MODULE I: 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 five parts: two presentations, two articles, and a resource packet. The first presentation is accessed online with the link provided. Online PowerPoint files are timed for 3-5 seconds per slide and do not have audio. They are intended for exposure to the material rather than mastery of all the information within them. For more detailed slides, it is possible to pause the presentation. The second and third presentation slide-sets are included in this manual.

Part 1

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

Part 2

Drug Therapy in the Elderly
Gurwitz

Part 3

Incidence and Preventability of Adverse Drug Events Among Older Persons in the Ambulatory Setting
Gurwitz, et al.

Part 4

Optimizing Drug Treatment for Elderly People: The Prescribing Cascade
Rochon & Gurwitz

Part 5

University of Wisconsin Hospital and Clinics Medication Reconciliation Education Packet
www.ashp.org

AAMC AND JOHN A. HARTFORD FOUNDATION GERIATRIC COMPETENCIES FOR MEDICAL STUDENTS ADDRESSED

Medication Management

1. 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.
2. 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.
3. 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.

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 I: 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 (physician), 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’

![Diagram of the prescribing cascade model]
MODULE I: GERIATRIC PRESCRIBING: GUIDING QUESTIONS

What organ systems undergo normal age-related physiologic changes that influence how to prescribe medications for older adults?

Why are elderly patients at a high risk for ‘prescribing cascades’? What are 2-3 clinical examples of instances where prescribing cascades can develop (see Gurwitz, Optimizing drug treatment for elderly people)?

Describe the difference between pharmacokinetics and pharmacodynamics. What 4 factors of pharmacokinetics change with aging?

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

What are some effective ways to reduce the number and cost of medications for an elderly patient?
MODULE I: GERIATRIC PRESCRIBING: READING AND REFERENCE LIST


