

KELLY C. SPONSER, MD

Assistant Professor, Department of Medicine,
Division of General Internal Medicine and Public
Health, Section of Hospital Medicine, Vanderbilt
University Medical Center, Nashville, TN

AMANDA S. MIXON, MD, MS, MSPH, FHM

Assistant Professor of Medicine, Section of Hospital Medicine,
Vanderbilt University Medical Center; Geriatric Research
Education and Clinical Center, VA Tennessee Valley Healthcare
System, Nashville, TN

Finding balance: Optimizing medication prescribing in older patients

ACCORDING TO A 2016 STUDY, more than one-third of older adults in the United States take 5 or more medications.¹ This is a growing problem. Not only do older patients take more drugs than younger patients, they are also at higher risk of adverse drug events, drug-drug interactions, geriatric syndromes, and lower adherence.²

See related article, page 129

**Hospitalization
is an
opportunity
to perform a
comprehensive
review
of medication
appropriateness**

Many drugs that older patients are given are potentially inappropriate, ie, their risks outweigh the expected benefits, particularly when effective and safer alternative therapies exist. Although many clinicians are aware of the risks of polypharmacy, they may not be confident in discontinuing potentially inappropriate medications. The process of deliberately tapering, stopping, or reducing doses of medications with the goal of reducing harm and improving patient outcomes is known as *deprescribing*.³

In this issue, Kim et al⁴ review several medications that are overused or often used inappropriately in older adults: statins for primary prevention of atherosclerotic cardiovascular disease, anticholinergic drugs, benzodiazepines, antipsychotics, and proton pump inhibitors. They offer guidance about the situations in which these drugs may be inappropriate as well as alternative drug and nondrug treatments. Further, they suggest that, when prescribing or deprescribing drugs in older adults, clinicians consult tools such as the Beers criteria and the STOPP/START

criteria (the Screening Tool of Older Persons' Potentially Inappropriate Prescriptions, and the Screening Tool to Alert Doctors to Right Treatment).

The issues Kim et al review are highly relevant and may increase awareness of specific potentially inappropriate medications. They also remind us that nonpharmacologic treatments are first-line for many medical conditions. In an era of a pill for every ill and a quick-fix mentality among both patients and providers, lifestyle changes and other nonpharmacologic treatments may be overlooked. Similarly, the STOPP/START criteria, which are concrete, evidence-based recommendations that can be applied to patient care, are likely underused in clinical practice.

Although necessary and valuable, simply arming clinicians with knowledge is insufficient to tackle the problems of polypharmacy and inappropriate prescribing. As the authors note in their discussion of benzodiazepines, practice guidelines exist regarding prescribing these agents, and data from randomized trials support specific interventions to deprescribe them.⁵ Nevertheless, clinicians report feeling inadequately prepared to discontinue benzodiazepines, particularly when patients perceive benefit from them. As such, user-friendly tools and specific strategies for weighing risks vs benefits are critical for clinicians.

■ PUTTING KNOWLEDGE INTO PRACTICE

How do we translate knowledge into practice with regard to deprescribing potentially inappropriate medications in older patients—or

doi:10.3949/ccjm.85a.17087

prescribing drugs only if appropriate in the first place?

An opportunity arises when patients are in the hospital. Taking a medication history on admission and matching medications with indications are key starting points. Clinical pharmacists can help screen for side effects and potential interactions and can provide deprescribing recommendations. Meticulous discharge medication reconciliation, patient education, and communication of the updated medication list to the outpatient provider are central to ensuring that patients adhere to medication adjustments after they go home.

■ A MATTER OF BALANCE

Another factor to consider is the patient's physiologic age compared with his or her chronologic age. If a patient has multiple comorbidities, frailty, limited life expectancy, or poor renal function, we may consider her older than her chronologic age. In this case, a drug's risks may outweigh its benefit, which is something to be discussed. On the other hand, a high-functioning and relatively healthy elderly patient may be a candidate for medications known to reduce the risk of death or control a chronic disease better. Incorporating a patient's goals of care and using shared decision-making are also likely to yield an optimal medication regimen.

Smartphone apps and resources embedded in electronic health records provide additional decision support. Used when prescribing or reconciling medications, these supplemental

brains offer instant feedback and information on dose adjustments, drug interactions, clinical guidelines, and even potentially inappropriate medications. While the impacts of these electronic tools on prescribing patterns and outcomes in geriatric populations remain unclear, new ones are being developed and studied.⁶ This may be the most promising way to translate knowledge into practice, as it is more easily integrated with existing clinician workflows.

■ AN OPPORTUNITY TO IMPROVE

There is significant opportunity to reduce polypharmacy and optimize medication prescribing practices for older adults. Awareness of potentially inappropriate medications and clinical situations in which the use of certain classes of medications should be minimized is the first step in addressing this problem. Using tools such as the STOPP/START criteria, reviewing medications at critical transition points, prioritizing patient function and goals, and using electronic clinical decision support should aid prescribing decisions.

Whenever possible, collaborating with other care team members such as pharmacists may increase efficiency and effectiveness of medication management. Ultimately, inclusion of more older adults in clinical trials may provide data-driven guidance for weighing risks and benefits. Finally, further study of the effects of deprescribing on clinical outcomes may be the missing piece to help clinicians and patients find balance in prescription management. ■

■ REFERENCES

1. Qato DM, Wilder J, Schumm LP, Gillet V, Alexander GC. Changes in prescription and over-the-counter medication and dietary supplement use among older adults in the United States, 2005 vs 2011. *JAMA Intern Med* 2016; 176:473–482.
2. Saraf AA, Petersen AW, Simmons SF, et al. Medications associated with geriatric syndromes and their prevalence in older hospitalized adults discharged to skilled nursing facilities. *J Hosp Med* 2016; 11:694–700.
3. Scott IA, Hilmer SN, Reeve E, et al. Reducing inappropriate polypharmacy: the process of deprescribing. *JAMA Intern Med* 2015; 175:827–834.
4. Kim LD, Koncilja K, Nielsen C. Medication management in older adults. *Cleve Clin J Med* 2018; 85:129–135.
5. Tannenbaum C, Martin P, Tamblyn R, Benedetti A, Ahmed S. Reduction of inappropriate benzodiazepine prescriptions among older adults through direct patient education: the EMPOWER cluster randomized trial. *JAMA Intern Med* 2014; 174:890–898.
6. Alagiakrishnan K, Wilson P, Sadowski CA, et al. Physicians' use of computerized clinical decision supports to improve medication management in the elderly—the Seniors Medication Alert and Review Technology intervention. *Clin Interv Aging* 2016; 11:73–81.

ADDRESS: Kelly C. Sponsler, MD, Department of Medicine, Division of General Internal Medicine, Vanderbilt University Medical Center, 1215 21st Avenue South, Suite 6000, Medical Center East, North Tower, Nashville, TN 37232; kelly.sponsler@vanderbilt.edu