

Grown Up...[©]

A Newsletter For Those Who Care For
ADOLESCENTS, ADULTS, and AGING ADULTS

Volume 14, Issue 3

MEDICATIONS & THE ELDERLY

Sample 2009

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BEHAVIORAL OBJECTIVES

AFTER READING THIS NEWSLETTER THE
LEARNER WILL BE ABLE TO:

1. Discuss key consequences of polypharmacy, including medication errors, adverse drug reactions, hospitalization and non-adherence.
2. Describe implications for the healthcare provider related to patient education and safety issues surrounding medications and the elderly.

In the United States, people over 65 make up approximately 13% of the population, but use nearly 30% of all prescriptions written. At any given time, an elderly patient takes, on average, four or five prescription drugs and two over-the-counter (OTC) medications.

Additionally, approximately 75 percent of the elderly have at least one chronic illness, such as arthritis, hypertension, congestive heart failure, and osteoporosis. For each chronic illness, at least one medication is taken.

When a patient has multiple conditions, medications, physicians and pharmacies, polypharmacy - excessive or unnecessary concurrent use of prescription or nonprescription medications, can quickly arise. Polypharmacy increases the risk of medication errors, hospitalizations, adverse drug reactions and non-adherence to a medication regime in the elderly population. This newsletter will discuss key risks of polypharmacy. Implications for the healthcare provider will also be described.

Medication Errors: It is estimated that a medication error occurs in nearly 7 out of 100 admissions. Over half (55%) of reported medication errors involve a patient aged 65 years or older. The most common type of medication error among aging adults is omission, occurring in 43% of the cases, followed by improper dose/quantity and prescribing errors. Occurring less often are medications given using the wrong administration technique, such as crushing sustained release medications, as well as by the wrong route, such as a medication given through a tube feeding rather than intravenously.



Adverse Drug Effects (ADE): The elderly are more likely to suffer an ADE than younger patients for many reasons, including having multiple chronic diseases requiring medications and having multiple physicians and/or pharmacists that may not communicate about the drugs being prescribed. Furthermore, older adults have a much higher risk of complications with medications because of the changes that occur in the body as one ages. Absorption, distribution, metabolism and elimination of medications are altered in older adults because of renal, liver and body composition changes.

The risk of adverse drug effects increases dramatically with each additional drug. Taking only two drugs increases the risk of an adverse effect by 6%. However, taking eight medications or more raises the risk by 100%. When two or more drugs are mixed in the body, they may interact with each other and produce uncomfortable or even dangerous side effects. For example, antacids can interfere with certain drugs for Parkinson's disease, hypertension, and heart disease.

Approximately, 12% of older hospitalized patients in the hospital experience adverse drug reactions. According to the Centers for Education and Research Therapeutics, 100,000 deaths occur yearly due to adverse drug reactions, and are the 4th leading cause of death - ahead of pulmonary disease, diabetes, AIDS, and automobile deaths.

Use of medications with anticholinergic properties, drugs designed to block the neurotransmitter, acetylcholine, are believed to have an adverse impact on cognitive performance in otherwise normal, older people. Detrimental effects on memory and the ability to perform daily living tasks, such as shopping and managing finances, also frequently occur. Additionally, their use may lead to incontinence and falls resulting in serious injury.

Many medications commonly prescribed for incontinence, high blood pressure, and allergies, have anticholinergic properties. The class of benzodiazepines, commonly used for treating anxiety and panic disorders, such as diazepam (Valium), alprazolam (Xanax) and Clonazepam (Klonopin), also have anticholinergic properties. In this country, over 40% of the benzodiazepines are prescribed for people over the age of 65.



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POPULATION/AGE-SPECIFIC EDUCATION POST TEST

GROWN UP...

Caring For Adolescents, Adults, and Aging Adults

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Competency: Demonstrates Age-Specific Competency by correctly answering 9 out of 10 questions related to Medications & the Elderly.

MEDICATIONS & THE ELDERLY

1. Polypharmacy is best described as:
 - a. the type of drug use common in elderly patients.
 - b. excessive or unnecessary use of medications.
 - c. toxic effects of drug use in the elderly.
 - d. avoidable adverse drug events.
2. Adverse reactions associated with polypharmacy in the elderly are almost entirely preventable.
 - a. True
 - b. False
3. Among elderly patients, which of the following medications are the most common cause of adverse reactions that result in an emergency department visit?
 - a. Verapamil and lanoxin (Digoxin)
 - b. Insulin and warfarin (Coumadin)
 - c. Laxatives and heparin
 - d. Diazepam (Valium) and alprazolam (Xanax)
4. At home, which of the following is important to help prevent the most common type of medication error in the elderly population?
 - a. Change prescribed warfarin to a simpler regimen, such as 5 mg on Tu/Th/Sa and 2.5 mg on all other days.
 - b. Assess if the patient is taking OTC medications.
 - c. Help the patient and his or her caregiver devise a dosage schedule and routine.
 - d. Be sure the patient understands by what route to take the prescribed medications.
5. An elderly person's risk of hospitalization for an ADE is six times higher when compared to younger patients.
 - a. True
 - b. False

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