

THIRD EDITION

# Geriatric Pharmacy Curriculum Guide



# GERIATRIC PHARMACY CURRICULUM GUIDE

## THIRD EDITION

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1321 Duke Street  
Alexandria, VA 22314-3563  
703.739.1300  
www.ascp.com

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## INTRODUCTION

The American Society of Consultant Pharmacists (ASCP) Geriatric Curriculum Guide is a resource designed to prepare pharmacy students and pharmacists with the education needed to care for older adults. This 3rd edition of the Guide links foundational geriatric principles of care necessary for pharmacy students with the American Association of Colleges of Pharmacy CAPE (Center for the Advancement of Pharmacy Education) Outcomes and the Accreditation Council for Pharmacy Education's Accreditation Standards and Guidelines. In addition, the Health in Aging Multidisciplinary Competencies in the Care of Older Adults at the Completion of the Entry-level Health Professional Degree and the Core Competencies for Interprofessional Collaborative Practice have been mapped within the current Geriatric Pharmacy Curriculum Guide.

While the Geriatric Pharmacy Curriculum Guide delineates competencies for students graduating from pharmacy school, this newest edition also offers a Tool Kit with suggestions for learning opportunities across the spectrum of professional development. From didactic coursework to introductory and advance practice experiences to residency training and beyond, the Tool Kit is designed to assist with topic discussions and pertinent activities to reinforce knowledge gained both inside and outside the classroom. The Tool Kit can also assist residency program directors in the development of unique geriatric-specific experiences for both general residency learning and those seeking to specialize in senior care pharmacy.

For the pharmacist in practice, the Geriatric Pharmacy Curriculum Guide offers professional development guidance on topics and content needed for those developing competencies in senior care pharmacy. The Geriatric Pharmacy Curriculum Guide is an excellent resource to ensure you are up-to-date on subject matter relevant to senior care pharmacy. The competencies described in the Geriatric Pharmacy Curriculum Guide are essential elements when applying the pharmacists' patient care process to older adults.

The resource pages provide a selection of key references, guidelines and other online resources important for any senior care practitioner's library, including the Pharmacists' Patient Care Process. These resources make wonderful patient education source documents and also provide information on how to build a senior care pharmacy practice.

## ACKNOWLEDGEMENTS

### Revision Committee

#### **Amie Taggart Blaszczyk, Pharm.D., CGP, BCPS, FASCP**

Associate Professor & Division Head – Geriatrics  
Texas Tech University Health Sciences Center School of Pharmacy  
Dallas, Texas

#### **Co-Chair**

#### **Erica Estus, Pharm.D., CGP**

Clinical Associate Professor  
University of Rhode Island College of Pharmacy  
Kingston, Rhode Island

#### **Co-Chair**

#### **Carla Bouwmeester, MS, Pharm.D., BCPS**

Associate Clinical Professor  
Northeastern University, School of Pharmacy  
Boston, Massachusetts

#### **Ruth Emptage, Pharm.D., CGP**

Clinical Assistant Professor of Pharmacy Practice  
The Ohio State University College of Pharmacy  
Columbus, Ohio

#### **Jeannie Kim Lee, Pharm.D., BCPS, CGP, FASHP**

Assistant Professor  
The University of Arizona College of Pharmacy  
Tucson, Arizona

#### **Rebecca Mahan, Pharm.D., CGP**

Assistant Professor of Pharmacy Practice – Geriatrics  
Texas Tech University Health Sciences Center School of Pharmacy  
Abilene, Texas

#### **Patricia W. Slattum, Pharm.D., Ph.D., CGP**

Professor of Pharmacotherapy and Outcomes Science  
Virginia Commonwealth University  
Richmond, Virginia

#### **Scott Martin Vouri, Pharm.D., BCPS, CGP**

Assistant Professor – Pharmacy Practice  
St. Louis College of Pharmacy  
St. Louis, Missouri

#### **Michael Brodeur, Pharm.D., CGP, FASCP**

Associate Professor  
Albany College of Pharmacy and Health Sciences  
Albany, New York

#### **Kristina M. Niehoff, Pharm.D., BCPS**

Clinical Pharmacy Specialist – Research  
VA Connecticut Health Care System  
West Haven, Connecticut

## GERIATRIC PHARMACY CURRICULUM GUIDE

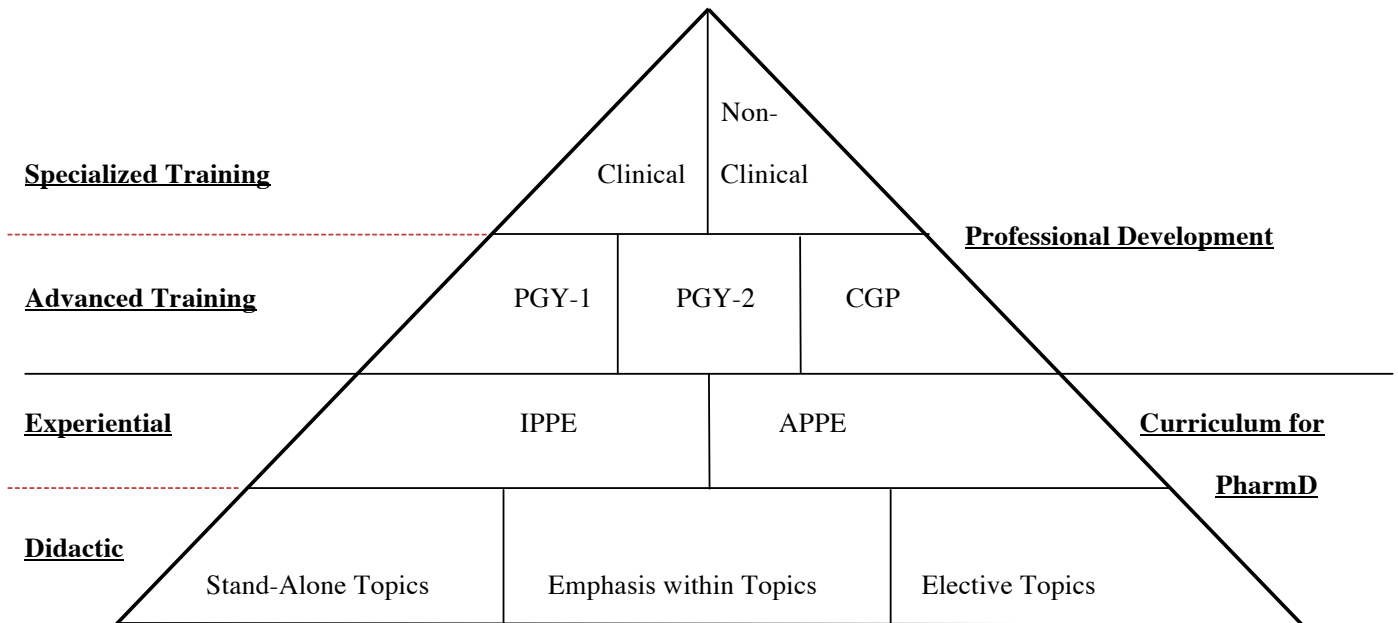
I. Foundational Principles of Aging		
	<b>Competency</b>	<b>Associated CAPE Outcome</b>
<b>A. Demographics</b>	1. Define the demographic, economic and medical characteristics of older adults (e.g., gender, ethnicity, geographic, socioeconomic, multi-morbidity, disability, and medication use patterns).	2.4, 3.5
	2. Recognize the heterogeneity of the older adult population.	2.4
<b>B. Biology of Aging</b>	1. Recognize the spectrum of aging from healthy aging to frailty.	2.4
	2. Describe the biology of aging and discuss common theories of aging.	1.1
	3. Discuss the physiologic changes of aging and how they impact the pharmacokinetic, pharmacodynamic and therapeutic use of medications.	1.1
<b>C. Socioeconomics of Aging</b>		
<i>Social Issues</i>	1. Describe the interrelationship between social issues and aging (e.g., family, cultural, community, housing, access to care, policy issues).	2.3, 3.5
	2. Recognize signs and symptoms of substance and medication misuse/abuse in older adults.	2.3
	3. Identify and manage the social issues of medication use for an individual patient's therapy.	2.3
	4. Describe the interrelationship between an older adult and their formal and informal care partners.	2.3
	5. Recognize available resources and develop strategies to support older adults and care partners.	2.3
<i>Ethics</i>	6. Recognize ethical dilemmas through a systematic decision-making process based on clearly articulated ethical theories and principles (e.g., self-determination, autonomy, justice in the distribution of resources).	4.4
	7. Promote patient-centered decision making and care.	2.4, 3.3, 3.4
	8. Describe advanced directives, living wills and the role of a power of attorney.	3.3
<i>Elder Abuse</i>	9. Define elder abuse/neglect (e.g., physical, psychological, and financial).	2.3
	10. Recognize and report the signs of elder abuse/neglect.	2.3
<i>Economic Issues</i>	11. Describe the options for coverage and benefits older adults may utilize (e.g., Medicare, Medicaid and supplemental coverage).	3.3
	12. Consider financial/reimbursement issues (e.g., formularies, insurance coverage) when making therapeutic recommendations.	2.3, 3.3
<i>Cultural Competencies</i>	13. Value and appreciate ethnic, racial and cultural differences in the older adult.	2.3, 2.4, 3.5, 4.4
	14. Recognize differences in healthcare beliefs which may exist between patients and healthcare professionals.	2.3, 3.5, 4.1
	15. Demonstrate the ability to assess personal misconceptions, generalities and stereotypes which may impact the care of an ethnically, racially and culturally diverse patient population.	3.1, 3.5, 4.1, 4.4
	16. Discuss the concept of ageism and how it may impact the treatment of patients.	2.3, 3.5
<b>D. Communication</b>	1. Communicate drug and adherence information to older patients, their care partners and the interprofessional team.	2.1, 3.2, 3.4, 3.6
	2. Recognize the prevalence of limited health literacy in the older adult population.	2.3, 2.4, 3.1, 3.5
	3. Demonstrate proficiency to interview and counsel older adults with varying degrees of health literacy, cognitive function, and communication abilities.	2.1, 3.2, 3.5, 3.6
	4. Recognize barriers to effective communication (e.g., cognitive, sensory, cultural, and language).	3.1, 3.2, 3.5, 4.1
	5. Discuss the physiologic changes of aging and how they impact the pharmacokinetic, pharmacodynamic and therapeutic use of medications.	1.1

