Reviewer’s report

Title: Prevalence of inappropriate medication using Beers criteria in Japanese long-term care facilities

Version: 2 Date: 19 September 2005

Reviewer: Sally K Rigler

Reviewer’s report:

General

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

The 2003 Beers Criteria were applied in this study to data from 2002. However, practitioners would not have had access to the 2003 criteria in 2002; rather, the 1998 criteria would have been the most recent available version. The authors should explain why they choose the 2003 version, and to what extent their findings might or might not have been influenced by differences in newly included drugs in the 2003 version.

Readers outside Japan will need a better understanding of the characteristics of HP, HFE, and NH settings which appear to be all categorized as long term care facilities which collected MDS data. Specifically, the hospital (HP) setting accounted for nearly half of the subjects. Is this a chronic care hospital rather than acute care? More information about long term care options in Japan would be helpful. Are MDS assessments mandatory or voluntary in these settings? Is there any form of mandated medication review by consultant pharmacists for nursing home residents as there is in the US? If so, are these pharmacy reviews the same for NP, HFE, and NH facilities, or do these processes of care differ by facility type?

How were these facilities selected to be included in the study? Were the 17 participating facilities that collected MDS data sampled randomly from all similar facilities, or was this a convenience sampling from available facilities?

On page 8, under Measurements, in the top two paragraphs, please specify which medications and which diseases or conditions were excluded from analysis.

Page 13, you have concluded that 8 patient characteristics and 3 facility characteristics were not associated with inappropriate medication use because they were not selected in the regression analysis. I think it is possible that number of medications used per day is so confounded with other measures of health status such as comorbidity, that that model is somewhat over-controlled. It is difficult to interpret this because you do not give any information about the bivariate association between each of the variables and the use of inappropriate medications, and you only report the multivariable model results.

Page 14: the description of adverse outcomes on the small sample in which you had prior 3 months data should be eliminated. It is not described in the methods or results sections, and as you point out, the number of subjects is too small in this analysis to make meaningful interpretations.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Under Results, it would be helpful to clarify that these rates of use of inappropriate medication use were for any use of any duration (is that correct?--Jan to July only?) over a 6 month period, rather than during a year.

I would suggest you use the plural 'medications' rather than 'medication' in all the phrases 'number of medication' throughout the paper.

Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests.