2023 Updated AGS Beers Criteria®
What's New, What's Changed, & Why

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Disclosures

- Editor – LexiComp, Wolters Kluwer
- Consulting Editor – AGS Geriatric Review Syllabus
- Member of the expert panel – AGS Updated Beers Criteria (2012, 2015, 2019, 2023)

Learning Objectives

- Describe the history and purpose of the AGS Beers Criteria and its updates.
- Identify medications to avoid and/or use with caution in older adults.
- Discuss the application of the 2023 changes in clinical practice.

Mark H Beers, MD 1954-2009

"A ballet-dancing opera critic who hiked the Alps and took up rowing after diabetes cost him his legs"

- MD, Univ of Vermont
- First med student to do a geriatrics elective at Harvard's new Division on Aging
- Geriatric Fellowship, Harvard
- Faculty, UCLA/RAND
- Co-editor, Merck Manual of Geriatrics
- Editor in Chief, Merck Manuals

Beers Criteria: History and Utilization

Original 1991 – Nursing home patients

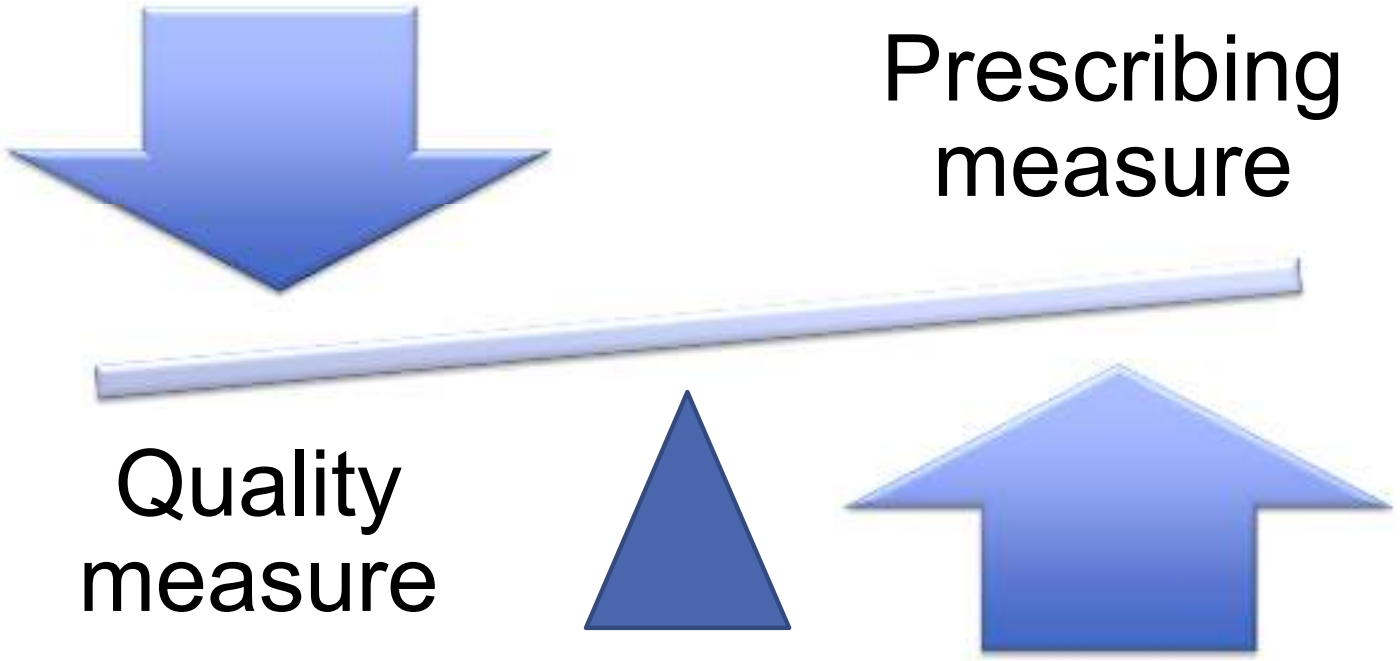
Updates

1997	- All older adults; adopted by CMS in 1999 for nursing home regulations
2003	- Era of generalization to Med D, NCQA, Healthcare Effectiveness Data and Information Set (HEDIS)
2012	- Further adoption into quality measures (AGS started regular updates)
2015	- Introduction of drug-drug interactions (DDI), renal dosage tables, how to use, and alternatives papers
2019	- Further refinement of the criteria
2023	- Further review and updates

What is the purpose of the Beers Criteria?

- To identify potentially inappropriate medications (PIMs) that should be avoided in older adults.
- To reduce adverse drug events and drug-related problems and improve medication selection and medication use in older adults.
- Designed for use in any clinical setting, also used as an educational, quality, and research tool.
- Not applicable for patients in palliative or hospice care.

Balancing the Purposes



Methodology

- Expert interdisciplinary panel
  - 12 voting members, 3 non-voting members
- Literature search
  - Evidence tables prepared, rated quality of evidence and strength of recommendation
- Followed IOM 2011 recommendations on guideline development
  - Includes period for public comment & invited peer review

AGS Beers Criteria – The Tables

Medications on the list have safer alternatives or inadequate evidence of efficacy in **older adults.**

- **Table 2**: Medications or medication classes that *should be avoided* in persons 65 years or older.
- **Table 3**: Medications that should be avoided in older persons known to have specific diseases or syndromes. (drug-disease interactions)
- **Table 4**: Medications that should be *used with caution.*

Tables continued

- **Table 5**: Potentially clinically important drug-drug interactions to avoid in older adults
- **Table 6**: Medications that should be avoided or have their dosage reduced with decreased renal function
- **Table 7:** Drugs with strong anticholinergic properties
- **Table 8:** Medications / criteria removed since 2019 Update
- **Table 9:** Medications / criteria added since 2019 Update
- **Table 10:** Medications / criteria modified since 2019 Update

Example – Table 2

Drugs	Rationale	Recommendation	Quality of Evidence	Strength of Recommendation
Skeletal muscle relaxants Carisoprodol Chlorzoxazone Cyclobenzaprine Metaxalone Methocarbamol Orphenadrine	Muscle relaxants typically used to treat MSK complaints are poorly tolerated by older adults because some have anticholinergic adverse effects, sedation, increased risk of fractures; effectiveness at dosages tolerated by older adults are questionable.*	Avoid	Moderate	Strong

*This criterion does not apply to skeletal muscle relaxants typically used for the management of spasticity (i.e. baclofen and tizanidine) although these drugs can also cause substantial adverse effects.
Baclofen was added to Table 6 – avoid in CrCl <60 mL/min)

Example – Table 3

Disease or Syndrome	Drugs	Rationale	Recommendation	Quality of Evidence	Strength of Recommendation
Delirium	Anticholinergics Antipsychotics Benzodiazepines Corticosteroids H2 antagonists Opioids Nonbenzodiaze-pines (Z drugs)	Avoid in older adults with or at high risk of delirium because of potential of inducing or worsening delirium. Ex. Avoid antipsychotics for behavioral problems of dementia or delirium unless nonpharm options failed or there is risk of harm to self or others	Avoid, except in situations listed under rationale statement.	H2 antagonists – low All others - moderate	Strong

Example – Table 3

Disease or Syndrome	Drugs	Rationale	Recommendation	Quality of Evidence	Strength of Recommendation
History of falls or fractures	Antiepileptics Antipsychotics Benzodiazepines Nonbenzodiaze-pines (Z drugs) Antidepressants TCAs SSRIs SNRIs Opioids	May cause ataxia, impaired psycho-motor function, syncope, additional falls Benzodiazepines: Shorter-acting ones are not safer than long-acting ones Antidepressants: Evidence for risk of falls and fractures is mixed; SNRIs may confer higher falls risk Avoid use of more than 1 of these drugs	Avoid use unless safer alternatives are not available. Antiepileptics: Avoid except for seizure & mood disorders. Opioids: Avoid except for pain management in the setting of severe acute pain.	Antidepressants moderate Opioids: Moderate All others: high	Strong

