How to Use the American Geriatrics Society 2015 Beers Criteria—A Guide for Patients, Clinicians, Health Systems, and Payors

Michael A. Steinman, MD,[*†] Judith L. Beizer, PharmD, CGP,[‡] Catherine E. DuBeau, MD,[§¶**] Rosemary D. Laird, MD,[††] Nancy E. Lundebjerg, MPA,[‡‡] and Paul Mulhausen, MD, MHS[§§]*

The Beers Criteria are a valuable tool for clinical care and quality improvement but may be misinterpreted and implemented in ways that cause unintended harms. This article describes the intended role of the 2015 American Geriatrics Society (AGS) Beers Criteria and provides guidance on how patients, clinicians, health systems, and payors should use them. A key theme underlying these recommendations is to use common sense and clinical judgment in applying the 2015 AGS Beers Criteria and to remain mindful of nuances in the criteria. The criteria serve as a "warning light" to identify medications that have an unfavorable balance of benefits and harms in many older adults, particularly when compared with pharmacological and nonpharmacological alternatives. However, there are situations in which use of medications included in the criteria can be appropriate. As such, the 2015 AGS Beers Criteria work best not only when they identify potentially inappropriate medications, but also when they educate clinicians and patients about the reasons those medications are included and the situations in which their use may be more or less problematic. The criteria are designed to support, rather than supplant, good clinical judgment.

The Beers Criteria were first introduced in 1991.[1] Since then, widespread efforts to educate clinicians about the criteria and to use them in quality improvement activities have had meaningful impacts on the quality of care of older adults. Use of many medications included in the Beers Criteria has declined, others have been withdrawn from the market, and there is greater (although still too little) appreciation of the unique considerations that should be applied when prescribing for older adults.[2–7]

Yet, implementation and uptake of the Beers Criteria have not been without problems. Many clinicians misunderstand the purpose of the criteria, mistakenly believing that the criteria deem all uses of the listed drugs to be universally inappropriate. Health systems have often reinforced this perception, implementing quality improvement and decision support systems that implicitly consider any use of these medications to be problematic. In addition, some payors have adopted prior authorization requirements for Beers Criteria medications, which may be misapplied by the payor and/or misinterpreted by the prescribing clinician.[8] Implementation of the criteria in inflexible, dogmatic ways can breed resentment and lack of faith in the recommendations.[2,9,10] Moreover, they can negatively affect quality of care by restricting access to medications included in the criteria that are being used in appropriate ways and create troublesome and unnecessary burdens for prescribers.[2]

The goal of this article is to improve how patients, clinicians, health systems, and payors use the AGS 2015 Beers Criteria. Guidance is provided on how the criteria are intended to be used, and recommendations are made for implementing them in a manner that reflects this intent. The hope is that patients, caregivers, clinicians, health systems leaders, and payors will use this guidance to direct implementation efforts that yield maximal benefits from the AGS 2015 Beers Criteria while minimizing unintended harms. To this end, the AGS is also developing educational materials customized to different audiences that are based on the recommendations in this article.

METHODS

To coincide with the 2015 update of the Beers Criteria, the AGS convened a workgroup consisting of four members of the update panel (MAS, JB, CD, RL), the Chief

From the *Division of Geriatrics, University of California at San Francisco; †San Francisco Veterans Affairs Medical Center, San Francisco, California; ‡College of Pharmacy and Health Sciences, St. John's University, Queens, New York; §Departments of Medicine; ¶Family Medicine and Community Health; **Obstetrics and Gynecology, University of Massachusetts Medical School, Worcester, Massachusetts; ††Florida Hospital, Winter Park, Florida; ‡‡American Geriatrics Society, New York, New York; and §§Telligen, West Des Moines, Iowa.

