciplinary pain management and palliative care teams and are able to make complex therapeutic recommendations in various practice settings. Training focuses on developing residents' capabilities to deal with a range of pain syndromes, including chronic malignant and non-malignant pain, neuropathic pain, and pain related to neurologic, orthopedic and rheumatologic conditions. Palliative care emphasis is placed on symptom management throughout patients' illnesses and at the end of life.

In addition to these direct patient care responsibilities, pain management and palliative care pharmacy residency graduates are trained to serve as authoritative resources in their health systems for the optimal use of medications. In that role they can be relied upon to lead the development and implementation of medication-related guidelines and protocols for pain management and palliative care, and the development of pain management and palliative care related services. Graduates are also highly skilled in the design and delivery of education and training related to pain management and palliative care for patients and/or caregivers, as well as health care professionals and health care professionals in training. Graduates are also skilled in both clinical practice research and in outcomes analyses.

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

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.

The educational outcomes, goals, and objectives are divided into those that are required and those that are elective. The required outcomes, including all of the goals and objectives falling under them, must be included in the design of all programs. The elective outcomes are provided for those programs that wish to add to the required outcomes. Programs selecting an elective outcome are not required to include all of the goals and objectives falling under that outcome. In addition to the potential elective outcomes contained in this document, programs are free to create their own elective outcomes with associated goals and objectives. Other sources of elective outcomes may include elective educational outcomes in the list provided for PGY1 pharmacy residencies and educational outcomes for training in other PGY2 areas. 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.

This document contains the required and elective outcomes for PGY2 pharmacy residencies in pain management and palliative care in successively detailed formats. The progression moves from the big picture to complete details for guiding instruction of a particular educational objective.

The explanation below first defines the terms used in the document and then indicates the contents of each entry, an explanation of when that particular level of detail might be useful, and the page number on which each entry begins.

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

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

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

Content Descriptor	Uses for This Level of Detail	Page
PGY2 Pain Management and Palliative Care Pharmacy Residency Required and Elective Educational Outcomes	<ul style="list-style-type: none"> <li>• A one-page summary that allows one to see at a glance the big picture of both the required educational outcomes and those that might be chosen as electives.</li> <li>• Useful when initially conceptualizing the framework for a residency program such as in step 1 of the RLS decision process when determining the program’s purpose and desired educational outcomes.</li> </ul>	4
PGY2 Pain Management and Palliative Care Pharmacy Residency Required and Elective Educational Outcomes and Goals	<ul style="list-style-type: none"> <li>• The goals associated with each educational outcome have been added, providing sweeping statements of the abilities of one who has achieved the outcome.</li> <li>• Useful when desiring a general, but more focused, idea of what is meant by the educational outcome. This level of understanding may contribute to considered decisions in step 1 of the RLS decision process, and in step 2 when laying out the program’s structure.</li> </ul>	5
PGY2 Pain Management and Palliative Care Pharmacy Residency Required and Elective Educational Outcomes, Goals, and Objectives – (Educational Objectives Classified by Taxonomy and Level of Learning)	<ul style="list-style-type: none"> <li>• The educational objectives, which are residents’ performances to be demonstrated and measured during instruction and assessment, are listed below each educational goal.</li> <li>• Useful when desiring to know the exact task performance expected of a resident who achieves the goals falling under a specific outcome. The detail here focuses on the specifics associated with goal performance, so this level of detail becomes useful when desiring to totally understand what an outcome and its goals mean. Understanding at this deep level will help to make sound decisions particularly in RLS decision process steps 3 (assigning educational goals and objectives to specific learning experiences), 4 (designating learning activities), and 5 (designing resident assessments).</li> </ul>	7
PGY2 Pain Management and Palliative Care Pharmacy Residency Required and Elective Educational Outcomes, Goals, and Objectives plus Instructional Objectives (Educational Objectives Classified by Taxonomy and Level of Learning)	<ul style="list-style-type: none"> <li>• Instructional objectives (IOs), expectations of what the average resident might need to learn in order to achieve the educational objective, have been listed below each objective.</li> <li>• Instructional objectives are an arsenal of ideas for preceptors for arranging the teaching/learning situation for residents. IOs will be of particular use when determining the learning activities for the learning experience in step 4 of the RLS decision process and later during instruction should a resident experience difficulty in performing a particular educational objective.</li> </ul>	16
Appendix	<ul style="list-style-type: none"> <li>• This appendix provides specific information regarding required core experiences.</li> </ul>	31

**Required Educational Outcomes for Postgraduate Year Two (PGY2) Pharmacy  
Residencies in Pain Management and Palliative Care**

- Outcome R1: Demonstrate leadership and practice management skills in pain management and palliative care.*
- Outcome R2: Optimize the outcomes of pain management and palliative care patients through the expert provision of evidence-based patient-centered medication therapy as an integral part of an interdisciplinary team.*
- Outcome R3: Serve as an authoritative resource on the optimal use of medications in pain management and palliative care.*
- Outcome R4: Demonstrate excellence in the provision of training and educational activities for health care professionals, health care professionals in training, and the public in pain management and palliative care.*
- Outcome R5: Contribute to the body of pain management and palliative care knowledge.*

**Elective Educational Outcomes for Postgraduate Year Two (PGY2) Pharmacy  
Residencies in Pain Management and Palliative Care**

- Outcome E1 Demonstrate skills required to function in an academic setting.*
- Outcome E2: Demonstrate additional leadership and practice management skills.*
- Outcome E4: Manage and improve the medication-use process in patient care settings.*
- Outcome E5: Write additional articles on pain management and palliative-care related topics for publication.*
- Outcome E6: Function effectively in pain management and palliative care settings participating in clinical investigations.*

<p style="text-align: center;"><b>Required Educational Outcomes and Goals for Postgraduate Year Two (PGY2) Pharmacy Residencies in Pain Management and Palliative Care</b></p>
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***Outcome R1: Demonstrate leadership and practice management skills in pain management and palliative care.***

- Goal R1.1: Exhibit the ongoing development of essential personal skills of a practice leader.
- Goal R1.2: Establish oneself as an expert for medication-related information and resources within an organization.
- Goal R1.3: Contribute the pharmacy specialist's perspective to an organization's technology and automation systems decisions.
- Goal R1.4: Contribute to the leadership and management activities within the practice area.
- Goal R1.5: Exercise practice leadership.

***Outcome R2: Optimize the outcomes of pain management and palliative care patients through the expert provision of evidence-based patient-centered medication therapy as an integral part of an interdisciplinary team.***

- Goal R2.1: Develop collaborative professional relationships with members of the health care team.
- Goal R2.2: Prioritize the pharmaceutical care needs of patients.
- Goal R2.3: Establish collaborative pharmacist-patient and pharmacist-caregiver relationships.
- Goal R2.4: Collect and analyze patient information.
- Goal R2.5: Appropriately triage patients.
- Goal R2.6: Design evidence-based therapeutic regimens.
- Goal R2.7: Design evidenced-based monitoring plans.
- Goal R2.8: Recommend regimens and monitoring plans.
- Goal R2.9: Design education for a patient's regimen and monitoring plan.
- Goal R2.10: Implement regimens and monitoring plans.
- Goal R2.11: Evaluate patient progress and redesign regimens and monitoring plans.
- Goal R2.12: Communicate pertinent patient information to facilitate continuity of care.
- Goal R2.13: Document direct patient-care activities appropriately.

***Outcome R3: Serve as an authoritative resource on the optimal use of medications in pain management and palliative care.***

- Goal R3.1: Employ advanced literature analysis skills in preparing drug information.
- Goal R3.2: Provide concise, applicable, comprehensive, and timely responses to formal or informal requests for drug information.
- Goal R3.3: Provide pharmacy expertise to the organization in the review of existing, development of new, and implementation of the organization's policies and procedures affecting the care of patients.
- Goal R3.4: Develop a core library appropriate for pain management and palliative care pharmacy practice.

