Reviewer's report

Title: Patterns of ambulatory medical care utilization in elderly patients with special reference to chronic diseases and multimorbidity - Results from a claims data based observational study in Germany

Version: 2 Date: 12 March 2011

Reviewer: Barbara Starfield

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Compulsory revisions:

1. What is the relationship between disability and degree of comorbidity (number of chronic conditions)? Are they really independent variables or is there confounding? Assuming non-independence, how was this handled in the regression analyses? Please make this clear.

2. Requiring diagnoses to be present in three quarters meant that people with fewer visits were excluded from being considered to have multimorbidity. Would this not artificially increase the number of visits in those with mm versus nmm?

3. The fact that specialist internists were included as primary care physicians certainly undercounts people who saw specialists. Is there anyway to account for this serious limitation? (At least it has to be recognized)

4. What percentage of PCPs are family physicians versus internists?

5. What proportion of visits are for prescriptions? Doesn't this have to be considered in the analysis and interpretation?

6. Standard deviations should be included in the figures.

7. Recent studies from Canada and Israel are showing that it is not the number of chronic conditions that account for high costs but, rather, the morbidity mix, as measured by the ACG case-mix measure. (See, for example, Broemeling et al, from British Columbia, and forthcoming papers by Shadmi from Israel). In this regard it is noteworthy that different triads in your study are associated with different numbers of consultations: the ones with DIFFERENT types of conditions are associated with more visits than the triads with similar and probably related conditions. That is, it is likely that it is the variety of conditions (rather than their number that is associated with high use. This is an issue that deserves recognition and perhaps advocating use of morbidity mix methods rather than counts of conditions.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:

I declare that I have no competing interests.