By the AGS Workgroup on Improving Use of the Beers Criteria
Staff support from: Mary Jordan Samuel, Elvy Ickowicz

Address correspondence to: Michael Steinman, 4150 Clement St, SFVAMC Box 181G, San Francisco, CA 94121.
E-mail: mike.steinman@ucsf.edu

DOI: 10.1111/jgs.13701

0002-8614/15/$15.00

Executive Officer of the AGS (NL), and the chair of the AGS Clinical Practice Committee (PM). The workgroup was tasked with developing guidance on the intended use and implementation of the AGS 2015 Beers Criteria and authoring the current report. The workgroup convened using conference calls and e-mail communication first to develop a list of principles to guide optimal use of the criteria, with a particular focus on the "drugs to avoid" elements of the criteria, and then to author the current report built around these principles. During each of these steps, feedback was solicited from stakeholders (listed in the acknowledgments). The penultimate draft of the report was sent for outside review and reviewed internally by AGS leaders, with final approval of the AGS Board of Directors.

KEY PRINCIPLES TO GUIDE OPTIMAL USE OF THE AGS 2015 BEERS CRITERIA

Seven key principles that should be used to guide optimal use of the criteria are shown in Table 1 and explained here.

Key Principle 1: Medications in the AGS 2015 Beers Criteria are potentially inappropriate, not definitely inappropriate

There is a common misperception that any use of a medication in the Beers Criteria is considered inappropriate. This is not correct. The Beers Criteria comprise medications that have an unfavorable balance of benefits and harms for many older adults, particularly in light of available pharmacological and nonpharmacological alternatives. In some cases the drug is almost always a poor choice. However, there are some older adults in whom use of these medications is appropriate. Thus, Beers Criteria medications are "potentially inappropriate" and merit special scrutiny but are not universally inappropriate in all patients.

Table 1. Key Principles to Guide Optimal Use of the American Geriatrics Society (AGS) 2015 Beers Criteria

1	Medications in the AGS 2015 Beers Criteria are potentially inappropriate, not definitely inappropriate.
2	Read the rationale and recommendations statements for each criterion. The caveats and guidance listed there are important.
3	Understand why medications are included in the AGS 2015 Beers Criteria and adjust your approach to those medications accordingly.
4	Optimal application of the AGS 2015 Beers Criteria involves identifying potentially inappropriate medications and where appropriate offering safer nonpharmacological and pharmacological therapies.
5	The AGS 2015 Beers Criteria should be a starting point for a comprehensive process of identifying and improving medication appropriateness and safety.
6	Access to medications included in the AGS 2015 Beers Criteria should not be excessively restricted by prior authorization and/or health plan coverage policies.
7	The AGS 2015 Beers Criteria are not equally applicable to all countries.

Key Principle 2: Read the rationale and recommendations statements for each criterion. The caveats and guidance listed there are important

Many medications are considered potentially inappropriate only in certain circumstances or in most circumstances but with some exceptions. These distinctions are highlighted in the rationale and recommendations statements for each criterion and are vital for proper interpretation and use of the criteria (Figure 1). As in all prescribing decisions, clinical judgment is required. As noted in Key Principle 1, a drug that the criteria consider "potentially inappropriate" may not always be a bad choice. Conversely, just because a medication is subject to an exemption (or not included in the criteria at all) does not automatically mean it is a good choice.

Key Principle 3: Understand why medications are included in the AGS 2015 Beers Criteria and adjust your approach to those medications accordingly

It is important not only to know that a medication is included on the Beers list, but also to know why it is included on the list. This information is provided in the rationale statement for each drug and should be used to guide decision-making. The risks of AGS 2015 Beers Criteria medications vary with the situation of each individual, and the importance of avoiding a given medication varies accordingly. For example, a Beers Criteria medication that increases risk of falls may be especially unsafe in an individual already at high risk of falls and less risky—although not insignificant—in an older adult with low fall risk.

