COURSE TITLE: Geriatrics APPE PHAR 981

REQUIRED/ELECTIVE: Required

PREREQUISITES: Senior Status

Description

The geriatrics pharmacy experience is a six week (240 hours), full-time program specialized training involving the elderly population. The program will emphasize the clinical aspects of geriatric pharmacy. Major emphasis is on the interdisciplinary nature of geriatric practice. Each discipline has specialized knowledge which is integrated into a care plan that addresses all the important areas of geriatric care. Pharmacists are expected to assess not only the pharmacotherapy and appropriateness of drugs, but also determine how safely and effectively a patient can self-administer the therapy, and to implement plans to ensure such safe and effective use. Through this exposure, the student will be expected to utilize, refine and apply his or her knowledge base of pharmacology, pharmacokinetics, pathophysiology and therapeutics to enhance the quality of pharmaceutical care of the elderly.

Justification

Given that the elderly population is growing more rapidly than any other age group the clinical Geriatric Pharmacy Experience was established and is designed to provide the pharmacy student with the knowledge and experience to meet the needs of the geriatric patient.

Course Goals:

(Taken from ASHP Supplemental Standard and Learning Objectives for Residency Training in Geriatric Pharmacy Practice, 1998.)

A. Take personal responsibility for attaining excellence in one's own ability to provide pharmaceutical care for the elderly population;

B. Demonstrate ethical conduct in all activities related to pharmacy practice;

C. Adapt pharmaceutical care plans to meet the emotional and cultural needs and expectations of elderly patients;

D. Adapt pharmaceutical care for culturally diverse geriatric patients;

E. Accept responsibility for accurate evaluation of one's own work;
F. Present oneself as an assertive member of the profession;

G. Work harmoniously with others on interdisciplinary teams; and

H. Use appropriate behavioral and cognitive techniques in interactions with geriatric patients, their families, their caregivers, and other healthcare professionals.

Minimum Endpoint Competencies:

A. Identify and resolve pharmaceutical care problems prevalent in geriatric populations;

B. Communicate clearly when speaking or writing.

C. Design and execute workups on geriatric pharmacy practice-related issues using the Pharmacist’s Workup of Drug Therapy (PWDT), PHARME format, or ASHP Clinical Skills format;

D. Document pharmaceutical care plans that are incorporated into patient care plans; and

E. Document assessment and implementation of pharmaceutical care plans into the patient record.

Introduction

The geriatric population is increasing faster than any other age group. In 1900 those over 65 years of age made up 4% of the population. In 1986 approximately 12% of the population was composed of people over 65; and in the year 2050 it is estimated that 21.8% of the population will be greater than 65 years of age (U.S. Senate Special Committee on Aging. Aging America, Trends and Projections. Washington, DC, U.S. Department of Health and Human Services, 1985-86). National statistics indicate that the population is aging because most acute threats to health have been overcome or controlled. There has also been a significant decrease in the average number of children born. Therefore, people are living longer at a time when there are fewer family members to help care for frail, elderly relatives.

Older people have more illnesses and hospitalizations with longer periods of acute care. So it is not surprising that both the frequency of drug therapy and the average number of drugs taken per person progressively increases with age. Persons older than 65 years currently represent about 11-12% of the population, but account for approximately 31% of all prescriptions written (Lamy, Am Fam Physician 1986:34:118-24). Geriatric patients take more medications because they have more diseases than younger and middle aged patients. It has been estimated that 4 of 5 elderly patients
have at least one chronic illness and usually more (Ann Intern Med 1981; 95:711). Adults over 65 refill prescriptions at a rate three times that of people under age 65, with those over 65 receiving approximately 13 prescriptions per year and those under 65 about 4 prescriptions per year (Applied Therapeutics, 3rd edition, p. 1514, 1983).