- Goal R3.5: Identify opportunities for improving the safety of aspects of the organization's medication-use system.
- Goal R3.6: Assist the organization in achieving compliance with accreditation, legal, regulatory, and safety requirements related to the use of medications (e.g., The Joint Commission requirements; ASHP standards, statements, and guidelines; state and federal laws regulating pharmacy practice; OSHA regulations).
- Goal R3.7: Lead the review of existing, and development and implementation of new, medication-related guidelines/protocols for the care of patients served by the specialized area of pharmacy practice.

***Outcome R4: Demonstrate excellence in the provision of training and educational activities for health care professionals, health care professionals in training, and the public in pain management and palliative care.***

- Goal R4.1: Provide effective education and training to health care professionals and health care professionals in training.
- Goal R4.2: Design and deliver education programs to the public that center on pain and symptom management.

***Outcome R5: Contribute to the body of pain management and palliative care knowledge.***

- Goal R5.1: Conduct a pharmacy-related research project using effective research and project management skills.
- Goal R5.2: Engage in the publication process.

**Elective Educational Outcomes and Goals for Postgraduate Year Two (PGY2)  
Pharmacy Residencies in Pain Management and Palliative Care**

***Outcome E1: Demonstrate skills required to function in an academic setting.***

- Goal E1.1: Understand faculty roles and responsibilities.
- Goal E1.2: Exercise teaching skills essential to pharmacy faculty

***Outcome E2: Demonstrate additional leadership and practice management skills.***

- Goal E2.1: Develop a proposal for a new or revised pain management and palliative care-related pharmacy service

***Outcome E3: Manage and improve the medication-use process in patient care settings.***

- Goal E3.1: Prepare and dispense medications for pain management and palliative care patients following existing standards of practice and the organization's policies and procedures.

***Outcome E4: Write additional articles on pain management and palliative-care related topics for publication.***

- Goal E4.1: Write articles that provide pertinent medication use information on pain management and palliative care related topics for health care professionals and/or the public.

***Outcome E5: Function effectively in pain management and palliative care settings participating in clinical investigations.***

Goal E5.1: Participate in the operation of a system that prepares and distributes investigational pain management and palliative care-related medications.

<p><b>Required Educational Outcomes, Goals, and Objectives for Postgraduate Year Two (PGY2) Pharmacy Residencies in Pain Management and Palliative Care</b></p>
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***Outcome R1: Demonstrate leadership and practice management skills in pain management and palliative care.***

Goal R1.1: Exhibit the ongoing development of essential personal skills of a practice leader.

Obj 1.1.1: (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.

Obj 1.1.2: (Characterization) Demonstrate commitment to the professional practice of pain management and palliative care pharmacy through active participation in the activities of local, state, and/or national pain management and palliative care and pharmacy professional organizations.

Obj 1.1.3: (Synthesis) Devise an effective plan for balancing professional and personal life.

Obj 1.1.4: (Characterization) Display integrity in professional relationships and actions.

Obj 1.1.5: (Application) Adhere to the requirements of the organization's policy in all interactions with the pharmaceutical industry.

Obj 1.1.6: (Synthesis) Initiate and maintain a systematic approach to documenting professional activities and accomplishments.

Obj 1.1.7: (Evaluation) Appraise each job responsibility for its relative importance to all job responsibilities and prioritize appropriately.

Obj 1.1.8: (Organization) Demonstrate sensitivity to the perspective of the patient, caregiver, or health care colleague in all communications.

Obj 1.1.9: (Organization) Demonstrate the personal characteristics required of specialists in pain management and palliative care pharmacy, including compassion, sensitivity, and tolerance.

Goal R1.2: Establish oneself as an expert for medication-related information and resources within an organization.

Obj 1.2.1: (Synthesis) Implement a successful strategy for earning credibility within the organization to be an authoritative expert on the medication-related care of patients.

Goal R1.3: Contribute the pharmacy specialist's perspective to an organization's technology and automation systems decisions.

- Obj 1.3.1: (Synthesis) When appropriate, participate in the organization's design of its technology and automation systems used in patient care.
- Obj 1.3.2: (Synthesis) When appropriate, participate in the organization's implementation of its technology and automation systems.
- Obj 1.3.3: (Synthesis) When appropriate, participate in the organization's quality improvement of its technology and automation systems.
- Goal R1.4: Contribute to the leadership and management activities within the practice area.
  - Obj 1.4.1: (Application) Use effective negotiation skills to resolve conflicts.
  - Obj 1.4.2: (Synthesis) Use group participation skills when leading or working as a member of a formal or informal work group.
  - Obj 1.4.3: (Comprehension) Explain the components of a proposal for a new pharmacy service that would meet a perceived need of the organization and its patients.
- Goal R1.5: Exercise practice leadership.
  - Obj 1.5.1: (Characterization) Demonstrate a commitment to advocacy for the optimal care of patients through the assertive and persuasive presentation of patient care issues to members of the health care team, the patient, and/or the patient's representative(s).
  - Obj 1.5.2: (Characterization) Display initiative in preventing, identifying, and resolving pharmacy-related patient care problems.
  - Obj 1.5.3: (Comprehension) Explain the nature of mentoring in pharmacy, its potential connection with achievement, and the importance of being willing to serve as a mentor to appropriate individuals.
  - Obj 1.5.4: (Comprehension) Explain the general processes of establishing and maintaining a PGY2 pharmacy residency program.

***Outcome R2: Optimize the outcomes of pain management and palliative care patients through the expert provision of evidence-based patient-centered medication therapy as an integral part of an interdisciplinary team.***

- Goal R2.1: Develop collaborative professional relationships with members of the health care team.
  - Obj 2.1.1: (Synthesis) Implement a strategy that effectively develops cooperative, collaborative, and communicative working relationships with members of the interdisciplinary health care team.
- Goal R2.2: Prioritize the pharmaceutical care needs of patients.
  - Obj 2.2.1: (Evaluation) Appropriately prioritize the care of patients if given limited time and multiple patient care responsibilities.
- Goal R2.3: Establish collaborative pharmacist-patient and pharmacist-caregiver relationships.
  - Obj 2.3.1: (Synthesis) Implement a strategy that effectively establishes a patient-centered pharmacist-patient and pharmacist-caregiver relationship.
- Goal R2.4: Collect and analyze patient information.



- Obj 2.4.1: (Analysis) Collect and organize all patient-specific information needed by the pharmacy specialist to anticipate, prevent, detect, and/or resolve medication-related problems and to make appropriate evidence-based, patient-centered medication therapy recommendations as part of the interdisciplinary team (see appendix for required and elective content regarding disease states, medications, and non-medication treatments).
- Obj 2.4.2: (Analysis) Determine the presence of or potential for all clinically significant problems in the patient's current medication therapy.
- Obj 2.4.3: (Analysis) Using an organized collection of patient-specific information, summarize the patient's health care needs.
- Goal R2.5: Appropriately triage patients.
  - Obj 2.5.1: (Evaluation) When presented with a patient with health care needs that cannot be met by the pharmacy specialist, request a consult by the appropriate health care provider based on the patient's acuity and the presenting problem.
  - Obj 2.5.2: (Synthesis) Devise a plan for follow-up on a consult for a patient.
- Goal R2.6: Design evidence-based therapeutic regimens.
  - Obj 2.6.1: (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.
  - Obj 2.6.2: (Synthesis) Design a patient-centered regimen that meets the evidence-based therapeutic goals established for the patient; integrates patient-specific information, disease and drug utilization review information, ethical issues and quality-of-life issues; and considers pharmacogenomic and pharmacoeconomic principles.
- Goal R2.7: Design evidenced-based monitoring plans.
  - Obj 2.7.1: (Synthesis) Design a patient-centered, evidenced-based monitoring plan for a therapeutic regimen that effectively evaluates achievement of the specified therapeutic goals.
- Goal R2.8: Recommend regimens and monitoring plans.
  - Obj 2.8.1: (Application) Recommend a patient-centered, evidence-based therapeutic regimen and corresponding monitoring plan to other members of the interdisciplinary team in a way that is systematic, logical, accurate, timely, and secures consensus from the team.
  - Obj 2.8.2: (Application) Discuss the proposed patient-centered, evidence-based therapeutic regimen and corresponding monitoring plan with the patient and/or caregiver in a way that is systematic, logical, accurate, timely, sensitive, and secures consensus from the patient and/or caregiver.
- Goal R2.9: Design education for a patient's regimen and monitoring plan.
  - Obj 2.9.1: (Analysis) Accurately identify what education will be essential to the patient's or caregiver's understanding of the therapeutic regimen and monitoring plan; how to adhere to it; and the importance of adherence.