Key Principle 4: Optimal application of the AGS 2015 Beers Criteria involves identifying potentially inappropriate medications and where appropriate offering safer nonpharmacological and pharmacological therapies

Prior versions of the Beers Criteria have not offered alternatives to potentially inappropriate medications (PIMs). Often the best therapeutic alternatives involve nonpharmacological strategies, including counseling and lifestyle changes. Implementation of the AGS 2015 Beers Criteria with clinician education and clinical decision support systems could be improved by educating clinicians about safer, more-effective therapies for the conditions for which Beers Criteria medications are commonly prescribed. The AGS and AGS 2015 Beers Criteria Expert Panel are working on developing these lists of alternative therapies.

Key Principle 5: The AGS 2015 Beers Criteria should be a starting point for a comprehensive process of identifying and improving medication appropriateness and safety

The AGS 2015 Beers Criteria capture only a small percentage of the total burden of medication-related problems in older adults.[11,12] The criteria work best when used as a starting point to review and discuss an individual's entire medication regimen. This includes individualized inquiry into and assessment of medication indication, effectiveness, adverse effects, cost, and adherence, and concordance of the medication regimen with an individual's abilities and goals of care.[13]

Therapeutic Category/Drug(s)	Rationale	Recommendation	Quality of Evidence	Strength of Recommendation
Alpha1 blockers Doxazosin Prazosin Terazosin	High risk of orthostatic hypotension; not recommended as routine treatment for hypertension; alternative agents have superior risk–benefit profile.	Avoid use as an antihypertensive.	Moderate	Strong
	↑	↑	↑	↑
	Read this to understand why drug is considered potentially inappropriate in older adults, e.g., frequent adverse events, risk/benefit profile, other guideline recommendations.	Read this to understand in what circumstances the drug is considered a potentially inappropriate medication. In this example, use of an alpha1-blocker for routine treatment of hypertension is considered potentially inappropriate. Use for other conditions such as lower urinary tract symptoms in men is *not* considered potentially inappropriate according to this criterion. However, this does not automatically make the medication appropriate; usual clinical judgment applies.	Quality of evidence on which recommendation is based. The Beers panel rated evidence based on a structured process.	Strength of recommendation. The Beers panel decided this based on the anticipated balance of risks and benefits from the medication.

Figure 1. How to read a Beers criterion: An example.

Key Principle 6: Access to medications included in the AGS 2015 Beers Criteria should not be excessively restricted by prior authorization and/or health plan coverage policies

Encouraging judicious use of AGS 2015 Beers Criteria medications through insurance design can be reasonable. For certain medications, severe restrictions can be warranted. However, onerous restrictions on the many medications in the criteria that have appropriate uses can hinder good clinical care and create the perception that the Beers Criteria are a punitive tool, undercutting their educational function.[2,14,15] Programs that restrict access to Beers Criteria medications should be carefully targeted and give the prescribing clinician, who is in the best position to evaluate the appropriateness of medications for individual patients, the opportunity to provide a valid clinical rationale that permits coverage.

Key Principle 7: The AGS 2015 Beers Criteria are not equally applicable to all countries

The AGS 2015 Beers Criteria were developed principally based on medications available in the United States. Medications may be available in other countries that are potentially inappropriate but are not included in the list.[16,17] Prior versions of the Beers Criteria have been adapted for several countries. In the absence of country-specific adaptations of the Beers Criteria, in most cases it is reasonable to use broad-based categories included in the criteria to identify PIMs, for example benzodiazepines and strongly anticholinergic drugs.

APPLICATION OF KEY PRINCIPLES—OVERVIEW

The following section suggests how patients, clinicians, and health systems and payors can apply the key principles to improve pharmaceutical care of older adults. These are summarized in Table 2, and a case example is provided in Figure 2.

Application of key principles for patients and caregivers

Talking with clinicians about AGS 2015 Beers Criteria medications

Older adults should not stop taking a drug just because it is included in the Beers Criteria. Instead, they should discuss with their clinicians whether that medication is the right choice for them and ask whether there are safer or more-effective alternatives. As part of this conversation, patients should be prepared to discuss symptoms that they think might be due to their medication(s), review how much the medication(s) seems to be helping them, and raise any other concerns about the medication. Similarly, patients should discuss with their clinicians the indication and planned duration of use for the medication. More than one perspective can be helpful, and it can be particularly useful to discuss these topics with one's prescriber(s), pharmacist(s), and other healthcare providers.