**Learning Objectives:**

At the completion of this session, the student-pharmacist will:

A. Be given an individual patient with one or more of the following problems:
   1. Polydiagnoses/polypharmacy
   2. Incontinence/Constipation
   3. Pain/Insomnia
   4. Stroke/TIA
   5. Dementia/Confusion/Depression
   6. Parkinson's Disease

B. Demonstrate minimum competency by recognizing patient-specific problems and emphasizing those problems with direct relationship to medications. The problems may include any of the following:
   1. Ethics, realization of ethical and social values, religious beliefs
   2. Restraints, falls – how these affect quality of life
   3. OBRA 1990 regulations, federal, state, JCAHO, skilled nursing facility regulations
   4. Interdisciplinary Team approach, comprehensive assessment, role of the pharmacist on the team
   5. Activities of daily living, including assessment of self-medication independence
   6. Consent to treatment, living wills, advanced directives
   7. Rehabilitation limitations/expectations

**Student Behavioral Objectives:**

The student shall:

A. Identify and recognize the geriatric patient as a person by preparing a written biography. Information to prepare this document may come from any of the following activities:
   1. Home visit with a health professional
   2. Interview of patient
   3. Interview with significant others, family, friends;

B. Identify pharmaceutical needs of the geriatric patient;
C. Design a treatment and monitoring plan for each pharmaceutical care problem;

D. Present and defend the plan orally, or in writing, to the preceptor before presenting to the multidisciplinary team;

E. Document the results and follow up all recommendations for pharmaceutical care problems in patients; and

F. Incorporate assessment of self-medication into the interdisciplinary care plan.

Responsibilities of the Student:

A. Attend all multidisciplinary team meetings;

B. Assess all patients on self-administration of medication. Incorporate this assessment into the interdisciplinary plan of care;

C. Recommend changes to the pharmaceutical care plan for patients presented to the multidisciplinary team;

D. Follow up all recommended changes for implementation, efficacy or unwanted effects;

E. Document results of recommendations and report these to the preceptor;

F. Submit biographies of geriatric patients utilizing information obtained from interviews of patient, family, caregivers, and home visits;

G. Present work-up of all patients assigned to student, verbally or in writing, to the preceptor as frequently as requested;

H. Provide drug-related information to other healthcare providers and lay persons, formally and informally (e.g., inservice lecture, written reports, informal presentations during rounds) as requested;

I. Behave in a professional manner; abide by the designated dress code; demonstrate a neat, clean, and professional appearance at all times;

J. Maintain confidentiality of patient information derived from interviews or medical chart reviews; and

K. Obtain prior authorization from the preceptor to miss scheduled hours. Unprofessional conduct, unexcused absences and unexcused tardy attendance from any single assigned responsibility (i.e. rounds, dispensing, multidisciplinary meetings, lectures) will be grounds for failure, effective at the time of the
occurrence. It is the student's responsibility to contact the instructor or a
designee for consent for an excused absence. Co-worker health professionals
or staff at these sites will assist in the enforcement of this policy. Arrange to
make up any time missed for excused illness, family responsibilities, doctor's
appointments, weather, or other reasons. Failure to make such arrangements
is sufficient grounds to receive a failing grade.

Specific Behavioral Objectives:

A. Given a specific patient case, the student will:
   1. Assess the ability of patient self-administration of medications as
      independent, partial assistance, or complete assistance. Develop a
care plan for those not independent;
   2. List alterations in drug regimens, considering appropriate modifications
      of pharmacodynamic and pharmacokinetic changes in the individual;
   3. List social and psychological influences, which may affect drug therapy,
      illness, outcome and attitudes towards the patient's medical care;
   4. Recite the pathophysiology of the disease states present, with particular
      attention to those aspects pertaining to drug therapy and response; and
   5. List the important data, which should be included on elderly patients'
      medication records in order to properly assess and monitor drug
      therapy.

B. Given a cooperative elderly patient, elicit a medication history which is pertinent
to the patient's past, present, and future medical history.

C. Given a cooperative patient or significant other:
   1. Counsel on the indications for drug use;
   2. Identify each medication;
   3. Explain administration methods and times; and
   4. Explain adverse effects, proper storage, refill procedures, drug
      interactions, or other potential problems with misuse or noncompliance.

D. Given a clinical question about drug usage or toxicity from a healthcare
provider, the student must:
   1. Restate the question into a form which may be answered by reference
to the primary medical or pharmaceutical literature; and
   2. Respond verbally to the satisfaction of the preceptor, and both verbally
      and in writing, present the response to the questioner.

E. Given several patients simultaneously, the student must organize his or her
time to correlate and assimilate the medical information for each patient. The
student must present the disease states, drug therapy, dose, dosing interval,
compliance, adverse effects expected, drug interactions, and pharmacokinetic alterations, to the preceptor on a prescheduled basis.

