



Meeting the challenge of monitoring medications in older adults

Use an evidence-based approach to help your patients avoid adverse drug events.

By Anne Rich, MSN, RN

Many older adults have at least one chronic disease or condition and take multiple medications. In addition, they're likely to see more than one prescribing physician and use more than one pharmacy, making tracking medications and identifying contraindications difficult. Older adults are more likely than younger

adults to have a serious adverse drug event (ADE) that requires hospitalization. (See *What's behind ADEs in older adults?*)

Prescriptions of potentially inappropriate medications (PIMs) in the elderly also is a problem; for example, a 2016 study found that 29% of patients in a cardiology outpatient department were prescribed at least one PIM.

Despite the evidence, many older adults continue to be prescribed PIMs and end up suffering costly, and often preventable, ADEs. Studies in ambulatory and long-term care settings have found that 27% of ADEs in primary care and 42% in long-term care were preventable.

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What's behind ADEs in older adults?

Several factors play into the increased incidence of adverse drug events (ADEs) in older adults.



Polypharmacy—Adults over 65 years old take more prescription medications than younger patients, in addition to over-the-counter drugs and supplements, which can interact with each other.



Physiological changes—Kidney and liver function decline with age, affecting drug metabolism and excretion. Dosages may need to be adjusted to accommodate for these changes, but often they're not.



Cognitive challenges—Older adults may experience cognitive difficulties that interfere with medication self-management.



Lack of clinician expertise—Older adults have unique care needs, which include appropriate prescribing and managing of medications. Unfortunately, there's a shortage of geriatric health professionals, and many prescribers have no gerontology training. Also, few studies on older adults and medications exist; more current, evidence-based information and statistics are needed.

sure patient safety by closely monitoring and regularly reviewing their patients' medications. Perform a medication assessment at least every 6 months (more often if the patient has been acutely ill) and after every hospitalization. Document each review, the results, and planned actions in the patient's health record. Two tools, the Beers Criteria for Potentially Inappropriate Medication Use in Older Adults (Beers Criteria) and the Brown Bag Review, can be used to aid in these assessments.

The Beers Criteria

In 1991, Dr. Mark Beers and his colleagues created a list of criteria for identifying medications whose risks outweigh their benefits and those that should be avoided or used with caution in adults 65 years and older. The American Geriatrics Society (AGS) revises and updates the criteria every 3 years, most recently in 2015. The AGS and an interprofessional panel of 13 geriatric care and pharmacotherapy experts comprehensively and systematically review and grade an extensive list of medications for drug-related problems and ADEs in older adults. Fifty-three

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medications or medication classes are included in the latest updated Beers Criteria, which contains these sections:

- PIMs and classes to avoid in older adults
- PIMs and classes to avoid in older adults with certain diseases and syndromes that the listed drugs can exacerbate
- medications to be used with caution in older adults
- potentially clinically important non-anti-infective drug-drug interactions that should be avoided in older adults.

Several organizations, including the Centers for Medicare & Medicaid Services, the National Committee for Quality Assurance, and the Pharmacy Quality Alliance, have identified the Beers Criteria as an important quality measure.

The criteria are intended as guidelines for prescribers and a clinical tool for nurses and other healthcare professionals to improve medication safety in older adults. (See *The Beers Criteria: An example.*) Use the criteria in combination with your clinical judgment and collaboration with patients and other members of the healthcare team to individualize care and treatment.

Brown Bag Review

The Brown Bag Review gives healthcare professionals an opportunity to review and discuss a patient's medications. Ask your patient to bring in all medications they take, including every over-the-counter (OTC) product (pills, creams, ointments, vitamins, and supplements). Remind your patient to include medicines they may not take every day or may take only when they have symptoms. If you're doing an assessment in the home, ask the patient for permission to check kitchen and bathroom cabinets and bedside tables and drawers for medicines he or she may have forgotten.

If any of the patient's medications appear on the Beers Criteria list, bring them to the primary care provider's (PCP) or prescriber's at-

The Beers Criteria: An example

The Beers Criteria is a list of drugs, organized by category, that are potentially inappropriate medications for adults over 65 years old. An example is the anticholinergic category (below), which includes first-generation antihistamines, antiparkinsonian agents, and antispasmodics.

Many older adults use over-the-counter (OTC) medications for colds, allergies, and difficulty sleeping, which may contain anticholinergics, such as diphenhydramine or other antihistamines. Troubling side effects of anticholinergics include dizziness and drowsiness, which is why they're found in OTC sleep aids. The most common adverse effects include nausea, blurred vision, confusion, agitation, and urinary retention.

Experimental studies and clinical observations suggest that anticholinergics may cause physical and mental impairment in older adults and may increase the risk of cognitive decline, morbidity, and mortality. In addition, recent evidence has shown a possible link between anticholinergics and dementia.

You can download "A Pocket Guide to the AGS 2015 Beers Criteria" at bit.ly/2NT9ZW1.

Organ System, Therapeutic Category, Drugs	Recommendation, Rationale, Quality of Evidence (QE), Strength of Recommendation (SR)
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Anticholinergics

First-generation antihistamines

- Brompheniramine
- Carbinoxamine
- Chlorpheniramine

Avoid

Highly anticholinergic; clearance reduced with advanced age, and tolerance develops when used as hypnotic; risk of confusion, dry mouth, constipation, and other anticholinergic effects or toxicity

- Clemastine
- Cyproheptadine
- Dexbrompheniramine
- Dexchlorpheniramine
- Dimenhydrinate
- Diphenhydramine (oral)
- Doxylamine
- Hydroxyzine
- Meclizine
- Promethazine
- Triprolidine

Use of diphenhydramine in situations such as acute treatment of severe allergic reaction may be appropriate

QE = Moderate; SR = Strong

tention. Frequently, patients don't tell their PCP or other healthcare providers every medication they're taking and forget they need to include all OTC medications and supplements. Another resource is the pharmacist. (If the patient isn't hospitalized, you can contact the pharmacist at the location where the patient obtains his or her medications.)

During the Brown Bag Review, ask the patient to tell you why he or she is taking each medicine (this term is more readily understood

than medication), when it's taken, and how much is taken. If the patient is using a medication incorrectly, find out why and clarify what should be done. Use the teach-back method to verify the patient's understanding.

Be a good detective

Pay attention, ask the right questions, insist on knowing every medication your older adult patients are taking, and use the Beers Criteria to closely monitor the appropriateness

of those medications. These simple steps can help decrease the incidence of ADEs and promote better patient outcomes. ★

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