Engaging patients and caregivers as active participants in care

Care is improved when patients and caregivers are actively involved in their care.[18,19] Because Beers Criteria medica-

Table 2. Application of Key Principles for Patients, Clinicians, and Health Systems

Patients	If you are taking a Beers Criteria medication, talk with your clinician(s) before stopping the medication. Ask your clinician(s) whether there are safer or more-effective therapies, including nonpharmacological therapies. Review indications and adverse effects of all your medications from a trusted source (e.g., Medline Plus, http://www.nlm.nih.gov/medlineplus/druginformation.html). Talk with your clinicians (prescribers and pharmacists) about your medications. Discuss whether your medications are effective for the purpose for which they are prescribed and whether any symptoms you are having could be adverse effects (side effects) of your medications. Keep in mind that any given symptom may or may not be a drug side effect.
Clinicians	Think of the AGS 2015 Beers Criteria as a "warning light" that should prompt close review and monitoring of a medication. Closely assess patients for potential adverse effects of Beers list medications, keeping in mind that many effects may be subtle yet important. Use the AGS 2015 Beers Criteria as an entrée into a larger review and discussion of medication prescribing quality. Do not automatically defer to a colleague who prescribed an AGS 2015 Beers Criteria medication. Use the criteria as a tool to stimulate dialogue between clinicians as to whether a drug is really warranted. When stopping AGS 2015 Beers Criteria medications, be sure to slowly taper down the dose rather than abruptly stop medications whose discontinuation may prompt a withdrawal reaction. A variety of healthcare professionals, including nurses, can play an important role in addressing management of AGS 2015 Beers Criteria medications.
Health Systems and Payors	The AGS 2015 Beers Criteria are well suited to clinical decision support systems. These work best when suggestions for alternative therapies accompany alerts about AGS 2015 Beers Criteria medications. The AGS 2015 Beers Criteria are reasonable to use for performance measurement across large groups of patients and providers but should not be used to judge care for any individual. Care should be taken that performance measures based on the AGS 2015 Beers Criteria do not distract clinicians from attending to other important aspects of pharmaceutical care in older adults. There is a reasonable role in health plan design for AGS 2015 Beers Criteria medications to be flagged for extra attention, but the criteria should not be used as the sole standard for health plan coverage determination or prior authorization.

AGS = American Geriatrics Society.

tions comprise only a small proportion of problematic prescribing, active engagement in pharmacotherapy should extend beyond Beers Criteria medications to cover the individual's entire medication regimen. Engagement in pharmacotherapy includes people learning about their medications, the reasons they are taking these medications, and what adverse effects (side effects) they can cause. A good source for this information is the National Library of Medicine's MedlinePlus website (http://www.nlm.nih.gov/medlineplus/druginformation.html). Optimal patient involvement also includes periodically reviewing their medications with their clinicians, including prescribers and pharmacists. In these reviews, patients and caregivers should report any problems with their medications, including potential adverse events, perceived lack of effectiveness, and problems with adherence or cost. Such discussions should occur at least annually and any time a new medication is prescribed.

True patient engagement involves not just an activated patient and caregiver, but also the willingness and ability of clinicians to engage patients in shared decision-making and incorporate patient preferences and values into their treatment recommendations. At times this may involve using an AGS 2015 Beers Criteria medication that the clinician might otherwise avoid.

Patient- and community-focused organizations

Organizations that have expertise and a focus on communicating with older adults and caregivers can play an important role in educating people and their communities about the AGS 2015 Beers Criteria and promoting their appropriate uptake and use.