F. The student must present information specific to an individual's drug therapy to physicians, nurses, pharmacists, or other health professionals and tactfully argue the rationale for change. The student must incorporate any considerations for alterations due to the aging process in pharmacodynamics, pharmacokinetics, social, psychological, or pathophysiologic, in a logical, organized, clear, concise, and tasteful manner to a professional audience.

**Student Evaluation:**

Both formative and summative evaluations will be given to the student for each assignment as appropriate. The student will be evaluated on a regularly scheduled basis for all of the following:

- Problem-solving abilities
- Responsibility and motivation
- Student-patient interactions
- Student-professional interactions
- Pharmacy interactions

Formative scores of less than satisfactory will be discussed with the student. The student will be expected to maintain all satisfactory ratings and improve less than satisfactory scores during the next session.

The student will be evaluated for the following assignments; passing level performance must be earned for one of each of the following:

- Written biography of a geriatric patient
- Work rounds, oral presentation
- Grand Rounds, oral presentation
- Written grand rounds patient
- Journal club presentation

Preceptors may assign and require additional numbers of assignments in any of the following areas:

- Written examinations
- Inservice lectures
- Written adverse drug reaction reports
- Written (formal) reply to drug-related questions
- Written pharmacokinetic reports
- Written case reports
- Others, as assigned
Textbooks, Reading Materials, Forms

There is no textbook required for this experience. Because the student is expected to utilize information from other pharmacy courses, both textbooks and lecture notes from previous courses should be brought to the session for personal reference. Each preceptor may assign chapters or other reading materials from other textbooks as appropriate. The preceptor as required will provide forms.

Suggested texts:


MINIMUM KNOWLEDGE BASE

A. **Dementia of the Alzheimer's Type (DAT)/Confusion**

Based on review of required readings, lectures, and observations of patients, the student should be able to perform all of the following:

1. Outline and identify primary clinical features of Alzheimer's disease in contrast to confusion or reversible dementias;
2. Describe nonpharmacologic treatment modalities employed to manage patients with dementia;
3. List medications that have the potential to exacerbate dementia;
4. Describe the indications for and side effects of psychotropic medications used for symptomatic management of a patient with DAT;
5. Formulate an appropriate treatment plan for a given patient with Alzheimer's disease; and
6. Describe the proposed rationale of therapy for the various causative treatment agents used and indicate their current clinical value

**Required Reading:**


B. **Parkinson's Disease**
Based on review of required readings, lectures, and observations of patients, the student should be able to perform all of the following:

1. Identify the characteristic clinical features and presentation of a patient with Parkinson's disease;
2. Describe the appropriate use of therapeutic agents in a given patient presenting with various stages of Parkinson's disease;
3. Formulate an appropriate treatment plan for a given patient with Parkinson's Disease (identify the patient's problem which requires pharmacological therapy, state the goal of therapy, desired therapeutic outcomes, treatment options, most appropriate option, dosage regimen, and specific monitoring parameters – to assess efficacy and adverse effects);
4. Differentiate the controversies regarding initiation of drug therapy in a patient with Parkinson's Disease;
5. Identify adverse effects related to the agents used in the treatment of Parkinson's Disease; and
6. Explain and recognize the On-Off phenomenon, early morning akinesia, end-of-dose deterioration, and peak-dose kinesia.

**Required Reading:**


C. **Insomnia**

Based on review of required readings, lectures, and observations of patients, the student should be able to perform all of the following:

1. Describe the GABA-BZ receptor complex and its substrates;
2. Describe the pathways of BZ metabolism and its implications in therapy;
3. Describe normal sleep architecture and variations of sleep patterns;
4. Describe the work-up of a patient presenting with insomnia;
5. Describe a treatment approach to such a patient, including choice of agent, duration of therapy, and side effects; and
6. Discuss advantages and disadvantages of other hypnotic agents in the elderly.

**Required Reading:**

D. Pain

Based on review of required readings, lectures, and observations of patients, the student should be able to perform all of the following:

1. Describe the differences in pathophysiology of pain in the elderly;
2. Differentiate acute and chronic pain management in the elderly;
3. List the nonnarcotic agents and the side effects particularly troublesome for the elderly; and
4. List the major side effects and clinical manifestations of each narcotic analgesic.

