Author's response to reviews

Title: A cross-sectional, population-based study measuring comorbidity among people living with HIV in Ontario

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Author's response to reviews: see over
1 February 2014

Re: MS 1435626954979540 - A cross-sectional, population-based study measuring comorbidity among people living with HIV in Ontario

Dear Dr. Calleja, Reviewers, and BioMed Central Health Services Research Editorial Team,

Thank you for the second opportunity to revise our manuscript based on peer review comments. We are grateful to the reviewers for their contributions. Below please find an enumerated response addressing all of the points raised in our revisions request. We have bolded the specific questions/comments and italicized our responses, indicating where changes have been made in the marked up revision document. We hope that with these revisions the manuscript will suitable for publication and look forward to your feedback.

Best regards,

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Reviewer A second report:

1. The authors have addressed all of the concerns raised by the reviewers. However, in reviewing the differences in the proportions reported in Table 2 (which I agree should be deleted) and Table 3, I found some calculation errors which are quite important. The prevalence of co-morbid conditions in the HIV cohort is listed as 38.72, is incorrect in Table 3. It should be 34.41, as stated in Table 2. Furthermore the prevalence of co-morbid physical conditions in the Ontario cohort is 26,907/71,410, which is 37.68% (not 34.23 as stated), which is actually higher than the prevalence in the HIV cohort. Therefore, the correct prevalence ratio is 0.91, not 1.13. If these revised calculations are correct, they could dramatically change the interpretation of the paper. Please re-check all of these proportions and prevalence ratios to make sure they are correct. This is a major compulsory revision. I would like to see a revised version before acceptance.

Thank you to this reviewer for investing the time to review the paper a second time. We understand why the reviewer presents this concern regarding the discrepancy between Tables 2 and 3, and agree that including Table 2 could be confusing for readers as well. As described in our previous letter, table 2 presents the non-age/sex-standardized data alone for the actual comorbidity prevalence estimates, and Table 3 presents the age/sex standardized prevalence estimates and prevalence ratios comparing people with HIV to the general population. As such, they provide slightly different estimates. One reviewer had previously suggested we combine Tables 2 and 3, but as they present different data, we feel that combining them would be confusing for readers. However, if the reviewer feels strongly, we could delete Table 2 to avoid confusion. If the editor and reviewer let us know, we will revise the results presentation accordingly.

Reviewer B second report:

General comments
2. I am happy overall with the paper which I feel now reads better. However, it needs more editing as it is still too wordy and could be punchier. In addition, the mix of co-morbidities and various types of multimorbidity (physical and mental) in the narrative comes across as rather confusing. This could be difficult for the reader who is not familiar with the concepts.

We thank the reviewer for their comments and their constructive tone. We address the issue of different types of multimorbidity in response 6. We have also done a careful read of the manuscript and have attempted to streamline the language and trim content, especially in areas that were troublesome.

Background
3. The last sentence in the first paragraph re ...outpatient management...
Outpatient management has connotations of hospital outpatient clinics rather than community-based treatment. Does the author mean ‘the hospital in-patient management of chronic diseases consumes substantial healthcare resources, the bulk of which could be managed in primary care’? (In UK NHS something like 92% of patient contacts are in primary care sector, yet primary care gets only 7% of total NHS budget...) Please clarify.

Thanks for seeking clarification on this point. The intention was to convey that that community-based management of chronic diseases consumes substantial resources and that most of this management is borne in primary care. We have revised the sentence to: “The community-based management of these chronic conditions consumes substantial healthcare resources [4], and the bulk of this management occurs in primary care[5, 6].”

Results
4. P 10 Second paragraph Figure 2 shows the prevalence of comorbidity (rather than burden)

This has been noted and revised accordingly.

5. Similarly Figure 2 title needs to be amended to Morbidity prevalence by age group (Men) and (Women)

This has been noted and revised accordingly.

Discussion
6. I’m not entirely convinced re separating mental health morbidity from physical health morbidity (Rebuttal item 25) or not including HIV (the index case) as a chronic condition and whether this would preclude ‘...meaningful comparisons between groups’. I think I’ll leave that to the Editor and the author(s). It would be interesting to compare both approaches to write up of paper!

We have carefully considered this reviewer’s comments. With respect to separating mental health morbidity from physical health morbidity, we do feel this adds new knowledge to the literature. The contribution of mental health conditions to co- and multimorbidity was raised as particularly important by Barnett et al (reference 37). These authors found a substantially higher prevalence of physical-mental health comorbidity among those living in most deprived areas, and this vulnerability is critical to understanding the health of people with HIV. In order to try and address the reviewer’s comments and to align with Barnett’s presentation, we have tightened the language to use simply “multimorbidity” for two or more conditions and “physical-mental health comorbidity” for one mental health diagnosis in addition to one or more physical health comorbidities.
In addition, in both the discussion and conclusion we have made clearer reference to this issue. In the discussion, on page 13, we have added the lines: “Finally, in finding that almost 50% of people with HIV who have at least one comorbidity also have a mental health diagnosis, our study is the first to our knowledge to quantify the relationship between these conditions. Barnett et al.[37] found that those living in the most deprived areas had the highest prevalence of physical-mental health comorbidity at 11.0%, which is lower than the prevalence found in our HIV population, despite their higher deprivation compared to the Ontario general population.” In the conclusion, we have revised the first statement to read “This population-based study quantifies the substantially higher comorbidity and multimorbidity prevalence among people living with HIV relative to the general population, and the high contribution of mental health diagnoses to these conditions.” However, if the editor feels strongly, we agree to remove this aspect of the paper.

With respect to the statement indicating that counting HIV as a comorbidity itself would have precluded comparison to the general population, we agree this is unhelpful – the concept is intuitive – and thus we have deleted that line entirely.

Overall

7. The paper contains useful new knowledge that should be published. Some essential editing needed.

Again, we are grateful for the opportunity to make revisions and hope this version is more in line with the reviewer’s expectations.