Major Changes for the 2023 Update

Aspirin, Anticoagulants

Drug	Recommendation
Aspirin	Avoid for primary prevention of cardiovascular disease (Moved from Table 4 to Table 2) Consider deprescribing in older patients already taking it for primary prevention.
Warfarin	Avoid as initial therapy for nonvalvular atrial fibrillation or VTE unless other alternatives are contraindicated.
Rivaroxaban	Avoid for long-term treatment of nonvalvular atrial fibrillation or VTE (Moved from Table 4 to Table 2)
Dabigatran	Use with caution (no change)

Aspirin
(moved from Table 4 to Table 2)

Recommendation:

- Avoid initiating aspirin for primary prevention of cardiovascular disease.
- Consider deprescribing in older adults already taking it for primary prevention.

Rationale:

- Risk of major bleeding from aspirin increases markedly in older age.
- Studies suggest lack of net benefit and potential for net harm when initiated for primary prevention in older adults.
- See USPSTF 2022 recommendations for adults >60.

Warfarin
(added to Table 2)

Recommendation:

- *Avoid* warfarin as initial therapy for treatment of VTE or non-valvular atrial fibrillation (NVAF) unless alternative options (eg DOACs) are contraindicated or there are substantial barriers to their use.

Rationale:

- Compared to DOACs, warfarin has higher risks of bleeding and similar or lower effectiveness for treatment of VTE and NVAF.
- For older adults who have been using warfarin chronically, it may be reasonable to continue it, particularly in those with well-controlled INRs and no adverse effects.

Rivaroxaban
(moved from Table 4 to Table 2)

Recommendation:

- *Avoid* rivaroxaban for long-term treatment of NVAF or VTE in favor of safer anticoagulant alternatives

Rationale:

- At doses used for long-term treatment of VTE or NVAF, rivaroxaban appears to have a higher risk of major bleeding and GI bleeding in older adults than other DOACs, particularly apixaban.
- Rivaroxaban may be reasonable in special situations, for example when once-daily dosing is necessary to facilitate adherence.
- All DOACs confer lower risk of intracranial hemorrhage than warfarin.

Sulfonylureas
(updated language in Table 2)

Recommendation:

- Avoid sulfonylureas as first or second-line monotherapy or add-on therapy unless there are substantial barriers to use of safer or more effective agents.
- If a sulfonylurea is used, choose a short-acting one (eg glipizide) over long-acting ones (eg glyburide, glimepiride)

Rationale:

- Sulfonylureas have a higher risk of CV events, all-cause mortality, and hypoglycemia than alternative agents.

SGLT-2 Inhibitors
(added to Table 4 – Use with Caution)

Recommendation:

- Use with caution.
- Monitor patients for urogenital infections and ketoacidosis.

Rationale:

- Older adults may be at increased risk of urogenital infections, particularly women in the first month of treatment.
- An increased risk of ketoacidosis has also been seen in older adults.

Estrogen
(updated language in Table 2)

- Do not initiate systemic estrogens (oral or transdermal) in older women.
  - For women who start HRT >60 yrs, the risks are greater than the benefits
  - Consider deprescribing in older women.
- Topical vaginal estrogen is appropriate for the management of vaginal atrophy or UTI prophylaxis.

