MODULE II: GERIATRIC PRESCRIBING

Summary

This module focuses on the complexity of managing multiple medications in older adults with regard to proper dosing, prescribing cascades, and adverse drug reactions. Module I has four parts: two PowerPoint presentations for students to scroll through, a third narrated PowerPoint presentation, and a link to the AGS Beer Criteria Printable Pocket Card. The first two presentations are accessed online via the links provided; the slides do not have audio and are intended for exposure to the material rather than mastery of all the information contained on them. Students should progress through the PowerPoints at their own pace; for more detailed slides, it is possible to pause the presentation. Some of the important concepts are repeated among the presentations. The narrated PowerPoint presentation can be accessed via Blackboard Vista; it provides a review of important topics from the first two presentations, describes some clinical pearls for geriatric prescribing, and offers an introduction to anticoagulation in the older adult. Students are encouraged to print out the AGS Beer Criteria Printable Pocket Card for reference and discussion in regards to its usefulness and purpose.

Part 1
Making Medication Use Safer in Older Adults
Tjia
http://onlinetraining.umassmed.edu/p35814819/

Part 2
Drug Therapy in the Elderly
Gurwitz
http://onlinetraining.umassmed.edu/drug_therapy/

Part 3
Geriatric Prescribing Parts I & II
Fitzgerald

Part 4
AGS Beers Criteria Printable Pocket Card
American Geriatrics Society

PROGRAM OBJECTIVES ADDRESSED

- Consider the complexity of multiple medical co-morbidities and polypharmacy when communicating with older persons in the ambulatory clinical setting.
- Increase awareness of medication reconciliation, including prescribed, herbal, and over-the-counter medications.
MODULE II: GERIATRIC PRESCRIBING: MEDICAL, NURSING, PHARMACY, AND INTERPROFESSIONAL COMPETENCIES

AAMC & JOHN A. HARTFORD FOUNDATION GERIATRIC COMPETENCIES FOR MEDICAL STUDENTS

Medication Management: Explain impact of age-related changes on drug selection and dose based on knowledge of age-related changes in renal and hepatic function, body composition, and Central Nervous System sensitivity.

Identify medications, including anticholinergic, psychoactive, anticoagulant, analgesic, hypoglycemic, and cardiovascular drugs that should be avoided or used with caution in older adults and explain the potential problems associated with each.

Medication Management: Document a patient’s complete medication list, including prescribed, herbal and over-the-counter medications, and for each medication provide the dose, frequency, indication, benefit, side effects, and an assessment of adherence.

AACN & JOHN A. HARTFORD FOUNDATION ADULT-GERONTOLOGY PRIMARY CARE NURSE PRACTITIONER COMPETENCIES

Management of Patient Health/Illness: Conducts a pharmacologic assessment addressing polypharmacy; drug interactions and other adverse events; over-the-counter; complementary alternatives; and the ability to obtain, purchase, self administer, and store medications safely and correctly.

Management of Patient Health/Illness: Prescribes medications with particular attention to high potential for adverse drug outcomes and polypharmacy in vulnerable populations, including women of childbearing age, adults with co-morbidities, and older adults.

ASCP GERIATRIC PHARMACY CURRICULUM GUIDE COMPETENCIES

Biology of Aging: Discuss the physiologic changes associated with aging and how they impact medication therapy.

Biology of Aging: Apply the knowledge of aging physiology to the clinical use of medications.

Communication: Demonstrate skill in communicating drug and adherence information (verbal and written) to senior patients, their caregivers and the interprofessional care team.

Communication: Demonstrate proficiency to interview and counsel seniors with varying degrees of cognitive and communication abilities.

Communication: Recognize barriers to effective communication (e.g., cognitive, sensory, cultural, and language).

Pathophysiology: Recognize medication-induced disease.

Geriatric Assessment: Obtain and interpret the medication history in relation to patient's current health status.

Geriatric Assessment: Recognize the relationship between geriatric syndromes/diseases and medication-related problems.

Education: Ensure understanding of medication use and its role in the overall treatment plan.

CORE COMPETENCIES FOR INTERPROFESSIONAL COLLABORATIVE PRACTICE

RR3: Engage diverse healthcare professionals who complement one's own professional expertise, as well as associated resources, to develop strategies to meet specific patient care needs.

TT3: Engage other health professionals- appropriate to the specific care situation- in shared patient-centered problem-solving
**MODULE II: GERIATRIC PRESCRIBING: IMPORTANT CONCEPTS**

◊ The amount of medication use in the elderly is much higher, compared to younger populations. 40% of people >65 years old use >5 medications, while 12% of the elderly population uses >10 medications.

◊ Nearly 1/3rd (1.9 million) of Adverse Drug Events are preventable. Of the most serious, life-threatening ADEs, over 40% are preventable.

◊ Body composition changes with age: muscle mass decreases while lipid storage increases. This can profoundly affect the half-life of lipid soluble drugs. Decrease in kidney function can also affect the half-life of medications as well.

◊ Older adults have slower metabolism, excretion of drug as well as increase sensitivity. The saying, “start low, go slow” is used to refer to medication dosing.

◊ The types of medications most commonly involved in adverse drug events relate closely to those most frequently prescribed in the ambulatory setting, with cardiovascular drugs and antibiotics/anti-infectives are the most frequently used and implicated drug categories.

◊ Some of the common problems with Polypharmacy are more adverse drug reactions, decreased adherence to drug regimens, poor quality of life, high rate of ADEs and or side effects, and (unnecessary) drug expense.

◊ Factors contributing to polypharmacy are underreporting symptoms, use of multiple providers, use of others’ medications, limited time for discussion, limited knowledge of geriatric pharmacology (clinician), and low health literacy leading to poor understanding of purpose of medications (patient).

◊ Factors contributing to non-adherence are a high number of medications, expense of medications, complex or frequently-changing dosing schedule(s), adverse reactions, confusion about brand /trade name, difficult-to-open containers, rectal/vaginal/SQ (unpopular) modes of administration, and limited patient health literacy.

**General Model of a ‘prescribing cascade’**
**MODULE II: GERIATRIC PRESCRIBING: GUIDING QUESTIONS**

- What have been your experiences regarding medication use in older adults? Do you have parents or grandparents on multiple medications? Do you know any family members who are been hospitalized because of an adverse drug event? What sort of medications does the patient you navigate take?

- What is Medication Reconciliation? What is the purpose of medication reconciliation and what are the essential steps in the process?

- Why are elderly patients at a high risk for ‘prescribing cascades’? What are 2-3 clinical examples of instances where prescribing cascades can develop?

- What are some effective ways to reduce the number and cost of medications for an elderly patient?

- What 4 factors of pharmacokinetics change with aging? What organ systems undergo normal age-related physiologic changes that influence how to prescribe medications for older adults?

- Discuss anticoagulation in older adults. What concerns, considerations, and challenges occur?
MODULE II: GERIATRIC PRESCRIBING: READING AND REFERENCE LIST