Application of key principles for clinicians

The 2015 AGS Beers Criteria as a "warning light"

The AGS 2015 Beers Criteria are not intended to identify medications that are uniformly inappropriate but rather to call attention to medications that are commonly problematic and thus should be avoided in most older adults. A good way to think about the role of the criteria is that when a clinician considers prescribing a Beers Criteria medication, a "warning light" should go off in his or her head. This warning light should remind the clinician of the potentially unfavorable balance of benefits and harms of the medication and prompt consideration of whether other treatment approaches would be better. Questions to address include: Why is the patient taking the drug, and is it truly needed? Are there safer or more-effective alternatives for the patient? Does this patient have particular characteristics that increase or mitigate the risk of this medication?

This heightened awareness not only should occur at the time the drug is initially prescribed, but should also continue over time and prompt ongoing monitoring to assess whether the therapy is effective or causing adverse effects. In many cases, this heightened awareness should lead to periodic attempts to discontinue or reduce doses of the medication. Even for people who have tolerated Beers Criteria medications, adverse effects or reduced effectiveness can occur years into therapy because of the physiology of aging and other changes in clinical status.

Assessing adverse effects

Many of the adverse effects of AGS 2015 Beers Criteria medications can be subtle yet important. For example,

Case Example	Ms. A is an 82-year-old woman who is visiting Dr. B for the first time. Dr. B reviews the patient's medication list and sees that she is taking amiodarone to treat atrial fibrillation. She has been on this medication for several years and reported "no problems" with it during visits with her previous provider.
Patient	Ms. A reviews her medications on Medline Plus (http://www.nlm.nih.gov/medlineplus/druginformation.html). She has had low-grade but persistent malaise and anorexia for years. Before, she thought these symptoms were simply a part of getting old, but she now realizes that they can be adverse effects of amiodarone. She reports these symptoms to her physician and asks whether they could be a side effect of amiodarone. She also notes that this drug is on the Beers list and asks her physician whether another drug might be safer or more effective.
Clinician	Dr. B remembers that amiodarone is on the AGS 2015 Beers Criteria because of its multiple toxicities, and is considered a potentially inappropriate medication for the management of atrial fibrillation because there are safer alternatives. She asks Ms. A about common and serious adverse effects of amiodarone and elicits her symptoms of malaise and anorexia. Dr. B e-mails Ms. A's cardiologist to inform him of Ms. A's symptoms and discuss options for using another medication; he concurs this would be reasonable. Dr. B contacts Ms. A to suggest substituting another medication for management of her atrial fibrillation and following her symptoms to see whether they improve.
Health system	The health system in which Dr. B practices establishes a clinical decision support system through its electronic medical record. Recognizing that Ms. A is taking amiodarone, the system sends an alert to Dr. B shortly before the visit. The alert notes that the drug is an AGS 2015 Beers Criteria medication, briefly describes the rationale for its inclusion on the Beers list, and links to easy-to-use resources about symptoms and signs of amiodarone toxicity and alternative medications to manage atrial fibrillation.

Figure 2. Optimal use of the American Geriatrics Society (AGS) 2015 Beers Criteria—A case example.

AGS 2015 Beers Criteria medications may induce mild decreases in cognitive function that can affect daily functioning and quality of life or cause small changes in balance and gait stability that increase the risk of falls. These adverse events may not be recognized or reported by patients or their caregivers, or may be mistakenly attributed by patients, caregivers, or clinicians as symptoms of an underlying condition or simply a result of old age.[20–22] Careful inquiry is often necessary, coupled with attention to the adage that "any symptom in an older adult is a medication side effect until proven otherwise." Often the only way to determine if an individual's symptoms are due to a drug is to withdraw the medication and see whether the symptoms improve, informally or as part of a more-systematic N-of-1 trial.[23]

How the AGS 2015 Beers Criteria fit into the larger picture of improving prescribing for older adults

Many serious adverse drug events in older adults are caused by medications not included in the Beers Criteria.[11] Common culprits such as warfarin are not listed as drugs to avoid in the AGS 2015 Beers Criteria because for many older adults their benefits outweigh their potential harms.[24] Nonetheless, attention to AGS 2015 Beers Criteria medications should not detract from closely monitoring and preventing adverse events from other high-risk medications. Similarly, attention to the AGS 2015 Beers Criteria should not detract from evaluating and addressing other concerns of fundamental importance including (but not limited to) medication reconciliation, medication adherence, unnecessary medication use, and underuse of potentially beneficial medications. Discussions about AGS 2015 Beers Criteria medications can be an excellent entrée to a broader discussion that addresses these other aspects of medication use.