Updated Language

- **Anticholinergics**
  - Cumulative exposure is associated with an increased risk of falls, delirium, and dementia, even in younger adults.
  - Consider total anticholinergic burden during regular medication reviews.
- **Antipsychotics**
  - Expanded the rationale on avoiding antipsychotics for behavioral problems of dementia. Use as a last resort if behavioral interventions have failed.
- **Proton Pump Inhibitors**
  - Risk of pneumonia and GI malignancies were added to the rationale (C difficile infections, bone loss, fractures) for avoiding long-term use of these agents.

Modifications to Table 5 – Drug Interactions

- Avoid the use of multiple agents with anticholinergic effects.
- Avoid concurrent use of ≥3 CNS-active medications.
  - Added skeletal muscle relaxants to the list of medications.
- Added SSRIs to the warfarin interactions.

Medications Removed Due to Low Utilization or no Current U.S. Manufacturer

- Low use defined as <4000 Part D fills in 2019.
  - <0.01% of Medicare beneficiaries
  - Ex. disopyramide, flurazepam, clemastine
- Listed as “Discontinued” by FDA; not on the U.S. market
  - Ex. methyldopa, reserpine, chlorpropamide
- **NOTE:** Removal from the AGS Beers Criteria does not translate as an endorsement to prescribe.

7 Principles for Use of the AGS Beers Criteria

- Medications in the Criteria are *potentially* inappropriate, not definitely inappropriate.
- Read the rationale and recommendations for each criterion.
- Understand why medications on in the Criteria and adjust your approach to those medications accordingly.
- Optimal application of the Criteria involves identifying PIMs, and when appropriate, use safer nonpharmacologic and pharmacologic therapies.
- The Criteria are a starting point for a comprehensive process of identifying and improving medication appropriateness and safety.
- Access to medications included in the Criteria should not be excessively restricted by prior authorization and/or health plan coverage policies.
- The Criteria are not equally applicable to all countries.

Application to Health-Systems

- **Educate the whole team – including patients & families!**
- Build alerts into the CPOE system.
  - Suggest appropriate alternatives.
- Avoid PIMs in order sets.
- P & T Committee Formulary decisions.
- Role of pharmacists:
  - Medication reconciliation
  - Drug Regimen Review in nursing facilities
- Opportunities for research & Quality Improvement
  - Evaluate your institution's data & focus on common PIMs

Application to Clinicians

- Think of Beers Criteria as a warning light
  - Why is the patient taking the drug; is it truly needed?
  - Are there safer and/or more effective alternatives?
  - Does this patient have particular characteristics that increase or mitigate risk of this medication?
  - Is this a time to consider deprescribing?
- Actively assess for symptoms, and assess whether these could be related to medications – avoid a “prescribing cascade”.
- Don’t automatically defer to colleagues.

Application to Patients & Caregivers
How to Explain the AGS Beers Criteria

Tell patients:

- Don’t stop taking a medication just because it is on the AGS Beers Criteria.
- Talk with your clinicians to see if there is a safer and/more effective alternative.
- Learn about all of the medications that you take, and let your clinician(s) know if you think you might be having a side effect, or if you are having any other problem.

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Take Home Messages

- Don’t let the perfect be the enemy of the good.
- The AGS Beers Criteria® are only part of appropriate prescribing.
- Target initiatives to high prevalence/high severity meds (based on local data, where possible).
- Shared decision-making in selecting and changing treatment regimens is critical.
- Stopping meds should be done with same consideration as starting.
- **AGS Beers Criteria® = Patient-centered care**

AGS Beers Criteria® Resources

- 2023 updated AGS Beers Criteria®
  (*J Am Geriatri Soc. 2023;71:2052-81*)
- Updated 2023 AGS Beers Criteria® Pocket Card and App
- How to Use the American Geriatrics Society 2015 Beers Criteria—A Guide for Patients, Clinicians, Health Systems, and Payors (*JAGS 2015*)
- Using Wisely: A Reminder on the Proper Use of the American Geriatrics Society Beers Criteria® (*JAGS 2019*)
- Alternative Medications List (Coming Soon)
- Public education resources for patients & caregivers

Questions and Discussion