<b>I. Foundational Principles of Aging (continued)</b>		
	<b>Competency</b>	<b>Associated CAPE Outcome</b>
<b>E. Continuum of Care</b>	1. Define the continuum of care available to older adults such as community resources, home care, formal and informal care partnerships, assisted living facilities, nursing facilities, sub-acute care facilities, hospice care, and hospitals.	2.2
	2. Participate in interprofessional decision making regarding appropriate levels of care for individual patients.	2.3, 3.4, 4.2
	3. Facilitate medication reconciliation to improve transitions across the continuum of care and reduce readmissions.	2.2
	4. Discuss the philosophy and practice of hospice/palliative care.	2.4
	5. Incorporate life expectancy and end-of-life issues in the decision-making of appropriate use of medications.	2.4
<b>F. Wellness &amp; Health-promotion</b>	1. Describe and advocate for health care initiatives relative to wellness and health promotion (e.g., nutrition, physical activity, medication adherence, immunizations, and health screenings).	2.3, 3.2, 3.3
	2. Counsel an older patient on the utility of health screenings and preventive measures.	2.3, 3.2, 3.6
	3. Conduct a medication review to minimize the impact of drug-related falls.	2.1, 2.3, 3.6
<b>II. Essential Competencies for the Practice of Geriatric Care</b>		
<b>A. Epidemiology</b>	Describe incidence and prevalence of diseases in the older adult population.	2.4
<b>B. Pathophysiology</b>	1. Recognize the atypical clinical presentation and progression of common diseases found in older adults.	2.1
	2. Identify symptoms of drug-induced diseases and geriatric syndromes.	2.1
<b>C. Geriatric Assessment</b>	1. Identify basic cognitive, functional, physical and safety assessments for common diseases in the older adult population.	2.1
	2. Demonstrate the ability to conduct basic cognitive, functional, physical and safety assessments for common diseases in the older adult population.	2.1, 3.6
	3. Assess social and cultural determinants of health outcomes.	2.3, 3.5
	4. Apply knowledge of geriatric syndromes and medication-related problems when interpreting assessment results.	2.1
	5. Obtain and interpret a comprehensive medication history in relation to a patient's current health status.	2.1, 3.6
	6. Assess a medication regimen for medication-related problems (e.g., polypharmacy, non-adherence, drug interactions, adverse drug events, underuse, and potentially inappropriate medications).	2.1, 3.1
	7. Appropriately recommend and interpret laboratory results for the older patient.	2.1
	8. Identify and recognize potential functional barriers to the older adult patient (e.g., transportation, housing, economics, and social support structure).	3.1
	9. Identify potential environmental causes of decline in activities of daily living (ADL), instrumental activities of daily living (IADL), and cognitive function.	3.1
	10. Develop a problem list and prioritize care based upon severity of illness, patient preference, quality of life, and time to benefit.	2.1
	11. Identify patients who need referrals to other health and non-health professionals.	3.3, 3.4
<b>D. Treatment</b>	1. Define therapeutic goals incorporating patient-specific principles (e.g., age, functionality, patient preference, and culture).	2.1
	2. Evaluate the appropriateness of standards of practice or treatment guidelines for the older adult patient.	1.1
	3. Determine therapeutic options and the risk/benefit to the patient (e.g., no treatment, non-pharmacologic interventions, non-prescription medications, complementary and alternative medicine, and prescription medications).	2.1
	4. Apply principles of pharmacokinetic and pharmacodynamic changes associated with aging to the design of the pharmacotherapy regimen.	1.1, 2.1

<b>II. Essential Competencies for the Practice of Geriatric Care (continued)</b>		
	<b>Competency</b>	<b>Associated CAPE Outcome</b>
	5. Design and recommend age/patient specific regimen including medication, dose, dosage form, dosing interval, and route of administration.	2.1
	6. Resolve and/or prevent medication-related problems in a given older adult patient.	2.1
<b>E. Monitoring</b>	1. Develop and implement an older adult patient-specific monitoring plan.	2.1, 3.1
	2. Revise therapeutic plans based upon changes in patient status.	2.1, 3.1
<b>F. Education</b>	1. Utilize educational material appropriate to the specific patient/care partner.	3.2
	2. Ensure understanding of medication use and its role in the overall treatment plan.	3.2, 3.5, 3.6
	3. Educate patient/care partner regarding potential problems with patient care management and administration of medications.	3.2, 3.6
	4. Assist the patient/care partner in identifying, procuring, and utilizing adherence strategies and devices.	3.2, 3.3
	5. Educate interprofessional team members regarding geriatric-specific pharmacotherapy principles.	3.2, 3.4, 3.6
<b>G. Documentation Actions &amp; Outcomes</b>	1. Document rationale, actions, and outcomes from medication therapies for the healthcare team.	2.1, 3.6
	2. Write an action plan for use by the patient/care partner.	2.1
	3. Perform and document comprehensive medication reconciliation across the continuum of care.	2.2, 3.6
	4. Acknowledge different systems for documentation and tracking of intervention data which can generate evidence of care.	2.2, 3.6
<b>III. Approach to Practice &amp; Care of Seniors</b>		
	<b>Competency</b>	<b>Associated CAPE Outcome</b>
<b>A. Evidence-based Practice &amp; Practice Evaluation</b>	1. Identify reputable sources of information for the care of an older adult patient.	1.1
	2. Evaluate medication utilization at the system level to ensure safe and effective drug therapy.	2.2
	3. Utilize a documentation system to evaluate outcomes of pharmacist intervention.	2.2, 3.6
	4. Evaluate and apply evidence from primary literature as it pertains to the care of older adult patients.	1.1, 2.1
	5. Evaluate the relevancy of clinical practice guidelines, standards of care and quality measures related to geriatric care.	1.1, 2.4
<b>B. Practice Opportunities</b>	1. Identify models of practice in geriatric care.	4.3
	2. Recognize emerging opportunities for geriatric practice.	3.4, 4.3
	3. Respect the roles and responsibilities of the pharmacist and other healthcare professionals within the interprofessional team.	2.3, 3.4, 4.2
	4. Discuss board certifications available for pharmacists providing geriatric care (e.g., CGP, BCPS, BCACP, CDE, etc.).	4.4
<b>C. Regulatory</b>	1. Identify agencies and organizations integral in the development and enforcement of geriatric public policy.	4.3
	2. Identify and adhere to site-specific regulations for geriatric care.	4.4
	3. Develop strategies for keeping up-to-date on regulatory changes and their impact on geriatric care.	4.1
	4. Promote advocacy for geriatric patient care and the pharmacy profession.	3.3, 4.3
<b>D. Financial Factors</b>	1. Develop, implement and assess formulary management/protocols as they pertain to the care of the older adult patient.	2.4
	2. Demonstrate knowledge of sources and processes of compensation for geriatric pharmacy services.	4.3

# Geriatric Curriculum Guide Toolkit

## Learner in Geriatrics Pyramid





# Learner in Geriatrics: Didactic

## Stand-Alone Topics

The aim of this section is to suggest topics/disease states that will have a primary focus on care of older adults.

## Emphasis within Topics

The aim of this section is to suggest topics/disease states where care of older adults may differ from younger populations and an emphasis on such differences can be incorporated into the broader topics.

## Elective Topics

The aim of this section is to suggest topics/disease states in an elective course which focuses on care of older adults by going beyond what is discussed in Stand-Alone Topics and Emphasis within Topics.

Stand-Alone Topics
Topics (Content)
<ul style="list-style-type: none"> <li>• Introduction to Geriatrics (epidemiology, biology of aging, pharmacokinetics, pharmacodynamics, elder abuse)</li> <li>• Introduction to Geriatric Syndromes (falls/gait problems, weakness/frailty, dizziness/syncope, functional/cognitive decline, sensory deficit, appetite/weight loss/malnutrition/dysphagia, medication-induced disease, polypharmacy)</li> <li>• Bowel-related Issues (constipation, diarrhea, fecal incontinence)</li> <li>• Chronic Kidney Disease / End-Stage Renal Disease</li> <li>• Delirium</li> <li>• Dementia (Alzheimer's disease, vascular dementia, Lewy Body dementia, other)</li> <li>• HEENT (glaucoma/macular degeneration/hearing loss/dysphagia)</li> <li>• Osteoarthritis</li> <li>• Osteoporosis (Paget's Disease, vitamin D/PTH disorders)</li> <li>• Parkinson's disease / Movement Disorders</li> <li>• Urology (bladder outlet obstruction, urinary incontinence)</li> </ul>
Resources (see page 17)

Emphasis Within Topics
Topics (Content)
<ul style="list-style-type: none"> <li>• Cardiology (ACS, arrhythmias, cardiomyopathy, CAD, CHF, hyperlipidemia, hypertension, PAD)</li> <li>• Endocrine (adrenal disorders, diabetes mellitus, disorders of the hypothalamus, sexual/erectile dysfunction, hormone therapy, thyroid disease)</li> <li>• Gastrointestinal Disorders (diverticular disease, GERD/PUD, non-hepatitis hepatic disorders, inflammatory bowel disease, irritable bowel disease, nausea/vomiting, pancreatitis)</li> <li>• Hematology/Oncology (anemia, disorders of hemostasis/platelets/WBC, cancers)</li> <li>• Infectious Disease (HIV/AIDS, bone/joint infection, endocarditis, genitourinary, GI infection, herpes zoster, hepatitis, influenza, meningitis, nosocomial infections, ophthalmic infection, pneumonia, STDs, skin/soft tissue infection, tuberculosis, respiratory infections)</li> <li>• Inflammatory Disorders (gout/hyperuricemia, rheumatoid arthritis, systemic inflammatory disease)</li> <li>• Neurology (pain, CVA/TIA, headache/migraine, MS, neuropathies, seizures, traumatic brain injury, fluid/electrolytes)</li> <li>• Nephrology (acid-base disorders, acute renal failure)</li> <li>• Psychiatric Disorders (anxiety, bipolar, depression, schizophrenia, sleep disorders, substance abuse/misuse)</li> <li>• Respiratory (asthma, COPD, cough/cold/allergy)</li> <li>• Skin Disorders (psoriasis, other common skin disorders)</li> <li>• Non-Therapeutic Issues (ethics, economics/insurance/Medicare, cultural competencies, continuum of care, wellness/health promotion, health literacy, medication adherence, interprofessional team care)</li> </ul>
Specific Topics (Content)
<ul style="list-style-type: none"> <li>• Explicit Criteria for Prescribing (e.g. Beers Criteria/STOPP/START)</li> <li>• Dementia (cognitive function tests, mild cognitive impairment)</li> <li>• Depression (slower onset of action of SSRIs and higher incidences of uncommon adverse effects, Geriatric Depression Scale)</li> <li>• Diabetes (relaxed A1c goal, hypoglycemia)</li> <li>• CVA (accurate history needed including medications)</li> <li>• Hyperlipidemia (new guidelines do not include aged &gt;75, statin benefit vs. risks)</li> <li>• Hypertension (relaxed BP goal, hypotension)</li> <li>• STDs (common in older adults → unprotected sex)</li> <li>• Thyroid disease (sub-clinical hyper/hypothyroidism)</li> </ul>
Resources (see page 17)



## Learner in Geriatrics: Didactic

Elective Topics
Topics (Lecture Content)
<ul style="list-style-type: none"><li>• Advanced Geriatric Syndromes (falls/gait problems, weakness/frailty, dizziness/syncope, functional/cognitive decline, sensory deficit, appetite/weight loss/malnutrition/dysphagia, medication-induced disease, polypharmacy)</li><li>• Audiology (hearing loss and aids)</li><li>• Cardiology (atrial fibrillation, CAD, CHF, isolated systolic hypertension/diastolic dysfunction, hyperlipidemia, HTN, thromboembolic disorder)</li><li>• Endocrine (diabetes, hyponatremia, menopause/andropause)</li><li>• GI (diverticular disease, GERD/PUD, IBS, pancreatitis, N/V, alternative feeding modalities [e.g. nasogastric tubes, PEG tubes])</li><li>• Hematologic (anemias)</li><li>• Infectious Disease (Endocarditis, genitourinary, GI infection, hepatitis, herpes zoster, influenza, pneumonia, skin/tissue infection, URI)</li><li>• Musculoskeletal (pain, palliative care)</li><li>• Neurological (dementias, CVA/TIA, Parkinson's/movement disorders, neuropathies, seizures)</li><li>• Ophthalmology (cataracts, dry eyes, macular degeneration, eye inflammation/surgical medications)</li><li>• Psychiatry (anxiety, depression, sleep disorders, substance abuse/misuse, delirium, agitation/behavioral and psychological issues in dementia)</li><li>• Respiratory (asthma, COPD, cough/cold/allergy)</li><li>• Skin Disorders (pressure ulcers)</li><li>• Non-Therapeutic Issues (advance directives, consulting/regulations, durable medical equipment, elder abuse, ethics, economic issues/insurance/Medicare, cultural competencies, communication/health literacy, continuum/transitions of care, options of care/dwelling, wellness/health promotion, end of life/hospice, medication adherence, interprofessional team roles and responsibilities, aging research)</li></ul>
Resources (see page 17)

# Learner in Geriatrics: Experiential

## Introductory Pharmacy Practice Experience (IPPE)

For purposes of this document, the aim for the learner in geriatrics in IPPE is to understand differences in older adults compared to younger adults, understand issues with communication, and empathy towards their care.