- Obj 2.9.2: (Synthesis) Design an effective and efficient plan for meeting the educational needs of the patient, including information on medication therapy, adverse effects, adherence, appropriate use, handling, and medication administration.
- Goal R2.10: Implement regimens and monitoring plans.
  - Obj 2.10.1: (Application) When appropriate, initiate the patient-centered, evidence-based therapeutic regimen and monitoring plan for the patient according to the organization's policies and procedures.
  - Obj 2.10.2: (Complex Overt Response) When appropriate, exercise skill in the administration or supervision of the administration of a patient's therapeutic regimen.
  - Obj 2.10.3: (Application) When necessary, contribute to the work of the team that secures access for drugs used in a patient's regimen.
  - Obj 2.10.4: (Application) Use effective patient education techniques to provide counseling to patients and caregivers, including information on the disease state, medication therapy, adverse effects, compliance, appropriate use, handling, medication therapy, adverse effects, compliance, appropriate use, handling, storage, medication administration, and any other therapeutic interventions.
  - Obj 2.10.5: (Application) Use a working knowledge of the organization's referral process to make any necessary patient referrals.
  - Obj 2.10.6: (Application) Make follow-up appointments as specified in the monitoring plan.
- Goal R2.11: Evaluate patient progress and redesign regimens and monitoring plans.
  - Obj 2.11.1: (Evaluation) Accurately assess the patient's progress toward the therapeutic goal(s).
  - Obj 2.11.2: (Synthesis) Redesign the patient's regimen and monitoring plan as necessary, based on evaluation of monitoring data and therapeutic outcomes.
- Goal R2.12: Communicate pertinent patient information to facilitate continuity of care.
  - Obj 2.12.1: (Application) Ensure that accurate and timely patient-specific information reaches those who need it at the appropriate time.
  - Obj 2.12.2: (Synthesis) Formulate a strategy for continuity of pharmaceutical care across all applicable treatment settings.
- Goal R2.13: Document direct patient-care activities appropriately.
  - Obj 2.13.1: (Analysis) Appropriately select direct patient-care activities for documentation.
  - Obj 2.13.2: (Application) Write timely and authoritative consults and notes according to the organization's policies and procedures.

***Outcome R3: Serve as an authoritative resource on the optimal use of medications in pain management and palliative care.***

- Goal R3.1: Employ advanced literature analysis skills in preparing drug information.
  - Obj 3.1.1: (Synthesis) Create an efficient and effective advanced search strategy to prepare a drug information response.

- Obj 3.1.2: (Analysis) Accurately identify the study design employed for a piece of biomedical literature.
  - Obj 3.1.3: (Evaluation) Determine if the study design and methodology are appropriate to accomplish the objectives of a piece of biomedical literature.
  - Obj 3.1.4: (Evaluation) Accurately interpret statistical information presented in a piece of biomedical literature.
  - Obj 3.1.5: (Analysis) Identify potential sources of bias in a piece of biomedical literature.
  - Obj 3.1.6: (Evaluation) Determine the internal and external validity of a piece of biomedical literature.
  - Obj 3.1.7: (Evaluation) Determine if a study's results have applicability for hypothesizing future research or for directing patient care decisions.
  - Obj 3.1.8: (Evaluation) When presented with conflicting biomedical literature, determine the validity and applicability for a specific drug information need.
  - Obj 3.1.9: (Evaluation) When presented with limited evidence-based biomedical literature, synthesize a reasonable response for the specific drug information need.
  - Obj 3.1.10: (Evaluation) Appraise information provided by a pharmaceutical manufacturer.
  - Obj 3.1.11: (Synthesis) Prepare an expert response to a complex drug information need.
- Goal R3.2: Provide concise, applicable, comprehensive, and timely responses to formal or informal requests for drug information.
- Obj 3.2.1: (Analysis) Discriminate between the requester's statement of need and the actual drug information need by asking for appropriate additional information.
  - Obj 3.2.2: (Synthesis) Formulate a systematic, efficient, and thorough procedure for retrieving drug information.
  - Obj 3.2.3: (Analysis) Determine from all retrieved biomedical literature the appropriate information to evaluate.
  - Obj 3.2.4: (Evaluation) Evaluate the usefulness of biomedical literature gathered.
  - Obj 3.2.5: (Evaluation) Determine whether a study's conclusions are supported by the study results.
  - Obj 3.2.6: (Synthesis) Formulate responses to formal drug information requests based on analysis of the literature
  - Obj 3.2.7: (Synthesis) Provide appropriate response to informal drug information questions that require the pharmacist to draw upon his or her knowledge base.
  - Obj 3.2.8: (Evaluation) Assess the effectiveness of drug information recommendations.

- Goal R3.3: Provide pharmacy expertise to the organization in the review of existing, development of new, and implementation of the organization's policies and procedures affecting the care of patients.
- Obj 3.3.1: (Evaluation) Make recommendations for drug class decisions based on comparative reviews.
  - Obj 3.3.2: (Synthesis) Formulate effective strategies for communicating formulary restrictions to providers.
  - Obj 3.3.3: (Evaluation) When presented with a drug shortage, identify appropriate alternative medications.
  - Obj 3.3.4: (Evaluation) When the needs of a particular patient warrant, determine if a non-formulary medication should be considered for therapy.
  - Obj 3.3.5: (Synthesis) Contribute to the work of an organizational committee or work group concerned with the improvement of medication-use policies and procedures.
- Goal R3.4: Develop a core library appropriate for pain management and palliative care pharmacy practice.
- Obj 3.4.1: (Application) Use knowledge of standard pain management and palliative care related recourses to develop and maintain a core library of primary, secondary, and tertiary references appropriate for pharmacy practice, education and research.
- Goal R3.5: Identify opportunities for improving the safety of aspects of the organization's medication-use system.
- Obj 3.5.1: (Application) Participate in the organization's system for reporting medication errors and adverse drug reactions (ADEs).
  - Obj 3.5.2: (Comprehension) Explain those aspects of the organization's medication-use system affecting patients served by the specialized area of pharmacy practice and its vulnerabilities to adverse drug events (ADEs).
  - Obj 3.5.3: (Evaluation) Identify opportunities for improvement in aspects of the organization's medication-use system affecting patients served by the specialized area of pharmacy practice by comparing the medication-use system to relevant best practices.
- Goal R3.6: Assist the organization in achieving compliance with accreditation, legal, regulatory, and safety requirements related to the use of medications (e.g., The Joint Commission requirements; ASHP standards, statements, and guidelines; state and federal laws regulating pharmacy practice; OSHA regulations).
- Obj 3.6.1: (Evaluation) Determine appropriate activities and documentation needed to meet accreditation, legal, regulatory, and safety requirements for pharmacy.
- Goal R3.7: Lead the review of existing, and development and implementation of new, medication-related guidelines/protocols for the care of patients served by the specialized area of pharmacy practice.
- Obj 3.7.1: (Analysis) Identify the need for a medication-related guideline/protocol for the care of patients served by the specialized

- Obj 3.7.2: area of pharmacy practice by comparing the applicability of existing guidelines/protocols to the needs of the organization. (Synthesis) Develop a medication-related guideline/protocol for the care of patients served by the specialized area of pharmacy practice based on best evidence and the characteristics of the local environment and patients.
- Obj 3.7.3: (Synthesis) Formulate a strategy that will successfully implement a medication-related guideline/protocol for the care of patients served by the specialized area of pharmacy practice.
- Obj 3.7.4: (Evaluation) Assess the results of implementing a medication-related guideline/protocol for the care of patients served by the specialized area of pharmacy practice.