The AGS 2015 Beers Criteria are complementary to other explicit criteria used to assess medication appropriateness, such as the Screening Tool of Older Persons' potentially inappropriate Prescriptions (STOPP) criteria.[25–27] Similarly, the AGS 2015 Beers Criteria should be used to complement, rather than compete with, criteria that evaluate other domains of prescribing quality, for example the Screening Tool to Alert doctors to the Right Treatment (START) criteria, which evaluate underuse of potentially beneficial medications in older adults.[28] Finally, the AGS 2015 Beers Criteria focus on medications that are particularly problematic for older adults. Many medications that are problematic across the age spectrum are not included but merit close scrutiny as well.

Talking with patients and their caregivers about AGS 2015 Beers Criteria medications

The criteria can provide a useful tool for engaging individuals and caregivers in discussion about their medications. They can be used to start a larger conversation about effectiveness, adverse effects, cost, adherence, and goals of care for the person's entire medication regimen. They can also be a useful adjunct for helping physicians counsel people about stopping medications that appear on the list, particularly if they are reluctant to stop those medications.

Talking with other clinicians about AGS 2015 Beers Criteria medications

Primary care and generalist clinicians should not automatically defer to their specialist colleagues if that specialist

prescribed an AGS 2015 Beers Criteria medication, and vice versa.[21] Rather, the Beers list can provide a foundation for a discussion between clinicians of whether the person truly needs the medication and whether there are safer and more-effective alternatives.

Stopping AGS 2015 Beers Criteria medications

Many Beers medications should not be stopped abruptly because of the high risk of precipitating a withdrawal reaction. A good rule of thumb is that a drug dose is usually safe to taper down at the same rate that it can safely be tapered up.[29]

Role of healthcare professionals other than prescribers and pharmacists

Registered nurses and other healthcare professionals can play an important role even in the absence of direct prescribing authority. For example, nurses often see and assess for medication problems in the home, hospital, postacute, and long-term care settings, and often help in making a decision to give or not give a Beers medication prescribed on an as-needed basis. As such, they are important partners in identifying, addressing, and educating people about potential problems with AGS 2015 Beers Criteria medications.[30]

Application of key principles for health systems and payors

Use in clinical decision support systems

The AGS 2015 Beers Criteria are well suited to clinical decision support, and studies have shown they can be deployed to good effect in this setting.[31] Decision support systems are likely to be most useful when they suggest alternative pharmacological and nonpharmacological therapies that can be used in place of Beers Criteria medications.

Use in monitoring provider- and systems-level prescribing practices

The AGS 2015 Beers Criteria are useful for monitoring quality of care across populations of clinicians and patients. Because these medications are inappropriate for most older adults, lower rates of use are preferable in most settings. However, because there are circumstances in which use of these medications is reasonable, monitoring systems should not judge care to be inappropriate for any specific individual on the basis of that person taking a Beers Criteria medication. For similar reasons, the target rate of use for performance measurement programs should not be 0%. Performance measurement systems should also be careful to integrate performance measures for Beers Criteria medications with measures that address other important domains of quality in pharmaceutical care. Focusing clinician attention exclusively on Beers Criteria medications may result in insufficient attention to other aspects of prescribing such as medication monitoring, medication adherence, and underuse of medications that for many people are more important than the Beers Criteria.