## Advanced Pharmacy Practice Experience (APPE)

For purposes of this document, the aim for the learner in geriatrics in APPE is to understand and apply pharmacodynamics/kinetics to an older adult population, monitor outcomes appropriately, and recommend appropriate treatment for older adults.

## Introduction to Pharmacy Practice Experience (IPPE)

Site Discussion Activities
Topic Discussions
<ul style="list-style-type: none"><li>• Geriatrics Topics (how older adults are different, communication with older adults)</li><li>• Medicare (medications in older adults, overview of MTM, differentiate Medicare A,B, C, D)</li></ul>
Practice Opportunities
<ul style="list-style-type: none"><li>• The Geriatric Medication Game (St. Louis College of Pharmacy - <a href="https://www.stlcop.edu/research/researchareasandprojects/officeforresearchonaging/geriatricmedicationgame/">https://www.stlcop.edu/research/researchareasandprojects/officeforresearchonaging/geriatricmedicationgame/</a>)</li><li>• Generation Rx (<a href="http://www.pharmacy.osu.edu/outreach/generation-rx">http://www.pharmacy.osu.edu/outreach/generation-rx</a> -see the Senior Toolkit at the far right bottom marked "Seniors")</li><li>• STAMP Out Prescription Drug Misuse &amp; Abuse (ASCP - <a href="https://www.ascp.com/articles/stamp-out-prescription-drug-misuse-abuse">https://www.ascp.com/articles/stamp-out-prescription-drug-misuse-abuse</a>)</li><li>• Adopt-a-Patient Project (Semester long project where students "adopt" a real patient and work with him/her to make recommendations relating to medications and overall health.)</li><li>• Applying Medicare Part D (maximize Part D plans for beneficiaries, perform MTM)</li><li>• Vial of Life (<a href="https://www.vialoflife.com">https://www.vialoflife.com</a>)</li><li>• IPPE SOAR (Student and Older Adult Relationship) Project (University of Arizona College of Pharmacy - <a href="http://www.pharmacy.arizona.edu/features/students/introductory-learning-project-soars">http://www.pharmacy.arizona.edu/features/students/introductory-learning-project-soars</a>)</li></ul>
Resources (see page 17)

# Advanced Pharmacy Practice Experience (APPE)

## Geriatric Rotation

### Site Discussion Activities

#### Geriatric Specific Topic Discussions

- Introduction to Geriatric (epidemiology, biology of aging, pharmacokinetics, pharmacodynamics, elder abuse)
- Introduction to Geriatric Syndromes (falls/gait problems, weakness/frailty, dizziness/syncope, functional/cognitive decline, sensory deficit, appetite/weight loss/malnutrition/dysphagia, medication-induced disease, polypharmacy)
- Bowel-related Issues (constipation, diarrhea, fecal incontinence)
- Chronic Kidney Disease/End-Stage Renal Disease
- Delirium
- Dementia (Alzheimer’s disease, vascular-dementia, Lewy Body dementia, other)
- Ophthalmology (glaucoma/macular degeneration)
- Osteoarthritis
- Osteoporosis (Paget’s Disease, vitamin D deficiency/PTH disorders)
- Parkinson’s disease/movement disorders
- Urology (bladder outlet obstruction, urinary incontinence)

#### Geriatric-Focus Within Topic Discussion

- Explicit Criteria for Prescribing (e.g. Beers Criteria/STOPP/START)
- Dementia (cognitive function tests, mild cognitive impairment)
- Depression (slower onset of action of SSRIs and higher incidences of uncommon adverse effects, Geriatric Depression Scale)
- Diabetes (relaxed A1c goal, hypoglycemia)
- CVA (accurate history needed including medications)
- Hyperlipidemia (new guidelines do not include aged >75, statin benefit vs. risks)
- Hypertension (relaxed BP goal, hypotension)
- STDs (common in older adults → unprotected sex)
- Thyroid disease (sub-clinical hyper/hypothyroidism)

#### Practice Opportunities

- Journal Club & Older Adult Education on Outcomes (converting journal club to layperson terms)
- Comprehensive MTM
- Verbal Geriatric Assessment (pain scale, Geriatric Depression Scale, memory scales)
- Physical Geriatric Assessment (inhaler technique, glucometer)
- Outreach (Brown Bag assessment, fall-risk/FRAX Assessment)
- SOAP/Progress notes/Documentation
- In-services to Providers/Staff
- Interprofessional Participation (medication safety meeting, interdisciplinary rounds, P&T meetings, care plan meetings)
- Transitions of Care (medication reconciliation, admission/discharge counseling)
- Adherence (assessment, counseling, practice – medication planner fill/consumption using candy, <http://www.mymedschedule.com/>)

## Non-Geriatric Rotation

### Site Discussion Activities

#### Topic Discussions

- Cardiology (ACS, arrhythmias, cardiomyopathy, CAD, CHF, hyperlipidemia, hypertension, PAD)
- Endocrine (adrenal disorders, diabetes mellitus, disorders of hypothalamus, sexual/erectile dysfunction, hormone therapy, thyroid disease)
- Gastrointestinal Disorders (diverticular disease, GERD/PUD, non-hepatitis hepatic disorders, inflammatory bowel disease, irritable bowel disease, nausea/vomiting, pancreatitis, alternative feeding modalities [e.g. nasogastric tubes, PEG tubes])
- Hematology/Oncology (anemia, disorders of hemostasis/platelets/WBC, cancers)
- Infectious Disease (HIV/AIDS, bone/joint infection, endocarditis, genitourinary, GI infection, herpes zoster, hepatitis, influenza, meningitis, nosocomial infections, ophthalmic infection, pneumonia, STDs, skin/soft tissue infection, tuberculosis, respiratory infections)
- Inflammatory Disorders (gout/hyperuricemia, rheumatoid arthritis, systemic inflammatory disease)
- Neurology (pain, CVA/TIA, headache/migraine, MS, neuropathies, seizures, traumatic brain injury, fluid/electrolytes)
- Nephrology (acid-base disorders, acute renal failure)
- Psychiatric Disorders (anxiety, bipolar, depression, schizophrenia, sleep disorders, substance abuse/misuse, PTSD)
- Respiratory (asthma, COPD, cough/cold/allergy)
- Skin Disorders (psoriasis, other common skin disorders)
- Non-Therapeutic Issues (ethics, economics/insurance/Medicare, cultural competencies, continuum of care, wellness/health promotion, health literacy, medication adherence, interprofessional team care)

#### Practice Opportunities

- Journal Club (on geriatric topic, medication, or population)
- SOAP/Progress notes/Documentation
- In-services to Providers/Staff
- Interprofessional Participation (medication safety meeting, interdisciplinary rounds, P&T meetings)
- Transitions of Care (medication reconciliation, admission/discharge counseling)

#### Resources (see page 17)

# Learner in Geriatrics: Advanced Training

## Post-Graduate Year – 1

The aims for the PGY-1 learner in geriatrics are to understand and apply pharmacodynamics/kinetics to an older adult population, monitor outcomes appropriately, and recommend appropriate treatment for older adults.

## Post-Graduate Year – 2 (Geriatrics)

The aims for the PGY-2 learner in geriatrics are to understand, apply, and teach/educate (students/patients/care partners) pharmacodynamics/kinetics of an older adult population, monitor outcomes appropriately, and recommend appropriate treatment for older adults.

## Certified Geriatric Pharmacist (CGP)

The aims for the Advanced Training towards CGP learner in geriatrics are to understand, apply, and teach/educate (patients/care partners) pharmacodynamics/kinetics of an older adult population, monitor outcomes appropriately, and recommend appropriate treatment for older adults.

## Post-Graduate Year – 1

Geriatric Rotation
Site Discussion Activities
Topic Discussions
<ul style="list-style-type: none"> <li>• Introduction to Geriatrics (epidemiology, biology of aging, pharmacokinetics, pharmacodynamics, elder abuse)</li> <li>• Introduction to Geriatric Syndrome (falls/gait, weakness/frailty, dizziness/syncope, functional/cognitive decline, sensory deficit, appetite/weight loss/malnutrition/dysphagia, medication-induced disease, polypharmacy)</li> <li>• Bowel-related Issues (constipation, diarrhea, fecal incontinence)</li> <li>• Chronic Kidney Disease/End-Stage Renal Disease</li> <li>• Delirium</li> <li>• Dementia (Alzheimer’s disease, vascular-dementia, Lewy Body dementia, other)</li> <li>• Ophthalmology (glaucoma/macular degeneration)</li> <li>• Osteoarthritis</li> <li>• Osteoporosis (Paget’s Disease, vitamin D deficiency/PTH disorders)</li> <li>• Parkinson’s disease/movement disorders</li> <li>• Urology (bladder outlet obstruction, urinary incontinence)</li> </ul>
Topic Discussions
<ul style="list-style-type: none"> <li>• Explicit Criteria for Prescribing (e.g. Beers Criteria/STOPP/START)</li> <li>• Dementia (cognitive function tests, mild cognitive impairment)</li> <li>• Depression (slower onset of action of SSRIs and higher incidences of uncommon adverse effects, Geriatric Depression Scale)</li> <li>• Diabetes (relaxed A1c goal, hypoglycemia)</li> <li>• CVA (accurate history needed including medications)</li> <li>• Hyperlipidemia (new guidelines do not include aged &gt;75, statin benefit vs. risks)</li> <li>• Hypertension (relaxed BP goal, hypotension)</li> <li>• STDs (common in older adults → unprotected sex)</li> <li>• Thyroid disease (sub-clinical hyper/hypothyroidism)</li> </ul>
Practice Opportunities
<ul style="list-style-type: none"> <li>• Journal Club &amp; Older Adult Education on Outcomes (converting journal club to layperson terms)</li> <li>• Comprehensive MTM</li> <li>• Verbal Geriatric Assessment (pain scale, Geriatric Depression Scale, memory scales)</li> <li>• Physical Geriatric Assessment (Inhaler technique, glucometer)</li> <li>• Outreach (Brown Bag assessment, fall-risk, Assessment)</li> <li>• SOAP/Progress notes/Documentation</li> <li>• In-services to Providers/Staff</li> <li>• Interprofessional Participation (medication safety meeting, interdisciplinary rounds, P&amp;T meetings, care plan meetings)</li> <li>• Transitions of Care (medication reconciliation, admission/discharge counseling)</li> <li>• Adherence (assessment, counseling, practice – medication planner fill/consumption using candy, <a href="http://www.mymedschedule.com/">http://www.mymedschedule.com/</a>)</li> <li>• Complete geriatric related Medication/Drug Utilization Evaluation</li> <li>• Attend a local, regional or national meeting focusing on geriatrics</li> <li>• Networking opportunities with experts in geriatrics</li> </ul>