***Outcome R4: Demonstrate excellence in the provision of training and educational activities for health care professionals, health care professionals in training, and the public in pain management and palliative care.***

- Goal R4.1: Provide effective education and training to health care professionals and health care professionals in training.
  - Obj 4.1.1: (Synthesis) Use effective educational techniques in the design of an educational/training activity.
  - Obj 4.1.2: (Synthesis) Design an assessment strategy that appropriately measures the specified objectives for education or training and fits the learning situation.
  - Obj 4.1.3: (Application) Use skill in the four preceptor roles employed in practice-based teaching (direct instruction, modeling, coaching and facilitation).
  - Obj 4.1.4: (Application) Use skill in case-based teaching.
  - Obj 4.1.5: (Application) Use public speaking skills to speak effectively to a large group.
  - Obj 4.1.6: (Application) Use public speaking skills to speak effectively in a small group.
- Goal R4.2: Design and deliver education programs to the public that center on pain and symptom management.
  - Obj 4.2.1: (Synthesis) Contribute to the design of an educational program for the public that centers on health improvement, wellness, or disease prevention.
  - Obj 4.2.2: (Synthesis) Use appropriate educational techniques to deliver an educational program to the public that centers on health improvement, wellness or disease prevention.

***Outcome R5: Contribute to the body of pain management and palliative care knowledge.***

- Goal R5.1: Conduct a pharmacy-related research project using effective research and project management skills.
  - Obj 5.1.1: (Synthesis) Identify a topic of significance for a pharmacy-related research project that requires institutional review board (IRB) review.

- Obj 5.1.2: (Synthesis) Formulate a feasible design for a pharmacy-related research project.
  - Obj 5.1.3: (Synthesis) Secure any necessary approvals, including IRB, for a pharmacy-related research project.
  - Obj 5.1.4: (Synthesis) Implement a pharmacy-related research project as specified in its design.
  - Obj 5.1.5: (Synthesis) Effectively present the results of a pharmacy-related research project.
  - Obj 5.1.6: (Synthesis) Use correct grammar, punctuation, spelling, style, and formatting conventions to prepare a written summary of a pharmacy-related research project.
  - Obj 5.1.7: (Synthesis) Successfully employ accepted manuscript style to prepare a final report of a pharmacy-related research project.
  - Obj 5.1.8: (Evaluation) Accurately assess the impact, including sustainability if applicable, of the residency project.
- Goal R5.2: Engage in the publication process.
- Obj 5.2.1: (Comprehension) Explain the benefits, to the practitioner and the profession, of contributing to the pharmacy literature.
  - Obj 5.2.2: (Synthesis) Write a research article, review, or case report that is suitable for publication.
  - Obj 5.2.3: (Application) Follow the submission requirements of an appropriate peer-reviewed publication to submit a manuscript for publication.
  - Obj 5.2.4: (Evaluation) Participate in the peer review of a pharmacy professional's article submitted for publication or presentation.

<b>Elective Educational Outcomes, Goals, and Objectives for Postgraduate Year Two (PGY2) Pharmacy Residencies in Pain Management and Palliative Care</b>
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***Outcome E1: Demonstrate skills required to function in an academic setting.***

- Goal E1.1: Understand faculty roles and responsibilities.
- Obj E1.1.1: (Comprehension) Explain variations in the expectations of different colleges/schools of pharmacy for teaching, practice, research, and service.
  - Obj E1.1.2: (Analysis) Explain the role and influence of faculty in the academic environment.
  - Obj E1.1.3: (Comprehension) Describe the academic environment.
  - Obj E1.1.4: (Comprehension) Describe the types and ranks of faculty appointments.
  - Obj E1.1.5: (Comprehension) Discuss the promotion and tenure process for each type of appointment.
  - Obj E1.1.6: (Application) Identify resources available to help develop academic skills.

- Obj E1.1.7: (Comprehension) Explain the characteristics of a typical affiliation agreement between a college of pharmacy and a practice site (e.g., health system, hospital, clinic, retail pharmacy).
- Goal E1.2: Exercise teaching skills essential to pharmacy faculty
  - Obj E.1.2.1: (Synthesis) Develop an instructional design for a class session, module, or course.
  - Obj E1.2.2: (Synthesis) Prepare and deliver didactic instruction on a topic relevant to the specialized area of pharmacy residency training.
  - Obj E1.2.3: (Application) Develop and deliver cases for workshops and exercises for laboratory experiences.
  - Obj E.1.2.4: (Application) Serve as a preceptor or co-preceptor utilizing the four roles employed in practice-based teaching (direct instruction, modeling, coaching and facilitation),
  - Obj E1.2.5: (Analysis) Develop a teaching experience for a practice setting (e.g., introductory or advanced pharmacy experience).
  - Obj E1.2.6: (Synthesis) Design an assessment strategy that appropriately measures the specified educational objectives for the class session, module, course, or rotation.
  - Obj E1.2.7: (Evaluation) Create a teaching portfolio.
  - Obj E1.2.8: (Evaluation) Compare and contrast methods to prevent and respond to academic and profession dishonesty.
  - Obj E1.2.9: (Comprehension) Explain the relevance of copyright laws to developing teaching materials.

***Outcome E2: Demonstrate additional leadership and practice management skills.***

- Goal E2.1: Develop a proposal for a new or revised pain management and palliative care-related pharmacy service.
  - Obj E2.1.1: (Synthesis) Write a proposal for a pain management and palliative care-related service that meets a perceived need of the health system and its patients.
  - Obj E2.1.2: (Application) Use effective presentation skills to present a proposal for a new or revised pain management and palliative care-related service to the various concerned entities within the health system.
  - Obj E2.1.3: (Evaluation) Employ effective strategies for implementing a new or revised pain management and palliative care-related pharmacy services.
  - Obj E2.1.4: (Evaluation) Appraise a new or revised pain management and palliative care pharmacy service for adequacy in meeting the stated goals.

***Outcome E3: Manage and improve the medication-use process in patient care settings.***

- Goal E3.1: Prepare and dispense medications for pain management and palliative care patients following existing standards of practice and the organization's policies and procedures.

- Obj E3.1.1: (Evaluation) Interpret the appropriateness of a pain management and palliative care-related medication order before preparing or permitting the distribution of the first dose.
- Obj E3.1.2: (Synthesis) Design and implement quality improvement changes to aspects of the organization's medication-use system affecting pain management and palliative care patients.

***Outcome E4: Write additional articles on pain management and palliative care related topics for publication.***

- Goal E4.1: Write articles that provide pertinent medication use information on pain management and palliative care related topics for health care professionals and/or the public.
  - Obj E4.1.1: (Application) Use knowledge of the purpose of a particular publication to write articles that provide pertinent pain management and palliative care-related topics for health care professionals and/or the public.
  - Obj E4.1.2: (Synthesis) Submit a suitably formatted article on a pain management and palliative care-related topic for peer-reviewed publication.
  - Obj E4.1.3: (Evaluation) Provide peer review of a pharmacy or pain management and palliative care-related article for publication.

***Outcome E5: Function effectively in pain management and palliative care settings participating in clinical investigations.***

- Goal E5.1: Participate in the operation of a system that prepares and distributes investigational pain management and palliative care-related medications.
  - Obj E5.1.1: (Evaluation) Evaluate relevant aspects of a pain management and palliative care-related investigational drug study.
  - Obj E5.1.2: (Application) Manage the use of pain management and palliative care investigational drugs according to established protocols and the organization's policies and procedures.
  - Obj E5.1.3: (Comprehension) Compare and contrast record-keeping requirements of various regulatory agencies covering pain management and palliative care-related clinical research studies.



