Reviewer’s report

Title: Relative contribution of various chronic diseases and multi-morbidity to potential disability among Dutch elderly.

Version: 0 Date: 26 Sep 2016

Reviewer: Sarah Dennis

Reviewer's report:

Thank you for asking me to review this interesting paper about the relative contribution of a range of chronic conditions on life spent with disease.

I am afraid that I found this paper difficult to review and understand. I have read and re-read the methods section and it is still not clear to me how the results have been calculated. I have read several of the papers referenced too and it has not helped to clarify the results presented here. The description of the origin of the data is reasonably clear. The description of the outcome measures and multi-state life tables sections might be better re-ordered and the outcome measures moved to line 113.

The results do not really make sense to me, especially the results for the combinations of conditions. The tables need more explanatory notes and labels, is LE measured in years? My understanding of the table 1 is that if you are a man aged 65 with a diagnosis of diabetes (assume it is a new diagnosis) then you can expect on average to live a further 7 years with the disease and then I assume they would die. I assume that the remaining LE column at the end is the remaining life expectancy for "non-diseased" people aged 65, so the person aged 65 could expect to live for 17.4 years.

Table 2 does not make sense because it seems to imply that if you are 65 with a new diagnosis of CHD and CHF you will have 5.8 years of life with disease. However, if you only have a new diagnosis of CHF at 65 you can only expect 2.3 years of life with disease. Why would having a new diagnosis of both CHD and CHF at 65 result in more life lived with disease than a single diagnosis? For some of the combinations of diseases, it implies that as new conditions are added then life expectancy with disease increases. It may be that I have completely misunderstood this. My thinking is that if you have a new diagnosis of OA at 65, then your remaining life expectancy is lived with the disease. Some of these conditions hasten death and so combining conditions such as CHD and CHF seems unlikely to increase life lived with disease from say age 65.

I think there needs to be a lot more clarification of the methods and results. I have not focused much on the introduction and discussion because I wanted to understand the methods and the results. There a quite a few typing and tense errors that will need to be corrected, there are also
differences in font size in the manuscript. The introduction needs reworking to better make the case for the study.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Unable to assess

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

No

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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