Reviewer's report

Title: Predicting nursing home admission: a meta-analysis

Version: 1 Date: 13 February 2007

Reviewer: Andreas Stuck

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General
This is a systematic review of predictors of nursing home admission in the U.S. The authors attach a MOOSE checklist and confirm that they report all required information.

As stated by the authors, there have been earlier systematic reviews of predictors of risk factors of nursing home admissions in older people. This study adds new aspects by including data from representative community-dwelling populations in the U.S: and by reporting quantitative summary estimates. The study adds new and relevant information to the field.

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

From my perspective, the following aspects should be addressed in a revised version:

1. As stated by the authors, they did not distinguish between short term nursing home stays for rehabilitative purposes and long-term admissions for permanent institutionalization. This aspect might be evident for a U.S. audience. However for an international audience, this aspect is not evident and should be emphasized. First, the title of the paper should be adapted to reflect that this is a study on risk factors of nursing home admissions in the U.S. (to alert the reader that this a health care setting specific study). Second, the term "predict institutionalization" should be avoided, because this term implies permanent admission. Third, this limitation should be placed at the beginning of the limitation section.

2. It is not clear to me how the authors dealt with the fact that some studies report unadjusted (bivariate) estimate measures, and other studies report adjusted estimates. Pooling might require the use of bivariate measures because adjusted estimates might be more difficult to standardize. This should be clarified, and possible limitations be addressed.

3. I disagree with the clinical implications. Based on these data it is inappropriate to state that clinicians should use these risk factors as a "guidance". At most the authors could state that clinical usefulness of the identified risk factors should be addressed in future studies. The authors correctly state that the results could be used as a basis for developing a new risk index. As stated by the authors, however, no information is available on the predictive value of such a new risk index. Previous studies were disappointing from a clinical perspective, with AUROCs mostly around 0.70 for the prediction of nursing home admissions in older persons (e.g. Boult C. et al.). These earlier results suggest that risk prediction indices might be relevant for health care planning or insurance purposes on a population level, but (due to the limited predictive value) not for individual clinical situations. In my view it is important that this is corrected in the abstract. Also the implication part of the discussion section should be totally revised (for example page 13, second part of page).

4. The authors should discuss in more detail possible interactions between risk factors as a further limitation of the study.

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

none

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 of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

'I declare that I have no competing interests'