<p align="center"><b>Required Educational Outcomes, Goals, Objectives, and Instructional Objectives for Postgraduate Year Two (PGY2) Pharmacy Residencies in Pain Management and Palliative Care</b></p>
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***Outcome R1: Demonstrate leadership and practice management skills in pain management and palliative care.***

- Goal R1.1: Exhibit the ongoing development of essential personal skills of a practice leader.
  - Obj 1.1.1: (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.
  - Obj 1.1.2: (Characterization) Demonstrate commitment to the professional practice of pain management and palliative care pharmacy through active participation in the activities of local, state, and/or national pain management and palliative care and pharmacy professional organizations.
  - Obj 1.1.3: (Synthesis) Devise an effective plan for balancing professional and personal life.
  - Obj 1.1.4: (Characterization) Display integrity in professional relationships and actions.
  - Obj 1.1.5: (Application) Adhere to the requirements of the organization's policy in all interactions with the pharmaceutical industry.
  - Obj 1.1.6: (Synthesis) Initiate and maintain a systematic approach to documenting professional activities and accomplishments.
  - Obj 1.1.7: (Evaluation) Appraise each job responsibility for its relative importance to all job responsibilities and prioritize appropriately.
  - Obj 1.1.8: (Organization) Demonstrate sensitivity to the perspective of the patient, caregiver, or health care colleague in all communications.
  - Obj 1.1.9: (Organization) Demonstrate the personal characteristics required of specialists in pain management and palliative care pharmacy, including compassion, sensitivity, and tolerance.
- Goal R1.2: Establish oneself as an expert for medication-related information and resources within an organization.
  - Obj 1.2.1: (Synthesis) Implement a successful strategy for earning credibility within the organization to be an authoritative expert on the medication-related care of patients.
    - IO Identify barriers to the pharmacist for earning credibility with members of the interdisciplinary team.*
    - IO Identify barriers to the pharmacist for earning credibility within the organization.*
- Goal R1.3: Contribute the pharmacy specialist's perspective to an organization's technology and automation systems decisions.
  - Obj 1.3.1: (Synthesis) When appropriate, participate in the organization's design of its technology and automation systems used in patient care.

- Obj 1.3.2: (Synthesis) When appropriate, participate in the organization's implementation of its technology and automation systems.
- Obj 1.3.3: (Synthesis) When appropriate, participate in the organization's quality improvement of its technology and automation systems.
- Goal R1.4: Contribute to the leadership and management activities within the practice area.
  - Obj 1.4.1: (Application) Use effective negotiation skills to resolve conflicts.
  - Obj 1.4.2: (Synthesis) Use group participation skills when leading or working as a member of a formal or informal work group.
  - Obj 1.4.3: (Comprehension) Explain the components of a proposal for a new pharmacy service that would meet a perceived need of the organization and its patients.
- Goal R1.5: Exercise practice leadership.
  - Obj 1.5.1: (Characterization) Demonstrate a commitment to advocacy for the optimal care of patients through the assertive and persuasive presentation of patient care issues to members of the health care team, the patient, and/or the patient's representative(s).
  - Obj 1.5.2: (Characterization) Display initiative in preventing, identifying, and resolving pharmacy-related patient care problems.
  - Obj 1.5.3: (Comprehension) Explain the nature of mentoring in pharmacy, its potential connection with achievement, and the importance of being willing to serve as a mentor to appropriate individuals.
  - Obj 1.5.4: (Comprehension) Explain the general processes of establishing and maintaining a PGY2 pharmacy residency program.

***Outcome R2: Optimize the outcomes of pain management and palliative care patients through the expert provision of evidence-based patient-centered medication therapy as an integral part of an interdisciplinary team.***

- Goal R2.1: Develop collaborative professional relationships with members of the health care team.
  - Obj 2.1.1: (Synthesis) Implement a strategy that effectively develops cooperative, collaborative, and communicative working relationships with members of the interdisciplinary health care team.
    - IO Explain the training and expected areas of expertise of the members of the interdisciplinary pain management and palliative care team with which one works.*
    - IO For each of the professions with which one interacts on the interdisciplinary team, explain the profession's view of its role and responsibilities in collaborations on patient-centered care.*
    - IO Explain the expectations of the pharmacist's role on the pain management and palliative care team from the viewpoint of different professions.*
    - IO Explain the professional dynamics of the different services that contribute to the care of the pain management and palliative care patient.*

- IO *Distinguish the interpersonal dynamics of each member of the pain management and palliative care team.*
- Goal R2.2: Prioritize the pharmaceutical care needs of patients.
  - Obj 2.2.1: (Evaluation) Appropriately prioritize the care of patients if given limited time and multiple patient care responsibilities.
    - IO *Explain factors to consider when determining those patients who are candidates for pain management and/or palliative care as per service criteria.*
    - IO *Explain factors to consider when determining if a patient is suitable for hospice/end-of-life care.*
    - IO *Explain factors to consider when determining if a patient is a candidate for medical or surgical intervention.*
- Goal R2.3: Establish collaborative pharmacist-patient and pharmacist-caregiver relationships.
  - Obj 2.3.1: (Synthesis) Implement a strategy that effectively establishes a patient-centered pharmacist-patient and pharmacist-caregiver relationship.
    - IO *Explain unique characteristics of patients that may influence the pharmacist-patient relationship.*
    - IO *Explain psychosocial social issues frequently associated with the patient in pain and/or at the end-of-life.*
- Goal R2.4: Collect and analyze patient information.
  - Obj 2.4.1: (Analysis) Collect and organize all patient-specific information needed by the pharmacy specialist to anticipate, prevent, detect, and/or resolve medication-related problems and to make appropriate evidence-based, patient-centered medication therapy recommendations as part of the interdisciplinary team (see appendix for required and elective content regarding disease states, medications, and non-medication treatments).
    - IO *Explain the types of information that are typically available on pain and palliative care prior to pharmacist involvement.*
    - IO *Explain the functions of the nervous system and how they relate to pain transmission.*
    - IO *Identify the types of patient-specific information, including complementary and alternative medicines, the pharmacist requires to anticipate, prevent, detect, and/or resolve medication-related problems and to make appropriate evidence-based, patient-centered medication therapy recommendations for patients.*
    - IO *Explain how to interpret the various diagnostic and laboratory tests commonly performed on pain management and palliative care patients including the proper interpretation of urine toxicology screens.*
    - IO *Explain pharmacokinetic and pharmacodynamic concepts and how these need to be considered in developing dosing regimens for pain management and palliative care patients.*

- IO *Explain signs and symptoms, epidemiology, risk factors, pathogenesis, natural history of disease, pathophysiology, clinical course, etiology, and treatment of diseases or conditions that are commonly seen in the pain and palliative care setting.*
- IO *Explain signs and symptoms, epidemiology, risk factors, pathogenesis, natural history of disease, pathophysiology, clinical course, etiology, and treatment of diseases or conditions that are commonly seen in patients with a history of addiction and substance abuse.*
- IO *Explain the mechanism of action, pharmacokinetics, pharmacodynamics, pharmacogenomics, pharmacoeconomics, usual regimen (dose, schedule, form, route, and method of administration), indications, contraindications, interactions, adverse reactions, and therapeutics of opioid and non-opioid agents used in pain management and palliative care.*
- IO *Explain the mechanism of action, pharmacokinetics, pharmacodynamics, pharmacogenomics, pharmacoeconomics, usual regimen (dose, schedule, form, route, and method of administration), indications, contraindications, interactions, adverse reactions, and therapeutics of medications used to prevent and treat diseases commonly occurring in pain management and palliative care patients.*
- IO *Explain the principles and goals of pain and symptom management at the end-of-life.*
- Obj 2.4.2: (Analysis) Determine the presence of or potential for all clinically significant problems in the patient's current medication therapy.
- Obj 2.4.3: (Analysis) Using an organized collection of patient-specific information, summarize the patient's health care needs.
- Goal R2.5: Appropriately triage patients.
  - Obj 2.5.1: (Evaluation) When presented with a patient with health care needs that cannot be met by the pharmacy specialist, request a consult by the appropriate health care provider based on the patient's acuity and the presenting problem.
  - Obj 2.5.2: (Synthesis) Devise a plan for follow-up on a consult for a patient.
- Goal R2.6: Design evidence-based therapeutic regimens.
  - Obj 2.6.1: (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 *Identify various sources of disease management and drug-use guidelines potentially applicable to pain management and palliative care populations.*
    - IO *Explain various genetic, race, gender-related, age-related, and disease-related factors that influence the setting of therapeutic goals and their achievement in the pain management and palliative care patient.*