Use in prior authorization and insurance coverage decisions

There is a reasonable role for health plan design to screen for AGS 2015 Beers Criteria medications for extra attention and review. Some medications included in the criteria are particularly harmful or have few reasonable indications, justifying tight controls. However, many medications in the criteria can have appropriate uses. Excessive restrictions on use of these medications and ignoring caveats listed in the criteria may harm people by limiting their access to therapies that can help them. Moreover, excessive restrictions cause undue burden on prescribers and can inappropriately frame the Beers Criteria in a punitive light. As a result, in most cases in which AGS 2015 Beers Criteria medications require authorization, clinicians should have access to a streamlined process to justify their use. (This streamlined process should ideally be available across a range of prior authorization issues, not just for AGS 2015 Beers Criteria medications). When AGS 2015 Beers Criteria medications are flagged for approval or review, appropriate alternative therapies should be suggested where possible.

CONCLUSIONS

The ability of the AGS 2015 Beers Criteria to improve care depends on their being applied in a thoughtful manner. Individuals, clinicians, and health systems are encouraged to use the key principles outlined in this article to guide how they implement the Beers Criteria so as to improve outcomes while minimizing unintended harms.

ACKNOWLEDGMENTS

The decisions and content of the 2015 AGS Beers Criteria are those of the AGS, the Beers Criteria Expert Panel, and the Workgroup on Improving Use of the Beers Criteria and are not necessarily those of the U.S. Department of Veterans Affairs. We thank the following people for providing comments on advance drafts of the manuscript and other preparatory work: Robert Dombrowski, PharmD, (Centers for Medicare and Medicaid Services); Woody Eisenberg, MD (Senior Vice President for Pharmacy Quality Alliance); Peter Hollmann, MD (Albert Medical School, Brown University); Jerome Epplin, MD (Private practice); Tomas Griebling, MD, MPH (University of Kansas); Barbara Levy, MD (American College of Obstetrics and Gynecology); Lynn Friss Feinberg (AARP Public Policy Institute).

Conflicts of interest: Dr. Beizer is an author and editor for LexiComp, Inc. Dr. Mulhausen is the Chief Medical Officer of Telligen, Inc. Dr. Steinman is a consultant for Iodine.com, a web start-up company.

Author Contributions: All workgroup members 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, and AGS senior leadership was given opportunity to review and suggest edits to the manuscript.

This document does not represent official policies or positions of the U.S. Department of Veterans Affairs.