Required Reading:


E. Stroke/Transient Ischemic Attacks (TIA)

Based on review of required readings, lectures, and observations of patients, the student should be able to perform all of the following:

1. List four risk factors associated with cerebral ischemia;
2. Compare the indications, efficacy, and risk of anticoagulants and antiplatelet drugs in TIAs and progressing stroke;
3. Develop an appropriate treatment plan for a given patient presenting with a specific cerebrovascular disorder (identify the patient's problem which requires pharmacological therapy, state the goal of therapy, desired therapeutic outcomes, treatment options, most appropriate option, dosage regimen, and specific monitoring parameters--to assess efficacy and adverse effects); and
4. Explain the controversy regarding the dose of aspirin for prophylaxis of TIAs in regards to its mechanism of action and other effects as an antiplatelet agent.

Required Reading:


F. Bladder Dysfunction/Urinary Incontinence

Based on review of required readings, lectures, and observations of patients, the
The student should be able to perform all of the following:

1. Define and describe the physiology of the bladder and its nervous connections;
2. Differentiate the causes of urinary incontinence; and
3. Select the most appropriate treatment of urinary incontinence for a specific elderly patient.

G. Constipation

Based on review of required readings, lectures, and observations of patients, the student should be able to perform all of the following:

1. Contrast the different common causes of constipation in the elderly;
2. Identify the clinical presenting signs and symptoms most commonly seen in the elderly;
3. Describe the characteristics of the laxative abuser; and
4. Select the most appropriate management strategy for acute and chronic constipation.

Required Reading:


H. Polydiagnosis/Polypharmacy

Based on review of required readings, lectures, and observations of patients, the student should be able to perform all of the following:

1. Contrast the number of major medical health problems associated with the aging population with the younger population;
2. Identify the factors that impact the number and types of prescription and nonprescription drugs consumed per capita by the elderly; and
3. Identify the changes in physiology with aging that lead to increased risk to drug misadventures.

Required Reading:


I. Depression
Based on review of required readings, lectures, and observations of patients, the student should be able to perform all of the following:

1. Contrast the clinical presenting signs and symptoms of major depression in the elderly with those seen in younger groups;
2. List the common medical disorders, psychiatric disorders, and drug therapy associated with depression in the elderly;
3. Rank the currently available antidepressant medications in order of risk for adverse events for the elderly;
4. Select the most appropriate treatment for depression in a specific elderly patient;
5. Formulate a treatment plan for therapy of depression in an elderly patient; and
6. Monitor a patient treated for depression for efficacy and side effects of therapy.

**Required Reading:**

Appendix A

BIOGRAPHY OF AN ELDERLY PATIENT

Aging is defined in various ways, only one of which depends upon the number of years spent on this earth. Because pharmacists must deal effectively with the aging population, it is important that we view elderly patients with empathy, sensitivity and respect.

Goals and Objectives:

A. Respect the elderly patient as an individual;
B. Identify the psychosocial and economic needs of the elderly individual;
C. Identify what psychosocial and economic needs impact pharmaceutical care problems; and
D. Identify the knowledge and wisdom available from an individual who has experienced events first hand.

General Instructions

A. Interview the patient, spouse, or significant other.
B. Supplement information by reviewing data obtained by social worker, questionnaires, or the like.
C. Whenever possible, conduct the interview in a relaxed, non-rushed atmosphere, such as the patient's home. Some interviews will be conducted in the long-term care facility only. The format instructions are guidelines on what types of questions should be used in your interview. Each patient will emphasize one area more than another. The intent of the interview is to enable the patient to reminisce and recount his or her history to another person.
D. The completed report should be 1-2 typewritten pages.

Questions

A. Personal history of the patient: include patient's birth order, number of siblings, place of birth, spouse's name, number of children, ages, gender, and where patient has lived. Anything interesting the patient would like to relate.
B. Education and occupation history: include highest level of education completed, name of college or university and date of graduation, branch of military service, military occupation, highest military rank, civilian occupation, travel overseas. Is there something that stands out in your memory? Some event that impacted your life or changed your life's direction?
C. Hobbies, recreation, and habits: What did you do after retirement? What would you like to do that you can't do now? How vigorously do you exercise now? Compared to the past? Any regrets?