# Post-Graduate Year – 1

## Non-Geriatric Rotation

### Site Discussion Activities

#### Topic Discussions

- Cardiology (ACS, arrhythmias, cardiomyopathy, CAD, CHF, hyperlipidemia, hypertension, PAD)
- Endocrine (adrenal disorders, diabetes mellitus, disorders of hypothalamus, sexual/erectile dysfunction, hormone therapy, thyroid disease)
- Gastrointestinal Disorders (diverticular disease, GERD/PUD, non-hepatitis hepatic disorders, inflammatory bowel disease, irritable bowel disease, nausea/vomiting, pancreatitis, alternative feeding modalities [e.g. nasogastric tubes, PEG tubes])
- Hematology/Oncology (anemia, disorders of hemostasis/platelets/WBC, cancers)
- Infectious Disease (HIV/AIDS, bone/joint infection, endocarditis, genitourinary, GI infection, herpes zoster, hepatitis, influenza, meningitis, nosocomial infections, ophthalmic infection, pneumonia, STDs, skin/soft tissue infection, tuberculosis, respiratory infections)
- Inflammatory Disorders (gout/hyperuricemia, rheumatoid arthritis, systemic inflammatory disease)
- Neurology (pain, CVA/TIA, headache/migraine, MS, neuropathies, seizures, traumatic brain injury, fluid/electrolytes)
- Nephrology (acid-base disorders, acute renal failure)
- Psychiatric Disorders (anxiety, bipolar, depression, schizophrenia, sleep disorders, substance abuse/misuse, PTSD)
- Respiratory (asthma, COPD, cough/cold/allergy)
- Skin Disorders (psoriasis, other common skin disorders, pressure ulcers, wound care)
- Non-Therapeutic Issues (ethics, economics/insurance/Medicare, cultural competencies, continuum of care, wellness/health promotion, health literacy)

#### Practice Opportunities

- Journal Club (on geriatric topic, medication, or population)
- SOAP/Progress notes/Documentation
- In-services to Providers/Staff
- Interprofessional Participation (medication safety meetings, interdisciplinary rounds, P&T meetings)
- Transitions of Care (medication reconciliation, admission/discharge counseling)

#### Resources (see page 17)

## Post-Graduate Year – 2 (Geriatrics)

Geriatric Pharmacotherapy Residency
Facilitate Discussions
Geriatric-specific Topic Discussions
<ul style="list-style-type: none"> <li>• Introduction to Geriatrics (epidemiology, biology of aging, pharmacokinetics, pharmacodynamics, elder abuse)</li> <li>• Introduction to Geriatric Syndrome (falls/gait, weakness/frailty, dizziness/syncope, functional/cognitive decline, sensory deficit, appetite/weight loss/malnutrition/dysphagia, medication-induced disease, polypharmacy)</li> <li>• Audiology (hearing loss and aids)</li> <li>• Explicit Criteria for Prescribing (e.g. Beers Criteria/STOPP/START)</li> <li>• Bowel-related Issues (constipation, diarrhea, fecal incontinence)</li> <li>• Chronic Kidney Disease/End-Stage Renal Disease</li> <li>• Delirium</li> <li>• Dementia (Alzheimer’s disease, vascular-dementia, Lewy Body dementia, other)</li> <li>• Ophthalmology (glaucoma/macular degeneration)</li> <li>• Osteoarthritis</li> <li>• Osteoporosis (Paget’s Disease, vitamin D deficiency/PTH disorders)</li> <li>• Parkinson’s disease/movement disorders</li> <li>• Urology (bladder outlet obstruction, urinary incontinence)</li> <li>• Hospice &amp; Palliative Care</li> </ul>
Geriatric-focus within Other Topic Discussions
<ul style="list-style-type: none"> <li>• Depression (slower onset of action of SSRIs and higher incidences of uncommon adverse effects, Geriatric Depression Scale)</li> <li>• Diabetes (relaxed A1c goal, hypoglycemia)</li> <li>• CVA (accurate history needed including medications)</li> <li>• Hyperlipidemia (new guidelines do not include aged &gt;75, statin benefit vs. risks)</li> <li>• Hypertension (relaxed BP goal, hypotension)</li> <li>• STDs (common in older adults, unprotected sex, HIV/AIDS)</li> <li>• Thyroid disease (Sub-clinical hyper/hypothyroidism)</li> </ul>
Practice Opportunities
<ul style="list-style-type: none"> <li>• Journal Club &amp; Older Adult Education on Outcomes (converting journal club to layperson terms)</li> <li>• Comprehensive MTM</li> <li>• Verbal Geriatric Assessment (pain scale, Geriatric Depression Scale, memory scales)</li> <li>• Physical Geriatric Assessment (Inhaler technique, glucometer)</li> <li>• Outreach (Brown Bag assessment, Fall-Risk, Assessment)</li> <li>• SOAP/Progress notes/Documentation</li> <li>• In-services to Providers/Staff</li> <li>• Interprofessional Participation (medication safety meetings, interdisciplinary rounds, P&amp;T meetings)</li> <li>• Transitions of Care (medication reconciliation, admission/discharge counseling)</li> <li>• Adherence (assessment, counseling, practice – medication planner fill/Consumption using candy, <a href="http://www.mymedschedule.com/">http://www.mymedschedule.com/</a>)</li> <li>• Complete geriatric related research project/MUE/DUE and manuscript for publication</li> <li>• Attend national pharmacy and geriatric meetings (American Society of Consultant Pharmacists [ASCP], American Geriatrics Society [AGS], American Society of Health-System Pharmacists [ASHP], American Association of Colleges of Pharmacy, Gerontological Society of America[GSA])</li> <li>• Visit pharmacy organization headquarters (ASCP)</li> <li>• Become an active member in state and national pharmacy committees and/or geriatric societies</li> <li>• Network/Collaborate with experts in geriatrics</li> <li>• Teach at local pharmacy school (lectures, small group discussion, seminar, labs)</li> </ul>
ASHP’s Educational Outcomes, Goals, and Objectives in PGY-2 Geriatrics Residency
<ul style="list-style-type: none"> <li>• Serve as an authoritative resource on the optimal use of medications used with geriatric patients</li> <li>• Optimize the continuum-of-care of geriatric patients; recognizing diseases, disorders, syndromes, and psychosocial needs unique to this population; by providing evidence- based, patient-centered therapy as an integral part of an interdisciplinary team</li> <li>• Manage and improve medication-use systems across the continuum of care for geriatric patients</li> <li>• Demonstrate leadership and practice management skills</li> <li>• Demonstrate excellence in the provision of training and educational activities for health care professionals, health care professionals in training, and the public</li> <li>• Contribute to the body of geriatric pharmacotherapy knowledge</li> </ul>

## Post-Graduate Year – 2 (Geriatrics)

Non-Geriatrics Specialty Residency
Site Discussion Activities
Topic Discussions
<ul style="list-style-type: none"> <li>• Cardiology (ACS, arrhythmias, cardiomyopathy, CAD, CHF, hyperlipidemia, hypertension, PAD)</li> <li>• Endocrine (adrenal disorders, diabetes mellitus, disorders of hypothalamus, sexual/erectile dysfunction, hormone therapy, thyroid disease)</li> <li>• Gastrointestinal Disorders (diverticular disease, GERD/PUD, non-hepatitis hepatic disorders, inflammatory bowel disease, irritable bowel disease, nausea/vomiting, pancreatitis, alternative feeding modalities [e.g. nasogastric tubes, PEG tubes])</li> <li>• Hematology/Oncology (anemia, disorders of hemostasis/platelets/WBC, cancers)</li> <li>• Infectious Disease (HIV/AIDS, bone/joint infection, endocarditis, genitourinary, GI infection, herpes zoster, hepatitis, influenza, meningitis, nosocomial infections, ophthalmic infection, pneumonia, STDs, skin/soft tissue infection, tuberculosis, respiratory infections)</li> <li>• Inflammatory Disorders (gout/hyperuricemia, rheumatoid arthritis, systemic inflammatory disease)</li> <li>• Neurology (pain, CVA/TIA, headache/migraine, MS, neuropathies, seizures, traumatic brain injury, fluid/electrolytes)</li> <li>• Nephrology (acid-base disorders, acute renal failure)</li> <li>• Psychiatric Disorders (anxiety, bipolar, depression, schizophrenia, sleep disorders, substance abuse/misuse, PTSD)</li> <li>• Respiratory (asthma, COPD, cough/cold/allergy)</li> <li>• Skin Disorders (psoriasis, dry skin, other common skin disorders, pressure ulcers, wound care)</li> <li>• Non-Therapeutic Issues (ethics, economics/insurance/Medicare, cultural competencies, continuum of care, wellness/health promotion, health literacy)</li> </ul>
Practice Opportunities
<ul style="list-style-type: none"> <li>• Journal Club (on geriatric topic, medication, or population)</li> <li>• SOAP/Progress notes/Documentation</li> <li>• In-services to Providers/Staff</li> <li>• Interprofessional Participation (medication safety meetings, interdisciplinary rounds, P&amp;T meetings)</li> <li>• Transitions of Care (medication reconciliation, admission/discharge counseling)</li> </ul>
Resources (see page 17)



# Certified Geriatric Pharmacist (CGP)

Geriatric Rotation
Facilitate Discussions
Geriatric-Specific Topic Discussions
<ul style="list-style-type: none"><li>• Cardiology (ACS, arrhythmias, cardiomyopathy, CAD, CHF, hyperlipidemia, hypertension, PAD)</li><li>• Endocrine (adrenal disorders, diabetes mellitus, disorders of hypothalamus, sexual/erectile dysfunction, hormone therapy, thyroid disease)</li><li>• Gastrointestinal Disorders (diverticular disease, GERD/PUD, non-hepatitis hepatic disorders, inflammatory bowel disease, irritable bowel disease, nausea/vomiting, pancreatitis, alternative feeding modalities [e.g. nasogastric tubes, PEG tubes])</li><li>• Hematology/Oncology (anemia, disorders of hemostasis/platelets/WBC, cancers)</li><li>• Infectious Disease (HIV/AIDS, bone/joint infection, endocarditis, genitourinary, GI infection, herpes zoster, hepatitis, influenza, meningitis, nosocomial infections, ophthalmic infection, pneumonia, STDs, skin/soft tissue infection, tuberculosis, respiratory infections)</li><li>• Inflammatory Disorders (gout/hyperuricemia, rheumatoid arthritis, systemic inflammatory disease)</li><li>• Neurology (pain, CVA/TIA, headache/migraine, MS, neuropathies, seizures, traumatic brain injury, fluid/electrolytes)</li><li>• Nephrology (acid-base disorders, acute renal failure)</li><li>• Psychiatric Disorders (anxiety, bipolar, depression, schizophrenia, sleep disorders, substance abuse/misuse, PTSD)</li><li>• Respiratory (asthma, COPD, cough/cold/allergy)</li><li>• Skin Disorders (psoriasis, dry skin, other common skin disorders, pressure ulcers, wound care)</li><li>• Non-Therapeutic Issues (ethics, economics/insurance/Medicare, cultural competencies, continuum of care, wellness/health promotion, health literacy)</li></ul>
Practice Opportunities
<ul style="list-style-type: none"><li>• Journal Club (on geriatric topic, medication, or population)</li><li>• SOAP/Progress notes/Documentation</li><li>• In-services to Providers/Staff</li><li>• Interprofessional Participation (medication safety meetings, interdisciplinary rounds, P&amp;T meetings)</li><li>• Transitions of Care (medication reconciliation, admission/discharge counseling)</li></ul>
Resources (see page 17)

## Geriatric Training for Specialists

### Geriatric Training for Specialists – Clinical

The aims of geriatric training for specialists (clinical) are to understand, apply, and teach/educate specific topics within geriatrics not commonly seen by clinical practitioners (i.e., an oncology pharmacist working in a geriatric population).