REFERENCES

1. Beers MH, Ouslander JG, Rollingher I et al. Explicit criteria for determining inappropriate medication use in nursing home residents. Arch Intern Med 1991;151:1825–1832.
2. Anderson K, Stowasser D, Freeman C et al. Prescriber barriers and enablers to minimising potentially inappropriate medications in adults: A systematic review and thematic synthesis. BMJ Open 2014;4:e006544.
3. Bongue B, Naudin F, Laroche ML et al. Trends of the potentially inappropriate medication consumption over 10 years in older adults in the east of France. Pharmacoepidemiol Drug Saf 2009;18:1125–1133.
4. Dosa D, Cai S, Gidmark S et al. Potentially inappropriate medication use in veterans residing in community living centers: Have we gotten better? J Am Geriatr Soc 2013;61:1994–1999.
5. Gomes T, Juurlink D, Yao Z et al. Impact of legislation and a prescription monitoring program on the prevalence of potentially inappropriate prescriptions for monitored drugs in Ontario: A time series analysis. CMAJ Open 2014;2:E256–E261.
6. Ramaswamy R, Maio V, Diamond JJ et al. Potentially inappropriate prescribing in elderly: Assessing doctor knowledge, confidence and barriers. J Eval Clin Pract 2011;17:1153–1159.
7. Davidoff AJ, Miller GE, Sarpong EM et al. Prevalence of potentially inappropriate medication use in older adults using the 2012 Beers Criteria. J Am Geriatr Soc 2015;63:486–500.
8. Berger MS. Misuse of Beers Criteria. J Am Geriatr Soc 2014;62:1411.
9. Crownover BK, Unwin BK. Implementation of the Beers Criteria: Sticks and stones—or throw me a bone. J Manag Care Pharm 2005;11:416–417.
10. Winbery S, Boxer M. Physician perspective on propoxyphene as a potentially inappropriate medication in Tennessee. South Med J 2011;104:533–539.
11. Budnitz DS, Shehab N, Kegler SR et al. Medication use leading to emergency department visits for adverse drug events in older adults. Ann Intern Med 2007;147:755–765.
12. Steinman MA, Rosenthal GE, Landefeld CS et al. Agreement between drugs-to-avoid criteria and expert assessments of problematic prescribing. Arch Intern Med 2009;169:1326–1332.
13. Steinman MA, Hanlon JT. Managing medications in clinically complex elders: "There's got to be a happy medium". JAMA 2010;304:1592–1601.
14. Fick DM, Semla TP. 2012 American Geriatrics Society Beers Criteria: New year, new criteria, new perspective. J Am Geriatr Soc 2012;60:614–615.
15. McCormick WC. American Geriatrics Society response to letter to the editor from Marc S Berger "Misuse of Beers Criteria" July 2014. J Am Geriatr Soc 2014;62:2466–2467.
16. Fialova D, Topinkova E, Gambassi G et al. Potentially inappropriate medication use among elderly home care patients in Europe. JAMA 2005;293:1348–1358.
17. Onder G, van der Cammen TJ, Petrovic M et al. Strategies to reduce the risk of iatrogenic illness in complex older adults. Age Ageing 2013;42:284–291.
18. Durand MA, Carpenter L, Dolan H et al. Do interventions designed to support shared decision-making reduce health inequalities? A systematic review and meta-analysis. PLoS ONE 2014;9:e94670.
19. Hibbard JH, Greene J. What the evidence shows about patient activation: Better health outcomes and care experiences; fewer data on costs. Health Aff (Millwood) 2013;32:207–214.
20. Golden A, Beers MH, Fick DM. Is it safe to conclude that Beers Criteria medications led to few adverse events? Ann Intern Med 2008;148:628–629; author reply 629.
21. Magin P, Goode S, Pond D. GPs, medications and older people: A qualitative study of general practitioners' approaches to potentially inappropriate medications in older people. Australas J Ageing 2015;34:134–139.
22. Weingart SN, Gandhi TK, Seger AC et al. Patient-reported medication symptoms in primary care. Arch Intern Med 2005;165:234–240.
23. Scuffham PA, Nikles J, Mitchell GK et al. Using N-of-1 trials to improve patient management and save costs. J Gen Intern Med 2010;25:906–913.
24. American Geriatrics Society Clinical Practice C. The use of oral anticoagulants (warfarin) in older people. American Geriatrics Society guideline. J Am Geriatr Soc 2002;50:1439–1445; discussion 1446–1437.
25. Dalleur O, Boland B, Spinewine A. 2012 updated Beers Criteria: Greater applicability to Europe? J Am Geriatr Soc 2012;60:2188–2189; author reply 2189–2190.
26. Levy HB, Marcus EL, Christen C. Beyond the Beers Criteria: A comparative overview of explicit criteria. Ann Pharmacother 2010;44:1968–1975.
27. O'Mahony D, O'Sullivan D, Byrne S et al. STOPP/START criteria for potentially inappropriate prescribing in older people: Version 2. Age Ageing 2015;44:213–218.
28. Gallagher P, Ryan C, Byrne S et al. STOPP (Screening Tool of Older Person's Prescriptions) and START (Screening Tool to Alert doctors to Right Treatment). Consensus validation. Int J Clin Pharmacol Ther 2008;46:72–83.
29. Bain KT, Holmes HM, Beers MH et al. Discontinuing medications: A novel approach for revising the prescribing stage of the medication-use process. J Am Geriatr Soc 2008;56:1946–1952.
30. Resnick B, Fick DM. 2012 Beers Criteria update: How should practicing nurses use the criteria? Geriatr Nurs 2012;33:253–255.
31. Mattison ML, Afonso KA, Ngo LH et al. Preventing potentially inappropriate medication use in hospitalized older patients with a computerized provider order entry warning system. Arch Intern Med 2010;170:1331–1336.