Updated 2012 Beers Criteria: What’s Noteworthy and Cautionary?

Manju T. Beier Pharm D, CGP, FASCP *

Geriatric Consultant Resources LLC, and The University of Michigan, Ann Arbor, MI

The Beers Criteria for potentially inappropriate medication use in older adults, originally published in 1991, have gone through several iterations.1 The initial publication focused exclusively on nursing home residents, providing a list of medications where the potential for harm exceeded the potential for beneficial effects. The criteria have arguably been influential in providing guidance for appropriateness of prescribing decisions in the elderly, especially for physicians and pharmacists practicing in long term care. In 1997 and again in 2003, the criteria were updated by a consensus panel of experts in geriatric pharmacotherapy who expanded the scope of the criteria and made it applicable for all adults aged 65 and older no matter where they reside and receive care.2,3

For more than a decade now, the Beers Criteria have been used as a clinical reference for informed decision making regarding prescribing in older adults. They have been used in several studies to predict health outcomes associated with potentially inappropriate medication (PIM) use in the elderly with variable and mixed results.4,5 The Beers Criteria also inform quality measures for several organizations and agencies, such as the National Committee for Quality Assurance, the Pharmacy Quality Alliance, the Centers for Medicare and Medicaid Services, and Medicare Part D. These bodies have relied on the criteria when developing quality measures addressing the pharmacological management of older adults.6 In 1999 and then again in 2006, the Centers for Medicare and Medicaid Services adopted some of the medications in the “Beers list” as quality indicator measures for assessing medication use in long term care facilities.

The Beers Criteria have recently been revised by the American Geriatrics Society (AGS); this 2012 update,7 including several other tools and resources for public and professional use, are published on the AGS Web site.8 The 2012 Beers Criteria significantly improve on the previous methodology used in the past versions by using Institute of Medicine standards for clinical practice guidelines and a robust evidence-based grading system. The methodology and the literature-based review are well characterized in the AGS publication.7 The updated criteria are noteworthy in that they include ratings of the quality of the evidence and the strength of the panel’s recommendations based on a rigorous systematic literature review. Tables 6 and 7 are especially notable because they list medications removed and added, respectively, since the 2003 publication of the criteria.7 Medications like propoxyphene (withdrawn from the market), ferrous sulfate, cimetidine, daily furosemide, and long-term use of stimulant laxatives have been removed for lack of evidence or lack of generalizability to the elderly. Among the new therapeutic classes or medications added to the 2003 criteria, some noteworthy additions of drugs to avoid include all short-acting benzodiazepines (independent of dose), glyburide, megestrol, metoclopramide, dronedarone, spirinolactone, and sliding-scale insulin.7 Among the new drug-diagnosis/syndrome interactions added to the 2003 criteria, some significant additions are selective serotonin reuptake inhibitors and carbamazepine with falls or fractures, acetylsalicylic esterase inhibitors and syncope, many antimuscarinic/overactive bladder medications and chronic constipation, and H1 and H2 antihistamines and delirium.7 A nice comparison of the 2003 versus the 2012 update is summarized in a recent commentary.10

For clinicians practicing in long term care, the extra vigilance for selective serotonin reuptake inhibitors and falls, selective serotonin reuptake inhibitors and/or selective norepinephrine reuptake inhibitors, and hyponatremia, acetylsalicylic esterase inhibitors, and syncope, and over-active bladder medications and chronic constipation, anti-histamines and delirium may be the most noteworthy of all.

So what is cautionary? The 2012 update contains a new category of PIMs to be used with caution in older adults.7 An argument may be made that essentially all prescribing decisions are imbued with an extra dose of caution in older adults and the risk-benefit ratio is paramount in the elderly. Some notable medications contained in this “caution table” are the newer anticoagulants (dabigatran and prasugrel), where the evidence for use in those aged 75 or older and/or with reduced renal function is sparse or emerging. Because guidelines and tools are time sensitive, the practicing clinician needs to be vigilant and keep up to date with emerging evidence of efficacy and safety that may inform future dosing and duration of therapy decisions.

Other well-known explicit criteria include the Screening Tool of Older Persons’ Prescriptions (STOPP) Criteria from Europe.11,12 STOPP incorporates common examples of PIM use including drug-drug and...
drug-disease interactions, and duplicate drug class medications. For ease of use, STO\(\text{P}\) Criteria are arranged according to relevant physiological/organ systems, with an explanation regarding the inappropriateness of use. According to a recent commentary, a new update of the STO\(\text{P}\) criteria will be released later this year, perhaps enabling a more precise comparison of similarities and differences.\textsuperscript{21}\textsuperscript{22} In the meantime, familiarity with both criteria may be useful, as they are complementary in their definition of tables and implications for PIM use.

Polypharmacy and its attendant consequences, especially in older adults, is still a major problem in nursing homes. Recent articles continue to highlight the seriousness of this issue and it takes on a new urgency with the aging of the baby boomer generation.\textsuperscript{4,13\textsuperscript{19}} Explicit criteria for PIM use in older adults has been around for at least 2 decades, but despite the widespread adoption as quality measures and prescribing tools, the adverse event burden leading to medication errors and hospitalizations has not decreased appreciably.\textsuperscript{20} Several factors may be contributory, including lack of coordination during transitions of care, multiple comorbidities that lead to a cascade of prescribing events, new medications with paucity of evidence in older adults hastily adopted for treatment, communication gaps between prescribers from different specialties focused on the same patient, and, of course, age-related changes in pharmacokinetics and pharmacodynamics. Concerted efforts to address all of these issues are sorely needed in addition to continual updating of prescribing criteria and guidance in the elderly.\textsuperscript{21,22}

In summary, tools, guidelines, and criteria, no matter how informative and comprehensive, depend on widespread dissemination, acceptance, and incorporation into systemwide initiatives to address the monumental problem of medication-related problems in the elderly. As previously mentioned and emphasized by the AGS 2012 panel, there are limitations to the criteria, and professional judgment may overrule certain individualized cases where PIMs may be considered appropriate. It would be prudent and helpful for all of us as geriatric health care practitioners to remember some potential therapeutic alternatives that may be prescribed should the “Beers list” medication be deemed potentially inappropriate for a given patient. Finally, a “less-is-more” approach or deprescribing in some of our older, frail patients may be the most prudent approach.

References