### Geriatric Training for Specialists – Non-Clinical

The aims of geriatric training for specialists (non-clinical) are to understand, apply, and teach/educate specific topics within medicine/business/legislation not commonly seen by clinical practitioners.

## Geriatric Training for Specialists – Clinical

Topics (Lecture)*
<ul style="list-style-type: none"><li>• Infectious Disease (meningitis, nosocomial infections, tuberculosis, HIV/AIDS)</li><li>• Inflammatory Disease (IBD, rheumatoid arthritis, systemic inflammatory disease)</li><li>• Musculoskeletal (foot disorders, fractures, tendonitis/bursitis)</li><li>• Neurological (ALS, Huntington's disease)</li><li>• Hematology/Oncology (specific diseases, cancers)</li><li>• Pain (acute pain, chronic pain, cancer pain)</li><li>• Palliative Care and Hospice (pain management and comfort care, deprescribing)</li><li>• Respiratory (pulmonary hypertension, sleep apnea)</li><li>• Interprofessional Team Care</li></ul>
*= Not all-inclusive list
Resources (see page 17)

## Geriatric Training for Specialists – Non-Clinical

Topics (Lecture)*
<ul style="list-style-type: none"><li>• Starting a Consulting Business in Pharmacy (hospice, transitions of care)</li><li>• Starting a Senior Care Pharmacists Business (long-term care, assisted living)</li><li>• Justification of Services</li><li>• Pharmacist Prescribing (collaborative practice)</li><li>• Billing for Services</li><li>• Teaching/Lecturing/Precepting</li><li>• Interprofessional Education</li><li>• Aging Research</li></ul>
*=Not all-inclusive List
Resources (see page 17)

## Abbreviations

A1C: Glycated Hemoglobin  
ACPE: Accreditation Council for Pharmacy Education  
ACS: Acute Coronary Syndrome  
ADL: Activities of Daily Living  
AIDS: Acquired Immunodeficiency Syndrome  
ALS: Amyotrophic Lateral Sclerosis  
APPE: Advanced Pharmacy Practice Experience  
ASCP: American Society of Consultant Pharmacists  
ASHP: American Society of Health-System Pharmacists  
BCACP: Board Certified Ambulatory Care Pharmacists  
BCPS: Board Certified Pharmacotherapy Specialist  
BP: Blood Pressure  
CAD: Coronary Artery Disease  
CAPE: Center for the Advancement of Pharmaceutical Education  
CDC: Centers for Disease Control and Prevention  
CGP: Certified Geriatric Pharmacist  
CHF: Congestive Heart Failure  
COPD: Chronic Obstructive Pulmonary Disease  
CVA: Cerebrovascular Accident  
DUE: Drug Use Evaluation  
FRAX: Fracture Risk Assessment Tool  
GERD: Gastroesophageal Reflux Disease  
GI: Gastrointestinal  
HEENT: Head, Eyes, Ears, Nose and Throat  
HIV: Human Immunodeficiency Virus  
IADL: Instrument Activities of Daily Living  
IBD: Inflammatory Bowel Disease  
IPPE: Introductory Pharmacy Practice Experience  
MS: Multiple Sclerosis  
MTM: Medication Therapy Management  
MUE: Medication Use Evaluation  
N/V: Nausea/Vomiting  
PAD: Peripheral Artery Disease  
PEG: Percutaneous Endoscopic Gastronomy  
PGY1: Postgraduate Year One  
PGY2: Postgraduate Year Two  
P&T: Pharmacy and Therapeutics  
PTH: Parathyroid Hormone  
PTSD: Post Traumatic Stress Disorder  
PUD: Peptic Ulcer Disease  
SOAP: Subjective Objective Assessment Plan  
SSRI: Selective Serotonin Reuptake Inhibitor  
STD: Sexually Transmitted Disease  
START: Screening Tool to Alert doctors to the Right Treatment  
STOPP: Screening Tool of Older People's potentially inappropriate Prescriptions  
TIA: Transient Ischemic Attack  
URI: Upper Respiratory Infection  
WBC: White Blood Cell

# Resource Page

## General Resources

Pharmacists' Patient Care Process: [https://www.ascp.com/sites/default/files/JCPP%20Pharmacists%20Patient%20Care%20Process%20Final\\_0.pdf](https://www.ascp.com/sites/default/files/JCPP%20Pharmacists%20Patient%20Care%20Process%20Final_0.pdf)

Hutchison LC and Sleeper RB, eds. *Fundamentals of Geriatric Pharmacotherapy: An Evidence Based Approach*. Bethesda, MD: American Society of Health-Systems Pharmacists; 2010.

Reuben DB, Herr KA, Pacala JT, et al. *Geriatrics At Your Fingertips: 2014, 16th Edition*. New York: The American Geriatrics Society; 2014.

Merck Manual of Geriatrics: <http://www.merckmanuals.com/professional/geriatrics.html>

Hutchison LC, O'Brien CE. Changes in pharmacokinetics and pharmacodynamics in the elderly patient. *J Pharm Pract* 2007;20:1:4-12

Delafente JC. Pharmacokinetic and pharmacodynamic alterations in the geriatric patients. *Consult Pharm* 2008;23:324-234

Chen AM, Plake KS, Yehle KS, Kiersma ME. Impact of the geriatric medication game on pharmacy students' attitudes toward older adults. *Am J Pharm Educ* 2011;75(8) Article 158.

Sleeper RB. Common geriatric syndromes and special problems. *Consult Pharm* 2009; 24(6): 447-62.

Flynn B. What it is like to be a long-term care resident: A Personal Perspective. *Consult Pharm* 2005;20:610-614.

Anastasia E, Estus E. Living in an older adult community: A pharmacy student's experience. *Consult Pharm* 2013;28: 762-69.

Martin CM, McSpadden CS. Changes in the State Operations Manual: Implications for consultant pharmacy practice. *Consult Pharm* 2006; 21:948-961.

Nursing facility survey and regulations resources: <https://www.ascp.com/articles/nursing-facility-survey-regulations>.

Lee JK, Slack MK, Martin J, Ehrman C, Chisholm-Burns MA. Geriatric patient care by U.S. pharmacists in healthcare teams: systematic review and meta-analysis. *J Am Geriatr Soc* 2013;61(7):1119-1127. Epub 2013 Jun 23, DOI: 10.1111/jgs.12323.

Practice Resources from ASCP: <https://www.ascp.com/practice-resources>

*The Consultant Pharmacist*, the peer reviewed journal of the American Society of Consultant Pharmacists offers relevant information relating to geriatric education- didactic, experiential, and practice based information. Also provides case studies that can be used as examples and discussion topics.

*The American Journal of Pharmaceutical Education* (AJPE), is the official scholarly publication of the American Association of Colleges of Pharmacy. This journal features articles that support all areas of pharmaceutical education.

## Useful Position Statements/Practice Guidelines/General Background for Geriatrics

James PA, Oparil S, Carter BL, et al. 2014 evidence-based guideline for the management of high blood pressure in adults: report from the panel members appointed to the eighth Joint National Committee (JNC 8). *JAMA* 2014;311(5):507-520. doi:10.1001/jama.2013.284427.

Stone NJ, Robinson J, Liechtenstein HA, et al. 2013 ACC/AHA guidelines on the treatment of blood cholesterol to reduce atherosclerotic cardiovascular risk in adults. A report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. *Circulation*. 2013. Available at: <http://circ.ahajournals.org/content/early/2013/11/11/01.cir.0000437738.63853.7a.citation>.

American Diabetes Association (ADA). Standards of medical care in diabetes – 2013. *Diabetes Care* 2013;36(suppl 1):S11–S66.

American Geriatrics Society. Updated Beers Criteria for potentially inappropriate medication use in older adults. *J Am Geriatr Soc* 2012; 60:616-31.

O'Mahony D, O'sullivan D, Byrne S, O'connor MN, Ryan C, Gallagher P. STOPP/START criteria for potentially inappropriate prescribing in older people: version 2. *Age Ageing*. 2014;1-6.

Patient-Centered Care for Older Adults with Multiple Chronic Conditions: A Stepwise Approach from the American Geriatrics Society American Geriatrics Society Expert Panel on the Care of Older Adults with Multimorbidity. DOI:10.1111/j.1532- 5415.2012.04187.x.

AGS Choosing Wisely Workgroup. American Geriatrics Society identifies five things that healthcare providers and patients should question. *J Am Geriatr Soc* 2013;61:622-631.

AGS Choosing Wisely Workgroup. American Geriatrics Society identifies another five things that healthcare providers and patients should question. *J Am Geriatr Soc* 2014. DOI:10.1111/jgs.12770.

Steinman MA, Hanlon JT. Managing medications in clinically complex elders: There's got to be a happy medium. *JAMA* 2010;304(14):1592-1601.

Holmes HM, Hayley DC, Alexander GC, Sachs GA. Reconsidering medication appropriateness for patients late in life. *Arch Intern Med* 2006;166:605-9.

Elder Care - A Resource For Interprofessional Providers: [http://dev.aging.medicine.arizona.edu/education\\_training/programs/elder\\_care](http://dev.aging.medicine.arizona.edu/education_training/programs/elder_care).

TeamSTEPPS®: <http://teamstepps.ahrq.gov/>

Top 10 Particularly Dangerous Drug Interactions in Long Term Care. Available at: <http://www.amda.com/tools/clinical/m3/topten.cfm>.

## **Health Literacy, Communication Skills and Interprofessional Care Resources**

Culture, Language and Health Literacy. Available at: <http://www.hrsa.gov/culturalcompetence>.

AHRQ Pharmacy Health Literacy Center. Available at: <http://www.ahrq.gov/professionals/quality-patient-safety/pharmhealthlit/index.html>.

Communicating with Older Adults: An Evidence-Based Review of What Really Works. The Gerontological Society of America. 2012. Available at: [http://www.agingresources.com/cms/wp-content/uploads/2012/10/GSA\\_Communicating-with-Older-Adults-low-Final.pdf](http://www.agingresources.com/cms/wp-content/uploads/2012/10/GSA_Communicating-with-Older-Adults-low-Final.pdf).

Effective Communication Tools for Health Care Professionals. Available at: [www.hrsa.gov/publichealth/healthliteracy/index.html](http://www.hrsa.gov/publichealth/healthliteracy/index.html).

The Readiness for Interprofessional Learning Scale. Available at: <https://nexusipe.org/resource-exchange/ripls-readiness-interprofessional-learning-scale>.

National Center for Interprofessional Practice and Education. Available at: <https://nexusipe.org/>.

### **Precepting Resources:**

American Society of Consultant Pharmacists "Become a Preceptor". Available at: <https://www.ascp.com/articles/become-preceptor>.

Martin CM, Estus EL. Precepting: A win-win for students and pharmacists. *Consult Pharm* 2012; 27(6):403-09.

### **Residency Resources:**

ASHP Residency Information Page. Available at: <http://www.ashp.org/menu/Accreditation/ResidencyAccreditation.aspx>

### **Geriatric APPE/Elective Resources:**

Estus EL, Hume AL, Owens NJ. Innovations in teaching: Pharmacotherapy in geriatrics: Improving student perception and knowledge through an active learning course model. *Am J Pharm Educ* 2010; 74(3): Article 38.

