Adverse Drug Reactions

advance for Directors of Post-Acute Care

Each year in the United States, 100,000 people die from adverse drug reactions and over two million people suffer serious but non-fatal ADRs. In fact, adverse drug reactions are the fourth leading cause of death—ahead of diabetes, pulmonary disease, AIDS, pneumonia, accidents and automobile deaths.[1] And the elderly are more likely to suffer adverse drug reactions than younger adults.

Drug-related mortality and morbidity from adverse drug reactions costs more than $136 billion a year. That's more than the total costs for cardiovascular or diabetes care in America each year!

In a newly-released study, researchers looked at 191 patients admitted to a non-profit community teaching hospital over a two-year period because of adverse drug reactions. Almost half of these patients were 75 years of age or older, and the average cost of each hospital stay was almost $10,000. The drugs most commonly involved in these ADR's were: antidiabetic agents, anticoagulant medicines, anticonvulsants, beta-blockers and ACE-inhibitors.[2]

WHAT IS AN ADVERSE DRUG REACTION?

The American Society of Consultant Pharmacists defines an adverse drug reaction as "any unexpected, unintended, undesired, or excessive response to a drug that:

- requires discontinuing the drug (therapeutic or diagnostic)
- requires changing the drug therapy
- requires modifying the dose (except for minor dosage adjustments)
- necessitates admission to a hospital
- prolongs stay in a health care facility
- necessitates supportive treatment
- significantly complicates diagnosis
- negatively affects prognosis
- results in temporary or permanent harm, disability, or death."[3]

TYPES OF ADVERSE DRUG REACTIONS

There are several categories of ADRs.

Toxicity: When prolonged or excessive use of a drug damages one or more body systems, such as the kidneys or liver, it's said to be toxic. Long-term use of acetaminophen, for example, can be toxic to the liver.

Intolerance: Someone who is exceptionally sensitive to a drug and can no longer take the medication is demonstrating intolerance to the medication. Sedatives may cause confusion and ataxia in elderly adults to the extent that they cannot tolerate the drug.

Side effects: Drug effects that differ from the therapeutic effect the medication is intended to display are known as side effects. Meclizine, for example, may cause constipation in elderly adults.

Idiosyncrasy: Many elderly individuals are hypersensitive to a particular drug, and may show bizarre effects when they take it. Anesthetic agents, for example, can cause malignant hyperthermia in some seniors.

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Drug allergy: True drug allergies involve the body's immune system and are relatively rare. An anaphylactic response to penicillin is a severe medication allergy.

Drug interactions: Drug-drug, drug-herbal product, drug-nutraceutical, and drug-food interactions are common forms of drug interactions. With their complicated medication regimens, many seniors are at risk for drug-drug interactions. Blister packs, unit dose medications, and medication carts can help reduce errors, but many medicines are still dispensed in traditional pill bottles.

ADVERSE DRUG REPORTING

Many health care professionals mistakenly believe that only physicians and pharmacists can report adverse drug reactions. Actually, the Food and Drug Administration encourages all health professionals to report ADRs: "Your report may be the critical action that prompts a modification in use or design of the product, improves the safety profile of the drug or device and leads to increased patient safety."[4]

It's quick, easy and effective to report adverse drug reactions through the FDA's MedWatch Web site at *www.fda.gov/medwatch*. Every health professional—nurses, therapists, physicians and pharmacists—can use the simple voluntary reporting mechanism either online, by mail or fax, or by telephone (800-FDA-1088).

Don't be fooled by the mistaken belief that one report doesn't make a difference, or that drug testing has already identified any significant adverse drug reactions. Some ADRs are so rare that they only show up in 1 out of 100,000 patients, and your report may be the one that provides the clue to serious problems with a drug. You can make a difference! ■

References

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3. American Society of Consultant Pharmacists. Guidelines on detecting and reporting adverse drug reactions in long-term care environments. 2003. Accessed via *www.ascp.com/public/pr/guidelines/adverse.shtml*.
4. MedWatch. The FDA safety information and adverse event reporting program. 2003. Accessed via *www.fda.gov/medwatch/how.htm*.

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NOTES:

(Cut along the dotted line and photocopy this helpful handout for your caregivers.)