- IO Explain how to assess a pain management and palliative care candidate's risk for addiction and how it would influence the patient's medication regimen.*
- Obj 2.6.2: (Synthesis) Design a patient-centered regimen that meets the evidence-based therapeutic goals established for the patient; integrates patient-specific information, disease and drug utilization review information, ethical issues and quality-of-life issues; and considers pharmacogenomic and pharmacoeconomic principles.
- IO Explain the rationale for various pharmacologic combinations used in pain management and palliative care.*
- IO Explain how to identify patient eligibility for research protocols based on inclusion/exclusion criteria.*
- IO Explain additional concerns with adherence/persistence and cost when designing medication regimens for patients.*
- IO Explain public and private insurance variations for coverage of pain/palliative care-related medications.*
- IO Explain ethical considerations when providing opioids for patients with a history of substance abuse.*
- IO Explain how psychosocial considerations may impact the provision of pharmaceutical care and therapeutic outcomes in the pain management and palliative care patient.*
- Goal R2.7: Design evidenced-based monitoring plans.
- Obj 2.7.1: (Synthesis) Design a patient-centered, evidenced-based monitoring plan for a therapeutic regimen that effectively evaluates achievement of the specified therapeutic goals.
- IO State customary monitoring parameters for medication regimens commonly prescribed for patients to assess for safety and efficacy.*
- IO Explain the effect of pain management and palliative care -related medication therapies on the interpretation of clinical parameters.*
- IO Explain various approaches to assessing response to medication therapy (e.g., therapeutic drug monitoring, assays).*
- Goal R2.8: Recommend regimens and monitoring plans.
- Obj 2.8.1: (Application) Recommend a patient-centered, evidence-based therapeutic regimen and corresponding monitoring plan to other members of the interdisciplinary team in a way that is systematic, logical, accurate, timely, and secures consensus from the team.
- Obj 2.8.2: (Application) Discuss the proposed patient-centered, evidence-based therapeutic regimen and corresponding monitoring plan with the patient and/or caregiver in a way that is systematic, logical, accurate, timely, sensitive, and secures consensus from the patient and/or caregiver.
- IO Explain the kinds of issues that require particular sensitivity when discussing medication treatment plans with pain management and palliative care patients and/or caregivers.*
- IO Explain special obligations of patients participating in research protocols.*

- Goal R2.9: Design education for a patient's regimen and monitoring plan.
- Obj 2.9.1: (Analysis) Accurately identify what education will be essential to the patient's or caregiver's understanding of the therapeutic regimen and monitoring plan; how to adhere to it; and the importance of adherence.
  - Obj 2.9.2: (Synthesis) Design an effective and efficient plan for meeting the educational needs of the patient, including information on medication therapy, adverse effects, adherence, appropriate use, handling, and medication administration.
- Goal R2.10: Implement regimens and monitoring plans.
- Obj 2.10.1: (Application) When appropriate, initiate the patient-centered, evidence-based therapeutic regimen and monitoring plan for the patient according to the organization's policies and procedures.
    - IO Explain the organization's policies and procedures for ordering tests.*
    - IO Explain the organization's policies and procedures for writing medication orders*
  - Obj 2.10.2: (Complex Overt Response) When appropriate, exercise skill in the administration or supervision of the administration of a patient's therapeutic regimen.
  - Obj 2.10.3: (Application) When necessary, contribute to the work of the team that secures access for drugs used in a patient's regimen.
    - IO Explain patient assistance programs available for pain management and palliative care -related drugs.*
    - IO Explain the pharmacist's role in securing reimbursement for pain management and palliative care-related drugs.*
    - IO Identify circumstances in which it may be necessary to redesign the patient's medication regimen in order to insure that the patient will have access to the prescribed medications.*
    - IO Describe various approaches used to adjust medication regimens in order to facilitate patient access to medications.*
  - Obj 2.10.4: (Application) Use effective patient education techniques to provide counseling to patients and caregivers, including information on the disease state, medication therapy, adverse effects, compliance, appropriate use, handling, medication therapy, adverse effects, compliance, appropriate use, handling, storage, medication administration, and any other therapeutic interventions.
    - IO Explain the imperative that patients learn they must check with the interdisciplinary team before adding any prescribed, OTC, or alternative medication to their regimen.*
    - IO Explain the critical role of adherence and persistence in the short and long-term success of pain management and/or palliative care.*
    - IO Explain effective strategies for educating patients who are educational challenged (e.g., language barriers, blind, deaf, illiterate, immature).*

- Obj 2.10.5: (Application) Use a working knowledge of the organization's referral process to make any necessary patient referrals.
- Obj 2.10.6: (Application) Make follow-up appointments as specified in the monitoring plan.
- Goal R2.11: Evaluate patient progress and redesign regimens and monitoring plans.
  - Obj 2.11.1: (Evaluation) Accurately assess the patient's progress toward the therapeutic goal(s).
    - IO Explain potential long-term complications of therapy.*
    - IO Explain the importance of long-term monitoring of pain management and palliative care patients.*
    - IO Explain the role of the pharmacist in ongoing management of pain management and palliative care patients in assuring the optimal therapeutic outcomes.*
    - IO Explain the organization's systematic plan for routine patient follow-up and monitoring.*
    - IO Assess the need for individual patient modification of the organization's routine plan for patient follow-up and monitoring.*
  - Obj 2.11.2: (Synthesis) Redesign the patient's regimen and monitoring plan as necessary, based on evaluation of monitoring data and therapeutic outcomes.
    - IO Explain the impact of the evolution of pain management and palliative care research on the ongoing therapy of patients.*
- Goal R2.12: Communicate pertinent patient information to facilitate continuity of care.
  - Obj 2.12.1: (Application) Ensure that accurate and timely patient-specific information reaches those who need it at the appropriate time.
    - IO Determine instances in which there is urgency in communicating the results of monitoring to the appropriate members of the interdisciplinary team.*
  - Obj 2.12.2: (Synthesis) Formulate a strategy for continuity of pharmaceutical care across all applicable treatment settings.
- Goal R2.13: Document direct patient-care activities appropriately.
  - Obj 2.13.1: (Analysis) Appropriately select direct patient-care activities for documentation.
  - Obj 2.13.2: (Application) Write timely and authoritative consults and notes according to the organization's policies and procedures.

***Outcome R3: Serve as an authoritative resource on the optimal use of medications in pain management and palliative care.***

- Goal R3.1: Employ advanced literature analysis skills in preparing drug information.
  - Obj 3.1.1: (Synthesis) Create an efficient and effective advanced search strategy to prepare a drug information response.
    - IO State sources of pain and palliative care-related biomedical literature.*
    - IO Explain the potential need for increased reliance on alternate sources (e.g., abstracts from national meeting presentations, drug*

- company monographs, package inserts, expert opinion) when researching pain and palliative care-related medication questions.*
- Obj 3.1.2: (Analysis) Accurately identify the study design employed for a piece of biomedical literature.
  - Obj 3.1.3: (Evaluation) Determine if the study design and methodology are appropriate to accomplish the objectives of a piece of biomedical literature.
  - Obj 3.1.4: (Evaluation) Accurately interpret statistical information presented in a piece of biomedical literature.
  - Obj 3.1.5: (Analysis) Identify potential sources of bias in a piece of biomedical literature.
  - Obj 3.1.6: (Evaluation) Determine the internal and external validity of a piece of biomedical literature.
  - Obj 3.1.7: (Evaluation) Determine if a study's results have applicability for hypothesizing future research or for directing patient care decisions.
  - Obj 3.1.8: (Evaluation) When presented with conflicting biomedical literature, determine the validity and applicability for a specific drug information need.
  - Obj 3.1.9: (Evaluation) When presented with limited evidence-based biomedical literature, synthesize a reasonable response for the specific drug information need.
  - Obj 3.1.10: (Evaluation) Appraise information provided by a pharmaceutical manufacturer.
  - Obj 3.1.11: (Synthesis) Prepare an expert response to a complex drug information need.
- Goal R3.2: Provide concise, applicable, comprehensive, and timely responses to formal or informal requests for drug information.
- Obj 3.2.1: (Analysis) Discriminate between the requester's statement of need and the actual drug information need by asking for appropriate additional information.
  - Obj 3.2.2: (Synthesis) Formulate a systematic, efficient, and thorough procedure for retrieving drug information.
  - Obj 3.2.3: (Analysis) Determine from all retrieved biomedical literature the appropriate information to evaluate.
  - Obj 3.2.4: (Evaluation) Evaluate the usefulness of biomedical literature gathered.
  - Obj 3.2.5: (Evaluation) Determine whether a study's conclusions are supported by the study results.
  - Obj 3.2.6: (Synthesis) Formulate responses to formal drug information requests based on analysis of the literature
  - Obj 3.2.7: (Synthesis) Provide appropriate response to informal drug information questions that require the pharmacist to draw upon his or her knowledge base.
  - Obj 3.2.8: (Evaluation) Assess the effectiveness of drug information recommendations.