Bouwmeester C. The PACE Program: home-based long-term care. *Consult Pharm* 2012;1:24-30.

Augustine J, Shah A, Makadia N, Shah A, Lee JK. Knowledge, Attitudes, and Beliefs Regarding Geriatric Care among Student Pharmacists. *Currents in Pharmacy Teaching and Learning* 2014 (6):226- 232.

Gilligan AM, Loui JA, Mezdo A, Patel N, Lee JK. Geriatric Quality-of-Life: A comparison of active older individuals and pharmacy student perceptions. *Am J Pharm Educ* 2014 Feb 12;78(1):10. doi:10.5688/ajpe78110.

## **Curriculum Resources:**

Odegard PS, Breslow RM, Koronkowski MJ, et al. Geriatric pharmacy education; a strategic plan for the future. *Am J Pharm Educ* 2007;71(3):article 47.

Accreditation standards and key element for the professional program in pharmacy leading to the doctor of pharmacy degree, Draft 2016, Accreditation Council for Pharmacy Education, <https://acpe-accredit.org/standards/default.asp>

CAPE 2013: <http://www.aacp.org/resources/education/cape/Pages/default.aspx>

ACPE Standards: <https://www.acpe-accredit.org/standards/>

### **Outreach Resources:**

American Pharmacists Association. Patient Outreach Tools. Available at: <http://www.pharmacist.com/tools-patient-outreach>.

Adult Meducation. Available at: <http://www.adultmeducation.com/index.html>.

The GenerationRx Initiative. Available at: [www.pharmacy.osu.edu/outreach/generation-rx](http://www.pharmacy.osu.edu/outreach/generation-rx).

### **MTM Resources:**

ASCP: <https://www.ascp.com/MTM>

APhA: <http://www.pharmacist.com/mtm>

### **Career Resources:**

<https://www.ascp.com/welcome>

### **Professional Development/Geriatric Certification Resources:**

<https://www.ascp.com/professional-development>

<http://www.ccgp.org>

## Appendix A: Crosswalk with ACPE Outcomes

The Accreditation Council for Pharmacy Education is responsible for the accreditation of professional-level pharmacy degree programs, as well as continuing-education programs for pharmacists. The ACPE outcomes are the foundation of the curriculum of each school of pharmacy.

ACPE Outcome	ASCP Geriatric Pharmacy Curriculum Guide
<p><b>1.1. Foundational knowledge</b> The graduate must be able to develop, integrate, and apply knowledge from the foundational sciences (i.e. biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences) to evaluate the scientific literature, explain drug action, solve therapeutic problems, and advance population health and patient-centered care.</p>	<p>I.B.2. Describe the biology of aging and discuss common theories of aging. I.B.3. Discuss the physiologic changes of aging and how they impact the pharmacokinetic, pharmacodynamic and therapeutic use of medications. II.D.2. Evaluate the appropriateness of standards of practice or treatment guidelines for the older adult patient. II.D.4. Apply principles of pharmacokinetic and pharmacodynamic changes associated with aging to the design of the pharmacotherapy regimen. III.A.1. Identify reputable sources of information for the care of an older adult patient. III.A.4. Evaluate and apply evidence from primary literature as it pertains to the care of older adult patients. III.A.5. Evaluate the relevancy of clinical practice guidelines, standards of care and quality measures related to geriatric care.</p>
<p><b>2.1. Patient-centered care</b> The graduate must be able to provide patient-centered care as the medication expert (collect and interpret evidence, prioritize, formulate assessments and recommendations, implement, monitor and adjust plans, and document activities)</p>	<p>I.D.1. Communicate drug and adherence information to older patients, their care partners and the interprofessional team. I.D.3. Demonstrate proficiency to interview and counsel older adults with varying degrees of health literacy as well as cognitive and communication abilities. I.F.3. Conduct a medication review to minimize the impact of drug-related falls. II.B.1. Recognize the atypical clinical presentation and progression of common diseases found in older adults. II.B.2. Identify symptoms of drug-induced diseases and geriatric syndromes. II.C.1. Identify basic cognitive, functional physical and safety assessments for common diseases in the older adult population. II.C.2. Demonstrate the ability to conduct basic cognitive, functional, physical and safety assessments for common diseases in the older adult population. II.C.4. Apply knowledge of geriatric syndromes and medication-related problems when interpreting assessment results. II.C.5. Obtain and interpret a comprehensive medication history in relation to a patient's current health status. II.C.6. Assess a medication regimen for medication-related problems (e.g., polypharmacy, nonadherence, drug interactions, adverse drug event, underuse, potentially inappropriate medications). II.C.7. Appropriately recommend and interpret laboratory results for the older patient. II.C.10. Develop a problem list and prioritize care based upon severity of illness, patient preference, quality of life, and time to benefit. II.D.1. Define therapeutic goals incorporating patient- specific principles (e.g., age, functionality, patient preference, culture). II.D.3. Determine therapeutic options and the risk/benefit to the patient (e.g., no treatment, non-pharmacologic interventions, non-prescription medications, complementary and alternative medicine, and prescription medications). II.D.4. Apply principles of pharmacokinetic and pharmacodynamic changes associated with aging to the design of the pharmacotherapy regimen. II.D.5. Design and recommend age/patient specific regimen including medication, dose, dosage form, dosing interval, and route of administration. II.D.6. Resolve and/or prevent medication-related problems in a given older adult patient. II.E.1. Develop and implement an older adult patient- specific monitoring plan. II.E.2. Revise therapeutic plans based upon changes in patient status. II.G.1. Document rationale, actions, and outcomes from medication therapies for the healthcare team. II.G.2. Write an action plan for use by the patient/care partner. III.A.4. Evaluate and apply evidence from primary literature as it pertains to the care of older adult patients.</p>
<p><b>2.2. Medication use systems management</b> The graduate must be able to manage patient healthcare needs using human, financial, technological, and physical resources to optimize the safety and efficacy of medication use systems.</p>	<p>I.E.1. Define the continuum of care available to older adults such as community resources, home care, formal and informal care partnerships, assisted living facilities, nursing facilities, sub-acute care facilities, hospice care, and hospitals. I.E.3. Facilitate medication reconciliation to improve transitions across the continuum of care and reduce readmissions. II.G.3. Perform and document comprehensive medication reconciliation across the continuum of care. II.G.4. Acknowledge different systems for documentation and tracking of intervention data which can generate evidence of care. III.A.2. Evaluate medication utilization at the system level to ensure safe and effective drug therapy. III.A.3. Utilize a documentation system to evaluate outcomes of pharmacist intervention.</p>

<p><b>2.3. Health and wellness</b> The graduate must be able to design prevention, intervention, and educational strategies for individuals and communities to manage chronic disease and improve health and wellness.</p>	<p>I.C.1. Describe the interrelationship between social issues and aging (e.g., family, cultural, community, housing, access to care, policy issues). I.C.2. Recognize signs and symptoms of substance and medication misuse/abuse in older adults. I.C.3. Identify and manage the social issues of medication use for an individual patient’s therapy. I.C.4. Describe the interrelationship between an older adult and their formal and informal care partners. I.C.5. Recognize available resources and develop strategies to support older adults and care partners. I.C.9. Define elder abuse/neglect (e.g., physical, psychological, and financial). I.C.10. Recognize and report the signs of elder abuse/neglect. I.C.12. Consider financial/reimbursement issues (e.g., formularies, insurance coverage) when making therapeutic recommendations. I.C.13. Value and appreciate ethnic, racial and cultural differences in the older adult population. I.C.14. Recognize differences in healthcare beliefs which may exist between patients and healthcare professionals. I.C.16. Discuss the concept of ageism and how it may impact the treatment of patients. I.D.2. Recognize the prevalence of limited health literacy in the older adult population. I.E.2. Participate in interprofessional decision making regarding appropriate levels of care for individual patients. I.F.1. Describe and advocate health care initiatives relative to wellness and health promotion (e.g., nutrition, physical activity, medication adherence, immunizations, and health screenings). I.F.2. Counsel an older patient on the utility of health screenings and preventive measures. I.F.3..3. Conduct a medication review to minimize the impact of drug-related falls. II.C.3. Assess social and cultural determinants of health outcomes. III.B.3. Respect the roles and responsibilities of the pharmacist and other healthcare professionals within the interprofessional team.</p>
<p><b>2.4. Population-based care</b> The graduate must be able to describe how population-based care influences patient-centered care and the development of practice guidelines and evidence-based best practices.</p>	<p>I.A.1. Define the demographic, economic and medical characteristics of older adults (e.g., gender, ethnicity, geographic, socioeconomic, multi-morbidity, disability, and medication use patterns). I.A.2. Recognize the heterogeneity of the older adult population. I.B.1. Recognize the spectrum of aging from healthy aging to frailty. I.C.7. Promote patient-centered decision making and care. I.C.13. Value and appreciate ethnic, racial and cultural differences in the older adult population. I.D.2. Recognize the prevalence of limited health literacy in the older adult population. I.E.4. Discuss the philosophy and practice of hospice/palliative care. I.E.5. Incorporate life expectancy and end-of-life issues in the decision-making of appropriate use of medications. II.A. Describe incidence and prevalence of diseases in the older adult population. III.A.5. Evaluate the relevancy of clinical practice guidelines, standards of care and quality measures related to geriatric care. III.D.1. Develop, implement and assess formulary management/protocols as they pertain to the care of the older adult patient.</p>
<p><b>3.1. Problem solving</b> The graduate must be able to identify problems; explore and prioritize potential strategies; and design, implement, and evaluate a viable solution.</p>	<p>I.C.15. Demonstrate the ability to assess personal misconceptions, generalities and stereotypes which may impact the care of an ethnically, racially and culturally diverse patient population. I.D.2. Recognize the prevalence of limited health literacy in the older adult population. I.D.4. Recognize barriers to effective communication (e.g., cognitive, sensory, cultural, and language). II.C.6. Assess a medication regimen for medication- related problems (e.g., polypharmacy, non-adherence, drug interactions, adverse drug event, underuse, potentially inappropriate medications). II.C.8. Identify and recognize potential functional barriers to the older adult patient (e.g., transportation, housing, economics, and social support structure). II.C.9. Identify potential environmental causes of decline in activities of daily living (ADL), instrumental activities of daily living (IADL), and cognitive function. II.E.1. Develop and implement an older adult patient- specific monitoring plan. II.E.2. Revise therapeutic plans based upon changes in patient status.</p>
<p><b>3.2 Education</b> The graduate must be able to educate all audiences by determining the most effective and enduring ways to impart information and assess learning.</p>	<p>I.D.1. Communicate drug and adherence information to older patients, their care partners and the interprofessional team. I.D.3. Demonstrate proficiency to interview and counsel older adults with varying degrees of health literacy as well as cognitive and communication abilities. I.D.4. Recognize barriers to effective communication (e.g., cognitive, sensory, cultural, and language). I.F.1. Describe and advocate health care initiatives relative to wellness and health promotion (e.g., nutrition, physical activity, medication adherence, immunizations, and health screenings). I.F.2. Counsel an older patient on the utility of health screenings and preventive measures. II.F.1. Utilize educational material appropriate to the specific patient/care partner. II.F.2. Ensure understanding of medication use and its role in the overall treatment plan. II.F.3. Educate patient/care partner regarding potential problems with patient care management and administration of medications. II.F.4. Assist the patient/care partner in identifying, procuring, and utilizing adherence strategies and devices. II.F.5. Educate interprofessional team members regarding geriatric-specific pharmacotherapy principles.</p>



