Reviewer's report

Title: Estimating Multimorbidity Disease Burden Among Older Adults: A Study of Six Chronic Illness Measures, 2008/09 Canadian Community Health Survey

Version: 2 Date: 22 September 2014

Reviewer: Joshua Armstrong

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GENERAL POINTS
In this paper, the authors have aimed to examine the convergent construct validity of six measures of multimorbidity. The research question is well defined and sound data from the Canadian Community Health Survey was used to assess the question with social-psychological and health outcome variables. This content is of direct relevance to the journal’s audience. The article is well written and the discussion and conclusions are well balanced and adequately supported by the data. The limitations are, for the most part, clearly stated and the paper builds on previous research on multimorbidity.

Overall, I find that the paper accurately and clearly illustrates the need for proper quantification of multimorbidity and will be beneficial to health researchers interested in examining the impact of multimorbidity on outcomes of interest. My only concern with manuscript is within the methods section. The manuscript would benefit from more details on how the weighted scales were constructed, perhaps with illustrative examples.

MINOR ESSENTIAL REVISIONS
(1) The manuscript would benefit from more details on how the weighted scales were constructed, perhaps with examples for illustration. Please add some details to this section.
(2) Discussion Section - I personally would like to have seen more discussion of the results of the simple additive scale vs. the weighted scales. The results seem to indicate that little is gained from weighting, and this in itself is an important finding.
(3) Limitations section – The latter half of the limitations paragraph might benefit from some revisions (for clarity).
(4) Pg 12 – line 242: replace common with a period
(5) Pg 17 – line 364: should be “…are magnified for…” (currently "magnifies")

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.