Reviewer's report

Title: Age- and Gender-related Prevalence of Multimorbidity in Primary Care: the Swiss FIRE Project

Version: 3 Date: 19 June 2012

Reviewer: Helena Britt

Reviewer's report:

This paper has improved tremendously. In particular: the presentation of the results in Tables with the total M+F really helps the reader understand the results; the adjustment for the cluster sample study design has now been done.

However, I still have some suggested minor essential revisions:

Page 6 1st paragraph third last line: this would read better as: “Only medical conditions addressed during any encounter were coded (rather than the double negative you are using here)

Page 7: Statistical analysis line 1. The opening sentence does not make sense. I would suggest something like: This study has a cluster sample study design, and we adjusted for the cluster in the analyses.

Page 13 last para, line 1: it is more than ‘conventional wisdom. It is proven. I suggest you report that to be the case and include an additional reference to support the statement.

Page 14: last para, line 6 does not scan. I think you need to deleted ‘our data capture the actual” and ‘are’ after estimates. Further, I really do not understand the difference between the population that consults general practitioners and the ‘primary care population. This suggests that each GP has a patient list in your country, and these patients always go to that practice. If that is the case you need to make it clear here. If that is not the case, then the two things are the same.

Statistical comment.

I see that in Table 2 you get some significant results for the chi square statistic, using the best estimate. However the 95% CIs show no significant difference between the sexes for these. This is because there is a wide degree of uncertainty in each estimate (because of the cluster sample design). I think if you are going to rely totally on the chi square as your indicator of significance, you need to raise this in the discussion, as a limitation of your work. The 95% CIs will always give you a more conservative result than a chi square, because the point estimates are not affected by the adjustment for the cluster. It is better to take the more conservative estimate when doing multiple comparisons, to reduce the Type 1 error. If you used the CIs to judged significance of differences you would find there are NONE.
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: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
'I declare that I have no competing interests