- IO Explain all factors that must be assessed to determine the effectiveness of a response.*
- Goal R3.3: Provide pharmacy expertise to the organization in the review of existing, development of new, and implementation of the organization's policies and procedures affecting the care of patients.
- Obj 3.3.1: (Evaluation) Make recommendations for drug class decisions based on comparative reviews.
  - Obj 3.3.2: (Synthesis) Formulate effective strategies for communicating formulary restrictions to providers.
  - Obj 3.3.3: (Evaluation) When presented with a drug shortage, identify appropriate alternative medications.
  - Obj 3.3.4: (Evaluation) When the needs of a particular patient warrant, determine if a non-formulary medication should be considered for therapy.
  - Obj 3.3.5: (Synthesis) Contribute to the work of an organizational committee or work group concerned with the improvement of medication-use policies and procedures.
- Goal R3.4: Develop a core library appropriate for pain management and palliative care pharmacy practice.
- Obj 3.4.1: (Application) Use knowledge of standard pain management and palliative care related recourses to develop and maintain a core library of primary, secondary, and tertiary references appropriate for pharmacy practice, education and research.
- IO Explain how to access and withdraw information from national databases.*
- Goal R3.5: Identify opportunities for improving the safety of aspects of the organization's medication-use system.
- Obj 3.5.1: (Application) Participate in the organization's system for reporting medication errors and adverse drug reactions (ADEs).
  - Obj 3.5.2: (Comprehension) Explain those aspects of the organization's medication-use system affecting patients served by the specialized area of pharmacy practice and its vulnerabilities to adverse drug events (ADEs).
  - Obj 3.5.3: (Evaluation) Identify opportunities for improvement in aspects of the organization's medication-use system affecting patients served by the specialized area of pharmacy practice by comparing the medication-use system to relevant best practices.
- Goal R3.6: Assist the organization in achieving compliance with accreditation, legal, regulatory, and safety requirements related to the use of medications (e.g., The Joint Commission requirements; ASHP standards, statements, and guidelines; state and federal laws regulating pharmacy practice; OSHA regulations).
- Obj 3.6.1: (Evaluation) Determine appropriate activities and documentation needed to meet accreditation, legal, regulatory, and safety requirements for pharmacy.

- Goal R3.7: Lead the review of existing, and development and implementation of new, medication-related guidelines/protocols for the care of patients served by the specialized area of pharmacy practice.
- Obj 3.7.1: (Analysis) Identify the need for a medication-related guideline/protocol for the care of patients served by the specialized area of pharmacy practice by comparing the applicability of existing guidelines/protocols to the needs of the organization.
  - Obj 3.7.2: (Synthesis) Develop a medication-related guideline/protocol for the care of patients served by the specialized area of pharmacy practice based on best evidence and the characteristics of the local environment and patients.
  - Obj 3.7.3: (Synthesis) Formulate a strategy that will successfully implement a medication-related guideline/protocol for the care of patients served by the specialized area of pharmacy practice.
  - Obj 3.7.4: (Evaluation) Assess the results of implementing a medication-related guideline/protocol for the care of patients served by the specialized area of pharmacy practice.
    - IO Explain how a medication-use evaluation can be utilized to measure the effects of implementing a guideline/protocol.*
    - IO Explain how a medication-use evaluation can be utilized to measure adherence to a guideline/protocol.*
    - IO Explain how a clinical research project can be utilized to measure the outcomes of implementing a new guideline/protocol.*

***Outcome R4: Demonstrate excellence in the provision of training and educational activities for health care professionals, health care professionals in training, and the public in pain management and palliative care.***

- Goal R4.1: Provide effective education and training to health care professionals and health care professionals in training.
- Obj 4.1.1: (Synthesis) Use effective educational techniques in the design of an educational/training activity.
  - Obj 4.1.2: (Synthesis) Design an assessment strategy that appropriately measures the specified objectives for education or training and fits the learning situation.
  - Obj 4.1.3: Use skill in the four preceptor roles employed in practice-based teaching (direct instruction, modeling, coaching and facilitation).
  - Obj 4.1.4: (Application) Use skill in case-based teaching.
  - Obj 4.1.5: (Application) Use public speaking skills to speak effectively to a large group.
  - Obj 4.1.6: (Application) Use public speaking skills to speak effectively in a small group.
- Goal R4.2: Design and deliver education programs to the public that center on pain and symptom management.
- Obj 4.2.1: (Synthesis) Contribute to the design of an educational program for the public that centers on health improvement, wellness, or disease prevention.

Obj 4.2.2: (Synthesis) Use appropriate educational techniques to deliver an educational program to the public that centers on health improvement, wellness or disease prevention.

***Outcome R5: Contribute to the body of pain management and palliative care knowledge.***

Goal R5.1: Conduct a pharmacy-related research project using effective research and project management skills.

Obj 5.1.1: (Synthesis) Identify a topic of significance for a pharmacy-related research project that requires institutional review board (IRB) review.

Obj 5.1.2: (Synthesis) Formulate a feasible design for a pharmacy-related research project.

Obj 5.1.3: (Synthesis) Secure any necessary approvals, including IRB, for a pharmacy-related research project.

Obj 5.1.4: (Synthesis) Implement a pharmacy-related research project as specified in its design.

Obj 5.1.5: (Synthesis) Effectively present the results of a pharmacy-related research project.

Obj 5.1.6: (Synthesis) Use correct grammar, punctuation, spelling, style, and formatting conventions to prepare a written summary of a pharmacy-related research project.

Obj 5.1.7: (Synthesis) Successfully employ accepted manuscript style to prepare a final report of a pharmacy-related research project.

Obj 5.1.8: (Evaluation) Accurately assess the impact, including sustainability if applicable, of the residency project.

Goal R5.2: Engage in the publication process.

Obj 5.2.1: (Comprehension) Explain the benefits, to the practitioner and the profession, of contributing to the pharmacy literature.

Obj 5.2.2: (Synthesis) Write a research article, review, or case report that is suitable for publication.

Obj 5.2.3: (Application) Follow the submission requirements of an appropriate peer-reviewed publication to submit a manuscript for publication.

Obj 5.2.4: (Evaluation) Participate in the peer review of a pharmacy professional's article submitted for publication or presentation.

<p><b>Elective Educational Outcomes, Goals, Objectives, and Instructional Objectives for Postgraduate Year Two (PGY2) Pharmacy Residencies in Pain Management and Palliative Care</b></p>
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***Outcome E1: Demonstrate skills required to function in an academic setting.***

Goal E1.1: Understand faculty roles and responsibilities.

Obj E1.1.1: (Comprehension) Explain variations in the expectations of different colleges/schools of pharmacy for teaching, practice, research, and service.

