2012 UPDATED BEERS CRITERIA: GREATER APPLICABILITY TO EUROPE?

To the Editor: We read with interest the article on the 2012 Beers Criteria updated by the American Geriatrics Society and recently published in the *Journal of the American Geriatrics Society*.[1] The authors are to be commended for this important work. As clinicians and researchers, we particularly appreciate the evidence-based approach and the addition of several medications recently marketed for diseases that are prevalent in older people. Nevertheless, we would have appreciated additional information on the underlying reasons for the removal of some medications from this new list, such as fluoxetine, long-term use of stimulant laxatives, and high-sodium content drugs with heart failure.

The relevance of this updated list for European countries is particularly important to address for two main reasons. First, the inappropriate use of medicines in older adults in Europe has been under increased scrutiny over the last 10 years, and the Beers criteria—although frequently used—have weaknesses when applied to European countries.[2,3] Second, other explicit tools have been developed in Europe, and their comparison with the Beers criteria is of interest.[3,4]

An important criticism of the Beers criteria is their restricted applicability to Europe. Fialova and colleagues reported that, overall, half of the medications listed in the previous Beers criteria were not approved in most European countries. Therefore, one could wonder whether the applicability to Europe has increased with the 2012 Beers criteria.[2] Analyzing the Belgian situation, we came to a positive answer. We systematically compared the Belgian national formulary with the inappropriate medications and medication classes of the Beers list and checked whether each criterion was applicable to Belgium. The results are presented in Table 1. The proportion of individual criteria applicable in Belgium rose from 71.2% to 84.8%. Although the Belgian situation cannot be extrapolated to all Europe, it is likely that a similar observation could be made for several other countries, because Belgium has an average profile of medication availability.[2]

The Screening Tool of Older Person's Prescriptions (STOPP) criteria are being increasingly used in Europe and are to some extent considered to be the "European Beers criteria."[4] Several studies have shown a greater prevalence of inappropriate prescribing using these criteria than the Beers criteria, and a link with clinical outcomes has been shown in a few STOPP studies.[5,6] We therefore compared the 2012 Beers criteria with the STOPP criteria to identify similarities and differences. The comparison can be summarized as follows; 25 of the 99 Beers criteria are common or very similar to the STOPP criteria, meaning that three-quarters of the Beers criteria do not overlap with STOPP criteria. Similarly 36 of the 65 STOPP criteria (55%) are not part of the Beers criteria. The two lists thus share a minority of criteria. Among them, both lists suggest avoiding benzodiazepines in individuals with history of falls or fractures, calcium channel blockers in individuals with chronic constipation, and long-duration sulfonylureas. Among the differences between the two lists, we would like to point out a few things. The new Beers criteria highlight the danger of anticholinergics in a more explicit way than the STOPP criteria, and they include delirium and dementia in the medical situations of concern, which are prevalent syndromes in frail older adults, but the STOPP list includes several criteria regarding the use of warfarin—a medication frequently associated with adverse drug events in older adults—as well as specific criteria on opiates.[7]

Table 1. Applicability of the 2003 and 2012 Beers Criteria to Belgium

Level of Analysis	n/N (%) 2003	n/N (%) 2012
Medications or medication classes[a]	38/48 (79.2)	49/53 (92.5)
Molecules listed[b]	60/100 (60.0)	100/177 (56.5)
Individual criteria[c]	47/66 (71.2)	84/99 (84.8)

Example to illustrate method of calculation.

[a]First-generation antihistamines counted as one medication class.

[b]All molecules listed under first-generation antihistamines were counted (n = 12).

[c]Each recommendation related to a medication or medication class was counted unless one recommendation duplicated another (first-generation antihistamines should always be avoided because of anticholinergic properties, thus the criteria first-generation antihistamines in chronic constipation was not counted).

Summarizing the European-based studies that used the STOPP criteria, we observe that the four most prevalent criteria were benzodiazepines in individuals prone to falls, duplicate drug class prescription, aspirin in primary cardiovascular prevention, and proton pump inhibitors at full therapeutic dosage for longer than 8 weeks.[8] Beers 2012 would identify such an overuse of benzodiazepines and aspirin, but neither the drug duplications nor the excessive duration of proton pump inhibitors. The latter is important from an economic and a safety perspective (greater risk of fractures and pneumonia).[9,10]

In conclusion, we believe that the 2012 Beers criteria have greater relevance for European countries. Because the majority of criteria for inappropriate prescribing do not overlap in Beers and STOPP, both lists will continue to coexist. Furthermore, the addition to Beers of criteria

0002-8614/12/$15.00

regarding the underuse of medications in older persons would be most appreciated in the future.[3] We are eager to see how the new 2012 Beers criteria will perform when applied in observational and experimental research and how well they will predict adverse clinical or economical outcomes.

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ACKNOWLEDGMENTS

We thank Dominique Wouters, chief pharmacist, for her support and for facilitating the conduct of this work.

Conflict of Interest: The editor in chief has reviewed the conflict of interest checklist provided by the authors and has determined that the authors have no financial or any other kind of personal conflicts with this paper.

Author Contributions: Olivia Dalleur, Benoit Boland, and Anne Spinewine contributed to the concept, design, and preparation of the manuscript.

Sponsor's Role: None.

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