<p><b>3.3. Patient advocacy</b> The graduate must be able to represent the patients' best interests.</p>	<p>I.C.7. Promote patient-centered decision making and care. I.C.8. Describe advanced directives, living wills and the role of a power of attorney. I.C.11. Describe the options for coverage and benefits older adults may utilize (e.g. Medicare, Medicaid and supplemental coverage). I.C.12. Consider financial/reimbursement issues (e.g., formularies, insurance coverage) when making therapeutic recommendations. I.F.1. Describe and advocate health care initiatives relative to wellness and health promotion (e.g., nutrition, physical activity, medication adherence, immunizations, and health screenings). II.C.11. Identify patients who need referrals to other health and non-health professionals. II.F.4. Assist the patient/care partner in identifying, procuring, and utilizing adherence strategies and devices III.C.4. Promote advocacy for geriatric patient care and the pharmacy profession.</p>
<p><b>3.4. Interprofessional collaboration</b> The graduate must be able to actively participate and engage as a healthcare team member by demonstrating mutual respect, understanding, and values to meet patient care needs.</p>	<p>I.C.7. Promote patient-centered decision making and care. I.D.1. Communicate drug and adherence information to older patients, their care partners and the interprofessional team. I.E.2. Participate in interprofessional decision making regarding appropriate levels of care for individual patients. II.C.11. Identify patients who need referrals to other health and non-health professionals. II.F.5. Educate interprofessional team members regarding geriatric-specific pharmacotherapy principles. III.B.2. Recognize emerging opportunities for geriatric practice. III.B.3. Respect the roles and responsibilities of the pharmacist and other healthcare professionals within the interprofessional team.</p>
<p><b>3.5. Cultural sensitivity</b> The graduate must be able to recognize social determinants of health to diminish disparities and inequities in access to quality care.</p>	<p>IA.1. Define the demographic, economic and medical characteristics of older adults (e.g., gender, ethnicity, geographic, socioeconomic, multi-morbidity, disability, and medication use patterns). I.C.1. Describe the interrelationship between social issues and aging (e.g., family, cultural, community, housing, access to care, policy issues). I.C.13. Value and appreciate ethnic, racial and cultural differences in the older adult population. I.C.14. Recognize differences in healthcare beliefs which may exist between patients and healthcare professionals. I.C.15. Demonstrate the ability to assess personal misconceptions, generalities and stereotypes which may impact the care of an ethnically, racially and culturally diverse patient population. I.C.16. Discuss the concept of ageism and how it may impact the treatment of patients. I.D.2. Recognize the prevalence of limited health literacy in the older adult population. I.D.3. Demonstrate proficiency to interview and counsel older adults with varying degrees of health literacy as well as cognitive and communication abilities. I.D.4. Recognize barriers to effective communication (e.g., cognitive, sensory, cultural, and language). II.C.3. Assess social and cultural determinants of health outcomes. II.F.2. Ensure understanding of medication use and its role in the overall treatment plan.</p>
<p><b>3.6. Communication</b> The graduate must be able to effectively communicate verbally and nonverbally when interacting with individuals, groups, and organizations.</p>	<p>I.D.1. Communicate drug and adherence information to older patients, their care partners and the interprofessional team. I.D.3. Demonstrate proficiency to interview and counsel older adults with varying degrees of health literacy as well as cognitive and communication abilities. I.F.2. Counsel an older patient on the utility of health screenings and preventive measures. I.F.3. Conduct a medication review to minimize the impact of drug-related falls. II.C.2. Demonstrate the ability to conduct basic cognitive, functional, physical and safety assessments for common diseases in the older adult population. II.C.5. Obtain and interpret a comprehensive medication history in relation to patient's current health status. II.F.2. Ensure understanding of medication use and its role in the overall treatment plan. II.F.3. Educate patient/care partner regarding potential problems with patient care management and administration of medications. II.F.5. Educate interprofessional team members regarding geriatric-specific pharmacotherapy principles. II.G.1. Document rationale, actions, and outcomes from medication therapies for the healthcare team. II.G.3. Perform and document comprehensive medication reconciliation across the continuum of care. II.G.4. Acknowledge different systems for documentation and tracking of intervention data which can generate evidence of care. III.A.3. Utilize a documentation system to evaluate outcomes of pharmacist intervention.</p>
<p><b>4.1. Self-awareness</b> The graduate must be able to examine and reflect on personal knowledge, skills, abilities, beliefs, biases, motivation, and emotions that could enhance or limit personal and professional growth.</p>	<p>I.C.14. Recognize differences in healthcare beliefs which may exist between patients and healthcare professionals. I.C.15. Demonstrate the ability to assess personal misconceptions, generalities and stereotypes which may impact the care of an ethnically, racially and culturally diverse patient population. I.D.4. Recognize barriers to effective communication (e.g., cognitive, sensory, cultural, and language). III.C.3. Develop strategies for keeping up to date on regulatory changes and their impact on geriatric care.</p>

<p><b>4.2. Leadership</b> The graduate must be able to demonstrate responsibility for creating and achieving shared goals, regardless of position.</p>	<p>I.E.2. Participate in interprofessional decision making regarding appropriate levels of care for individual patients. III.B.3. Respect the roles and responsibilities of the pharmacist and other healthcare professionals within the interprofessional team.</p>
<p><b>4.3. Innovation and entrepreneurship</b> The graduate must be able to engage in innovative activities by using creative thinking to envision better ways of accomplishing professional goals.</p>	<p>III.B.1. Identify models of practice in geriatric care. III.B.2. Recognize emerging opportunities for geriatric practice. III.C.1. Identify agencies and organizations integral in the development and enforcement of geriatric public policy. III.C.4. Promote advocacy for geriatric patient care and the pharmacy profession. III.D.2. Demonstrate knowledge of sources and processes of compensation for geriatric pharmacy services.</p>
<p><b>4.4 Professionalism</b> The graduate must be able to exhibit behaviors and values that are consistent with the trust given to the profession by patients, other healthcare providers, and society.</p>	<p>I.C.6. Recognize ethical dilemmas through a systematic decision-making process based on clearly articulated ethical theories and principles (e.g., self-determination, autonomy, justice in the distribution of resources). I.C.13. Value and appreciate ethnic, racial and cultural differences in the older adult population. I.C.15. Demonstrate the ability to assess personal misconceptions, generalities and stereotypes which may impact the care of an ethnically, racially and culturally diverse patient population. III.B.4. Discuss board certifications available for pharmacists providing geriatric care (e.g., CGP, BCPS, BCACP, CDE, etc.). III.C.2. Identify and adhere to site-specific regulations for geriatric care.</p>
<p>ACPE Citation: Accreditation standards and key element for the professional program in pharmacy leading to the doctor of pharmacy degree, Draft 2016, Accreditation Council for Pharmacy Education, <a href="https://acpe-accredit.org/standards/default.asp">https://acpe-accredit.org/standards/default.asp</a></p>	

## Appendix B: Crosswalk with Core Competencies for Interprofessional Collaborative Practice (2011)

(<http://www.aacn.nche.edu/education-resources/ipecreport.pdf>)

This competency statement was produced by the Interprofessional Education Collaborative sponsored by the American Association of Colleges of Nursing, the American Association of Colleges of Osteopathic Medicine, the American Association of Colleges of Pharmacy, the American Dental Education Association, the Association of American Medical Colleges and the Association of Schools of Public Health. These competencies are taught within each health profession, but the goal of this statement is to go beyond each individual profession's educational program and encourage interprofessional collaboration to provide safe, high quality, accessible, patient-centered care. This collaboration is particularly important in the care of complex older adults. Geriatrics is an ideal platform for teaching collaborative practice across the professions.

Core Competencies for Interprofessional Collaborative Practice	ASCP's Geriatric Pharmacy Curriculum Guide
<p><b>Values/Ethics for Interprofessional Practice</b> Work with individuals of other professions to maintain a climate of mutual respect and shared values.</p>	<p>I.C.7. Promote patient-centered decision making and care. I.C.13. Value and appreciate ethnic, racial and cultural differences in the older adult population. I.C.14. Recognize differences in healthcare beliefs which may exist between patients and healthcare professionals.</p>
<p><b>Roles/Responsibilities</b> Use the knowledge of one's own role and those of other professions to appropriately assess and address the healthcare needs of the patients and populations served.</p>	<p>I.C.4. Describe the interrelationship between an older adult and their formal and informal care partners. I.C.5. Recognize available resources and develop strategies to support older adults and care partners. I.E.2. Participate in interprofessional decision making regarding appropriate levels of care for individual patients. II.C.11. Identify patients who need referrals to other health and non-health professionals. II.F.5. Educate interprofessional team members regarding geriatric-specific pharmacotherapy principles. III.B.3. Respect the roles and responsibilities of the pharmacist and other healthcare professionals within the interprofessional team.</p>
<p><b>Interprofessional Communication</b> Communicate with patients, families, communities, and other health professionals in a responsive and responsible manner that supports a team approach to the maintenance of health and the treatment of disease.</p>	<p>I.D.1. Communicate drug and adherence information to older patients, their care partners and the interprofessional team. II.G.1. Document rationale, actions, and outcomes from medication therapies for the healthcare team.</p>
<p><b>Teams and Teamwork</b> Apply relationship-building values and the principles of team dynamics to perform effectively in different team roles to plan and deliver patient-/population-centered care that is safe, timely, efficient, effective, and equitable.</p>	<p>III.B.3. Respect the roles and responsibilities of the pharmacist and other healthcare professionals within the interprofessional team.</p>
<p>Citation: Interprofessional Education Collaborative Expert Panel. (2011). Core competencies for interprofessional collaborative practice: Report of an expert panel. Washington, D.C.: Interprofessional Education Collaborative.</p>	

## Appendix C: Crosswalk with the Curricular Framework: Core Competencies in Multicultural Geriatric Care (2004)

The Curricular Framework: Core Competencies in Multicultural Geriatric Care was created with recommendations from the University of California Academic Geriatric Resource Program and the Ethnogeriatrics Committee of the American Geriatrics Society. The objective was to develop cultural competencies for geriatric faculty for all healthcare disciplines. The competencies focus on preparing healthcare professionals to work effectively in cross-cultural situations.

Core Competencies in Multicultural Geriatric Care	ASCP's Geriatric Pharmacy Curriculum Guide
<p><b>Attitudes</b> Assess awareness of personal beliefs before interacting with others.</p>	<p>I.C.13. Value and appreciate ethnic, racial and cultural differences in the older adult population. I.C.14. Recognize differences in healthcare beliefs which may exist between patients and healthcare professionals. I.C.15. Demonstrate the ability to assess personal misconceptions, generalities and stereotypes which may impact the care of an ethnically, racially and culturally diverse patient population.</p>
<p><b>Knowledge</b> Use data to influence attitudes and improve healthcare outcomes.</p>	<p>I.A.1. Define the demographic, economic and medical characteristics of older adults (e.g., gender, ethnicity, geographic, socioeconomic, multi-morbidity, disability, and medication use patterns). I.C.16. Discuss the concept of ageism and how it may impact the treatment of patients. I.D.4. Recognize barriers to effective communication (e.g., cognitive, sensory, cultural, and language). II.C.8. Identify and recognize potential functional barriers to the older adult patient (e.g., transportation, housing, economics, and social support structure).</p>
<p><b>Skills</b> Demonstrate competency in understanding cultural needs by applying attitudes and knowledge when working with patients.</p>	<p>II.C.3. Assess social and cultural determinants of health outcomes.</p>
<p>Citations: Xakellis G, Brangman SA, Hinton WL, et al. Curricular framework: core competencies in multicultural geriatric care. J Am Geriatr Soc 2004;52(1):137-42. American Psychological Association, Committee on Aging. (2009). Multicultural Competency in Geropsychology. Washington, DC: American Psychological Association. Betancourt JR. Cultural competency: providing quality care to diverse populations. Consult Pharm 2006;21(12):988-95.</p>	

## Appendix D: Crosswalk with Partnership with Health in Aging Multidisciplinary Competencies in the Care of Older Adults at the Completion of the Entry-level Health Professional Degree (2010)

The Partnership for Health in Aging, originally convened by the American Geriatrics Society, is a coalition of more than 30 health professions organizations involved in the care of older adults. As one of its first actions, the Partnership for Health in Aging developed a statement of educational core competencies unique to the care of older adults that are relevant to all health professions. The competencies are applicable to all health professions at the completion of the entry-level degree program.