- Obj E1.1.2: (Analysis) Explain the role and influence of faculty in the academic environment.
- Obj E1.1.3: (Comprehension) Describe the academic environment.
- Obj E1.1.4: (Comprehension) Describe the types and ranks of faculty appointments.
- Obj E1.1.5: (Comprehension) Discuss the promotion and tenure process for each type of appointment.
- Obj E1.1.6: (Application) Identify resources available to help develop academic skills.
- Obj E1.1.7: (Comprehension) Explain the characteristics of a typical affiliation agreement between a college of pharmacy and a practice site (e.g., health system, hospital, clinic, retail pharmacy).
- Goal E1.2: Exercise teaching skills essential to pharmacy faculty
  - Obj E.1.2.1: (Synthesis) Develop an instructional design for a class session, module, or course.
  - Obj E1.2.2: (Synthesis) Prepare and deliver didactic instruction on a topic relevant to the specialized area of pharmacy residency training.
  - Obj E1.2.3: (Application) Develop and deliver cases for workshops and exercises for laboratory experiences.
  - Obj E.1.2.4: (Application) Serve as a preceptor or co-preceptor utilizing the four roles employed in practice-based teaching (direct instruction, modeling, coaching and facilitation),
  - Obj E1.2.5: (Analysis) Develop a teaching experience for a practice setting (e.g., introductory or advanced pharmacy experience).
  - Obj E1.2.6: (Synthesis) Design an assessment strategy that appropriately measures the specified educational objectives for the class session, module, course, or rotation.
  - Obj E1.2.7: (Evaluation) Create a teaching portfolio.
  - Obj E1.2.8: (Evaluation) Compare and contrast methods to prevent and respond to academic and profession dishonesty.
  - Obj E1.2.9: (Comprehension) Explain the relevance of copyright laws to developing teaching materials.

***Outcome E2: Demonstrate additional leadership and practice management skills.***

- Goal E2.1: Develop a proposal for a new or revised pain management and palliative care-related pharmacy service.
  - Obj E2.1.1: (Synthesis) Write a proposal for a pain management and palliative care-related service that meets a perceived need of the health system and its patients.
  - Obj E2.1.2: (Application) Use effective presentation skills to present a proposal for a new or revised pain management and palliative care-related service to the various concerned entities within the health system.
  - Obj E2.1.3: (Evaluation) Employ effective strategies for implementing a new or revised pain management and palliative care-related pharmacy services.

- Obj E2.1.4: (Evaluation) Appraise a new or revised pain management and palliative care pharmacy service for adequacy in meeting the stated goals.

***Outcome E3: Manage and improve the medication-use process in patient care settings.***

- Goal E3.1: Prepare and dispense medications for pain management and palliative care patients following existing standards of practice and the organization's policies and procedures.
  - Obj E3.1.1: (Evaluation) Interpret the appropriateness of a pain management and palliative care-related medication order before preparing or permitting the distribution of the first dose.
  - Obj E3.1.2: (Synthesis) Design and implement quality improvement changes to aspects of the organization's medication-use system affecting pain management and palliative care patients.

***Outcome E4: Write additional articles on pain management and palliative care related topics for publication.***

- Goal E4.1: Write articles that provide pertinent medication use information on pain management and palliative care related topics for health care professionals and/or the public.
  - Obj E4.1.1: (Application) Use knowledge of the purpose of a particular publication to write articles that provide pertinent pain management and palliative care-related topics for health care professionals and/or the public.
    - IO (Analysis) Identify pain management and palliative care-related topics that would be suitable for a particular audience.*
  - Obj E4.1.2: (Synthesis) Submit a suitably formatted article on a pain management and palliative care-related topic for peer-reviewed publication.
  - Obj E4.1.3: (Evaluation) Provide peer review of a pharmacy or pain management and palliative care-related article for publication.

***Outcome E5: Function effectively in pain management and palliative care settings participating in clinical investigations.***

- Goal E5.1: Participate in the operation of a system that prepares and distributes investigational pain management and palliative care-related medications.
  - Obj E5.1.1: (Evaluation) Evaluate relevant aspects of a pain management and palliative care-related investigational drug study.
    - IO Explain factors to consider (e.g., impact on pharmacy budget, personnel) when determining the feasibility of a proposed pain management and palliative care-related investigational drug study.*
    - IO Explain drug procurement, storage, preparation, administration, and accountability considerations for investigational or other research-related drugs.*

- IO Explain the phases of the investigational drug development process and the objectives for each phase as it applies to approving pain management and palliative care-related drugs.*
  - IO Explain the steps in the investigational drug protocol approval process.*
  - IO Explain the purposes of standard sections of investigational protocols for pain management and palliative care -related therapy.*
  - IO Explain factors to consider when judging the adequacy of the informed consent document.*
  - IO Explain the laws and regulations governing informed consent (and, in pediatric patients, assent) and conduct of clinical research.*
- Obj E5.1.2: (Application) Manage the use of pain management and palliative care investigational drugs according to established protocols and the organization's policies and procedures.
- Obj E5.1.3: (Comprehension) Compare and contrast record-keeping requirements of various regulatory agencies covering pain management and palliative care-related clinical research studies.
- IO Explain the process for reporting adverse reactions to drugs used in a pain management and palliative care-related investigational protocol.*

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The effective date for implementation of these educational outcomes, goals and objectives is July 1, 2010.

## ***PGY2 Pharmacy Residencies in Pain Management and Palliative Care***

As indicated in the Overview at the beginning of this document, PGY2 pharmacy residencies in pain management and palliative care are designed to transition PGY1 pharmacy residency graduates from generalist practice to specialized practice focused on the pain management and palliative care needs of patients. In this regard, residency graduates should be equipped to participate as essential members of interdisciplinary pain management and palliative care teams and able to make complex therapeutic recommendations in a broad variety of practice settings. Thus, training should focus on developing residents' capabilities to deal with a varied depth and broad range of pain syndromes, including chronic malignant and non-malignant pain, neuropathic pain, and pain related to neurologic, orthopedic and rheumatologic conditions. Palliative care emphasis should be placed on symptom management throughout patients' illnesses and at the end of life.

The resident will explain signs and symptoms, epidemiology, risk factors, pathogenesis, natural history of disease, pathophysiology, clinical course, etiology, and treatment of diseases and conditions listed below. The resident will also have experience managing patients with these diseases and conditions.

The resident will explain the mechanism of action, pharmacokinetics, pharmacodynamics, pharmacogenomics, pharmacoeconomics, usual regimen (dose, schedule, form, route, and method of administration), indications, contraindications, interactions, adverse reactions, and therapeutics of medications and non-traditional therapies, where relevant, that are applicable to the diseases and conditions listed below.

The resident will explain various forms of non-medication therapy, including life-style modification and the use of devices for disease prevention and treatment, for diseases and conditions listed below.

- I.      Pain Management
  - Pain related to cancer
  - Pain related to chronic disease
  - Pain management complicated by addiction
  - Pain management complicated by tolerance
  - Pain management related to surgical procedures
  - Pain management complicated by mental health disorders
  
- II.     Palliative Care
  - Spiritual considerations
  - Social and community influencers
  - Fatigue
  - Medication side effects
  - Constipation and other GI complications
  - Nausea and vomiting
  - Nutritional deficiencies
  - Skeletal related events
  
- III.    Interdisciplinary and Patient Care Management
  - Role and accountability
  - Techniques in managing death and dying
  
- IV.     Treatment procedures and modalities

## Sample Rotation Structure

Rotation	Required 1 mo	Required Longitudinal
Orientation	x	
Home Based Hospice	x	
Inpatient Pain Management	x	
Inpatient Palliative Care	x	
Research	x	
Outpatient*		X (2 months)
Drug Information Services		X (12 months)
Education/Training		X (12 months)
PMPC Rotations**	3	
Electives***	4	

### **Outpatient\***

Pain - General  
Pain Specialty (Headache)  
Primary care with pain focus  
Oncology/Supportive care  
HIV

### **PMPC Rotations\*\***

Acute Pain (PCA)  
BMT Pain/Palliative Care  
Inpatient Cancer Pain Mgmt  
Inpatient Hospice  
Pain/Pall Care Clinical Skills  
Pain Procedures  
Physical Med and Rehab  
Rheumatology  
Peds Pain Management

### **Electives \*\*\***

Oncology  
Academia  
Substance Abuse  
Psychopharmacology  
Geriatrics  
Infectious Diseases  
Investigational New Drug  
Outcomes Research/ Drug Pol  
Cardiology  
ICU