2012 American Geriatrics Society Beers Criteria: New Year, New Criteria, New Perspective

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Key words: Beers list; Beers criteria; medications; older adults; drugs

Mark Beers, MD, recognized more than 2 decades ago that the prevention of adverse drug events in older adults is crucial to the public health of this vulnerable population. The Beers Criteria remain simultaneously one of the most used and most controversial sets of medication criteria in the world. Although not without limitations, the Beers Criteria have done more than any other tool in the past decade to improve the awareness of and clinical outcomes for older adults with polypharmacy and for the most vulnerable older adults at risk of adverse drug events. They have accomplished this because of their explicit nature, simple application for nonpharmacy experts, and wide dissemination. The continued development of explicit lists of medications to avoid in older adults, such as the Beers Criteria, is a critical component, albeit not the only one, in the public health imperative to decrease drug-related problems and improve the health of older adults. Nevertheless, continuing challenges include evaluating and communicating a drug’s risks and benefits in older adults to individual clinicians across all settings of care and developing an explicit list of these medications as part of a concise document that meets the needs of patients, clinicians, educators, researchers, policy-makers, and regulators. This article provides a perspective from the co-chairs of the 2012 American Geriatrics Society (AGS) Beers Criteria by addressing these issues, exploring the major differences and intended use of the criteria in this AGS-sponsored update, and proposing an agenda for future work.

The authors believe the 2012 criteria are vastly improved from previous iterations because they include important updates to the established method for developing the explicit list of medications to avoid in older adults and consider the challenges of guiding individual clinicians in avoiding certain drugs in older adults or using them with caution. Most importantly, the quality of the criteria has been improved by the application of an evidence-based approach and the support of AGS. The decision to follow the Institute of Medicine standards for evidence and transparency was an important benchmark—one that was clearly a transition for criteria that have been traditionally developed using a Delphi consensus process. Because of the nature of clinical drug trials in older adults, evidence was at times difficult to find and to apply cleanly. The literature search was complex because of the large number and diversity of search terms required, the extended time period searched, and the lack of clinical trial data in older adults often resulting in reliance on observational data. With AGS support, the development of databases to support more-frequent updates of the criteria and continual grading of the evidence as it emerges will continue to enhance this process. Past criticisms of the Beers Criteria correctly pointed out that many of the drugs were off the market or not in widespread use, lessening their relevance to clinicians and their association with health outcomes. The support of AGS has made this list more dynamic and relevant to the real-world practice of medicine. Still, caveats in their recommendation or rationale complicate some of the resulting criteria. These caveats offer additional guidance to clinicians about when to avoid a drug but at times cannot be used as a performance measure if extracted from a large database or by surveyors without sufficient clinical insight to discern these nuances.

The Beers Criteria are situated within a larger perspective of strategies to improve medication safety in older adults. Previous studies have found that a small number of medications are responsible for most adverse drug events in older adults. In a recent study, four medications or medication classes (warfarin, insulin, oral antiplatelet agents, and oral hypoglycemic agents) were associated with most

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DOI: 10.1111/j.1532-5415.2012.03922.x
adverse drug events in older adults.\(^1\) Often, there is not a safer alternative to these medications (hence, most are not included in the updated AGS Beers Criteria), but recognizing the risk of their use and monitoring more closely should reduce harm and improve medication safety in older adults. The Screening Tool of Older Persons Potentially Inappropriate Prescriptions and Screening Tool to Alert Doctors to the Right Treatment (STOPP/START criteria), which were developed by consensus, are also crucial to improving the health of older adults. They are organized according to physiological systems and include clinical stopping rules. Although they have considerable overlap with the AGS Beers Criteria, including many of the same drugs, they also cover some areas that the AGS Beers Criteria do not.\(^2,3\) Evidence from the previous study\(^1\) and STOPP/START criteria should be used in a complementary manner with the 2012 AGS Beers Criteria to guide clinicians in making decisions about safe medication use in older adults.

The 2012 AGS Beers Criteria provide several benefits. They have been a beacon for increasing awareness of inappropriate medication use in older adults and will continue to enlighten and encourage clinicians and nongeriatric specialists to stop and consider carefully the risks of a particular drug in older adults while considering the drug and nondrug alternatives. In addition, these criteria can be easily integrated into and have broad and simple application for use in the electronic health record. For example, providers could be sent instant feedback with suggested alternatives when a drug on the list of drugs to avoid or use with caution is prescribed in a particular care setting. Studies have already tested this approach with individual medications on the list, for example, in the case of diphenhydramine and sedative hypnotics, suggesting a nondrug intervention for sleep in hospitalized older adults.\(^4\) Regardless of these clear advantages, the criteria are not suitable for all situations, and caution must be exercised to ensure that they are not misapplied. For example, they should not be used in a punitive manner or to make financial decisions about Medicare Part D drugs, because these situations do not consider the individual circumstances of the patient or the best clinical judgment of the clinician. In addition, special considerations are needed when applying these criteria to certain populations, such as individuals near the end of life.

Future research should consider partnerships to create an improved database that will support updating the criteria more frequently so that they become less static and more of a real-time decision support tool. Future updates, as did this one, should include in-depth discussion of the specific language used for the lists of drugs to avoid and use with caution, careful consideration of the number and expertise of panelists participating in the update, the inclusion of drug-drug interactions, and development of a list of medications that could be used as alternatives to those to avoid. The panel recognizes the increasingly loud plea from the front-line clinicians for such a list of alternatives to pair with the Beers Criteria and agrees that it is needed. A list of alternatives also needs to consider nonpharmacological strategies and be evidence based, requiring additional literature searching and grading of evidence. Although the creation of an alternative list of drug and nondrug choices brings with it a larger challenge for the future, it will add a new dimension and enhance the ability to use a less-is-more approach.

In summary, these criteria are a much-needed and improved update for drugs to avoid and use with caution in older adults. With the support of AGS, they will continue to develop over time. When used properly by clinicians, researchers, pharmacy benefit managers, policymakers, and regulators, they will ultimately improve the health of older adults.

ACKNOWLEDGMENTS

The decisions and content of the 2012 AGS Beers Criteria are those of the AGS and the panelists and are not necessarily those of the U.S. Department of Veterans Affairs.

Conflict of Interest: Dr. Fick is partially supported by the National Institute of Health (NIH) for National Institute of Nursing Research grants R01 NR011042 and R01NR012242. Dr. Semla receives honoraria from the AGS for his contribution as an author of Geriatrics at Your Fingertips and for serving as a Section Editor for the Journal of the American Geriatrics Society. He is a past President and Chair of the AGS Board of Directors. His spouse is an employee of Abbott Laboratories. He serves on the Omnicare Pharmacy and Therapeutics Committee (long-term care). He is an author and editor for Lexi-Comp, Inc.

Author Contributions: Todd Semla and Donna Fick contributed to the concept, design, and preparation of the manuscript.

Sponsor’s Role: AGS staff participated in the final technical preparation and submission of the manuscript.

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