Partnership with Health in Aging Multidisciplinary Competencies in the Care of Older Adults at the Completion of the Entry-level Health Professional Degree	ASCP's Geriatric Pharmacy Curriculum Guide
<b>Domain #1: Health Promotion and Safety</b>	
1. Advocate to older adults and their caregivers interventions and behaviors that promote physical and mental health, nutrition, function, safety, social interactions, independence, and quality of life.	I.F.1. Describe and advocate health care initiatives relative to wellness and health promotion (e.g., nutrition, physical activity, medication adherence, immunizations, and health screenings). I.F.2. Counsel an older patient on the utility of health screenings and preventive measures.
2. Identify and inform older adults and their caregivers about evidence-based approaches to screening, immunizations, health promotion, and disease prevention.	I.F.1. Describe and advocate health care initiatives relative to wellness and health promotion (e.g., nutrition, physical activity, medication adherence, immunizations, and health screenings). I.F.2. Counsel an older patient on the utility of health screenings and preventive measures.
3. Assess specific risks and barriers to older adult safety, including falls, elder mistreatment, and other risks in community, home, and care environments.	I.C.2. Recognize signs of substance and medication misuse/abuse in older adults. I.C.9. Define elder abuse/neglect (e.g., physical, psychological, and financial). I.C.10. Recognize and report the signs of elder abuse/neglect. I.F.3. Conduct a medication review to minimize the impact of drug-related falls. II.C.1. Identify basic cognitive, functional physical and safety assessments for common diseases in the older adult population. II.C.2. Demonstrate the ability to conduct basic cognitive, functional, physical and safety assessments for common diseases in the older adult population. II.C.3. Assess social and cultural determinants of health outcomes. II.C.4. Apply knowledge of geriatric syndromes and medication-related problems when interpreting assessment results. II.C.8. Identify and recognize potential functional barriers to the older adult patient (e.g., transportation, housing, economics, and social support structure). II.C.9. Identify potential environmental causes of decline in activities of daily living (ADL), instrumental activities of daily living (IADL), and cognitive function.
4. Recognize the principles and practices of safe, appropriate, and effective medication use in older adults.	II.C.6. Assess a medication regimen for medication-related problems (e.g., polypharmacy, non-adherence, drug interactions, adverse drug event, underuse, potentially inappropriate medications). II.D.4. Apply principles of pharmacokinetic and pharmacodynamic changes associated with aging to the design of the pharmacotherapy regimen. II.D.5. Design and recommend age/patient specific regimen including medication, dose, dosage form, dosing interval, and route of administration. II.D.6. Resolve and/or prevent medication-related problems in a given geriatric patient.
5. Apply knowledge of the indications and contraindications for, risks of, and alternatives to the use of physical and pharmacological restraints with older adults.	I.C.7. Promote patient-centered decision making and care. II.C.6. Assess a medication regimen for medication-related problems (e.g., polypharmacy, non-adherence, drug interactions, adverse drug event, underuse, potentially inappropriate medications). II.D.6. Resolve and/or prevent medication-related problems in a given older adult patient.

<b>Domain #2: Evaluation and Assessment</b>	
1. Define the purpose and components of an interdisciplinary, comprehensive geriatric assessment and the roles individual disciplines play in conducting and interpreting a comprehensive geriatric assessment.	II.C.1. Identify basic cognitive, functional physical and safety assessments for common diseases in the older adult population. II.C.2. Demonstrate the ability to conduct basic cognitive, functional, physical and safety assessments for common diseases in the older adult population. II.C.3. Assess social and cultural determinants of health outcomes.
2. Apply knowledge of the biological, physical, cognitive, psychological, and social changes commonly associated with aging.	I.B.2. Describe the biology of aging and discuss common theories of aging. I.B.3. Discuss the physiologic changes of aging and how they impact the pharmacokinetic, pharmacodynamic and therapeutic use of medications. I.C.1. Describe the interrelationship between social issues and aging (e.g., family, cultural, community, housing, access to care, policy issues). II.C.9. Identify potential environmental causes of decline in activities of daily living (ADL), instrumental activities of daily living (IADL), and cognitive function.
3. Choose, administer, and interpret a validated and reliable tool/instrument appropriate for use with a given older adult to assess: a) cognition, b) mood, c) physical function, d) nutrition, and e) pain.	II.C.1. Identify basic cognitive, functional physical and safety assessments for common diseases in the older adult population. II.C.2. Demonstrate the ability to conduct basic cognitive, functional, physical and safety assessments for common diseases in the older adult population.
4. Demonstrate knowledge of the signs and symptoms of delirium and whom to notify if an older adult exhibits these signs and symptoms.	II.C.1. Identify basic cognitive, functional physical and safety assessments for common diseases in the older adult population. II.C.2. Demonstrate the ability to conduct basic cognitive, functional, physical and safety assessments for common diseases in the older adult population. II.C.6. Assess a medication regimen for medication-related problems (e.g., polypharmacy, non-adherence, drug interactions, adverse drug event, underuse, potentially inappropriate medications). II.D.6. Resolve and/or prevent medication-related problems in a given older adult patient.
5. Develop verbal and nonverbal communication strategies to overcome potential sensory, language, and cognitive limitations in older adults.	I.D.3. Demonstrate proficiency to interview and counsel older adults with varying degrees of health literacy, cognitive function, and communication abilities. I.D.4. Recognize barriers to effective communication (e.g., cognitive, sensory, cultural, and language).
<b>Domain #3: Care Planning and Coordination Across the Care Spectrum (Including End-of- Life Care)</b>	
1. Develop treatment plans based on best evidence and on person-centered and directed care goals.	I.C.7. Promote patient-centered decision making and care. II.D.2. Evaluate the appropriateness of standards of practice or treatment guidelines for the older adult patient. III.A.4. Evaluate and apply evidence from primary literature as it pertains to the care of older adult patients. III.A.5. Evaluate the relevancy of clinical practice guidelines, standards of care and quality measures related to geriatric care.
2. Evaluate clinical situations where standard treatment recommendations, based on best evidence, should be modified with regard to older adults' preferences and treatment/care goals, life expectancy, co- morbid conditions, and/or functional status.	I.C.7. Promote patient-centered decision making and care. I.E.5. Incorporate life expectancy and end-of-life issues in the decision-making of appropriate use of medications. II.C.10. Develop a problem list and prioritize care based upon severity of illness, patient preference, quality of life, and time to benefit. III.A.5. Evaluate the relevancy of clinical practice guidelines, standards of care and quality measures related to geriatric care.
3. Develop advanced care plans based on older adults' preferences and treatment/care goals, and their physical, psychological, social, and spiritual needs.	I.C.7. Promote patient-centered decision making and care. II.D.1. Define therapeutic goals incorporating patient-specific principles (e.g., age, functionality, patient preference, culture).
4. Recognize the need for continuity of treatment and communication across the spectrum of services and during transitions between care settings, utilizing information technology where appropriate and available.	I.E.1. Define the continuum of care available to older adults such as community resources, home care, formal and informal care partnerships, assisted living facilities, nursing facilities, sub- acute care facilities, hospice care, and hospitals. I.E.2. Participate in interprofessional decision making regarding appropriate levels of care for individual patients. I.E.3. Facilitate medication reconciliation to improve transitions across the continuum of care and reduce readmissions. II.G.3. Perform and document comprehensive medication reconciliation across the continuum of care.

<b>Domain #4: Interdisciplinary and Team Care</b>	
1. Distinguish among, refer to, and/or consult with any of the multiple healthcare professionals who work with older adults, to achieve positive outcomes.	II.C.11. Identify patients who need referrals to other health and non-health professionals. II.F.5. Educate interprofessional team members regarding geriatric-specific pharmacotherapy principles. III.B.3. Respect the roles and responsibilities of the pharmacist and other healthcare professionals within the interprofessional team.
2. Communicate and collaborate with older adults, their caregivers, healthcare professionals, and direct-care workers to incorporate discipline-specific information into overall team care planning and implementation.	I.C.4. Describe the interrelationship between an older adult and their formal and informal care partners. I.E.2. Participate in interprofessional decision making regarding appropriate levels of care for individual patients. II.G.1. Document rationale, actions, and outcomes from medication therapies for the healthcare team.
<b>Domain #5: Caregiver Support</b>	
1. Assess caregiver knowledge and expectations of the impact of advanced age and disease on health needs, risks, and the unique manifestations and treatment of health conditions.	II.F.2. Ensure understanding of medication use and its role in the overall treatment plan.
2. Assist caregivers to identify, access, and utilize specialized products, professional services, and support groups that can assist with care-giving responsibilities and reduce caregiver burden.	I.C.4. Describe the interrelationship between an older adult and their formal and informal care partners. II.F.4. Assist the patient/care partner in identifying, procuring, and utilizing adherence strategies and devices.
3. Know how to access and explain the availability and effectiveness of resources for older adults and caregivers that help them meet personal goals, maximize function, maintain independence, and live in their preferred and/or least restrictive environment.	II.F.1. Utilize educational material appropriate to the specific patient/care partner. II.F.2. Ensure understanding of medication use and its role in the overall treatment plan. II.F.3. Educate patient/care partner regarding potential problems with patient care management and administration of medications.
4. Evaluate the continued appropriateness of care plans and services based on older adults' and caregivers' changes in age, health status, and function; assist caregivers in altering plans and actions as needed.	II.E.2. Revise therapeutic plans based upon changes in patient status.
<b>Domain #6: Healthcare Systems and Benefits</b>	
1. Serve as an advocate for older adults and caregivers within various healthcare systems and settings.	III.C.4. Promote advocacy for geriatric patient care and the pharmacy profession.
2. Know how to access, and share with older adults and their caregivers, information about the healthcare benefits of programs such as Medicare, Medicaid, Veterans' services, Social Security, and other public programs.	I.C.11. Describe the options for coverage and benefits older adults may utilize (e.g., Medicare, Medicaid and supplemental coverage). I.C.12. Consider financial/reimbursement issues (e.g., formularies, insurance coverage) when making therapeutic recommendations.
3. Provide information to older adults and their caregivers about the continuum of long-term care services and supports—such as community resources, home care, assisted living facilities, hospitals, nursing facilities, sub-acute care facilities, and hospice care.	I.E.1. Define the continuum of care available to older adults such as community resources, home care, formal and informal care partnerships, assisted living facilities, nursing facilities, sub-acute care facilities, hospice care, and hospitals.
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