Author’s response to reviews

Title: Potential quality indicators for seriously ill home care clients: A cross-sectional analysis using Resident Assessment Instrument for Home Care (RAI-HC) data for Ontario

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Response to Reviewer Comments for PCAR-D-18-00048

We thank the reviewers for their careful consideration of this paper and their helpful comments. We have addressed each question/comment below.

Reviewer One:

1. Abstract says it looked at RAI-HCs completed between 2009 to 2013 but under the methods/sample section it says 2006 to 2013.
   a. The years cited in the methods are correct and the abstract has been updated.

2. In the abstract, methods section says "consolation" instead of "consultation"
   a. Has been fixed
3. Background section, you name a few diagnoses but then say that end of life care would be relevant for those with "all" types of serious illness... should be using the word "different" as you can't make a conclusion saying "all" when research was about a few diagnoses.
   a. This has been modified (pg. 4, line 113)

4. Background section, first paragraph - seriously ill clients should be defined right away rather than waiting until the methods section to understand who makes up this group
   a. We have included a definition on pg. 4, lines 108-110

5. This paper defines palliative care and makes a lot of comparisons to other research for palliative care patients, however, it fails to mention if the patients in the study were actually "palliative" - did they have an SRC 95 code to identify them as palliative on home care, or were they on specific palliative care caseloads or just regular community caseloads? Those on palliative caseloads or community caseloads with SRC 95 might have different outcomes- which would maybe change the findings
   a. In the dataset available to us from CIHI, we were unable to determine if clients being assessed with the RAI-HC were given a designation of SRC 95 so we do not know for sure if they were part of the palliative care caseload.
   b. We have made this more explicit on pg. 6, line 166-168.

6. interRAI-PC is used in most regions for palliative care patients, wondering why this assessment was not used?
   a. At the time of the study, the first author (LH) was a graduate student and she did not have access to the interRAI PC data for Ontario. She did have access to the RAI-HC data which is why we chose this dataset instead.

7. Background section, third paragraph, first sentence should say "was to develop a set" remove the word "of" in there
   a. Has been fixed

8. 14 geographic regions is mentioned a few times, but for those outside of Ontario they might not know that the 14 regions represent LHINs. Should probably have a brief description about this.
Some details have been added on pg. 5, lines 139-141.

9. Methods, Sample section - mentions "intake' assessment, should word this differently so all readers understand that the assessment completed at time of admission to home care was not used, but rather the second assessment after being on service for a while was used...etc.
   a. We have added some detail to clarify our meaning of the intake assessment (pg. 6, lines 156-157).

10. Methods, Sample section - when defining the seriously ill client population you use the abbreviation "CHESS" when it is not mentioned in any sections before. reader has to continue to read to know what that stands for.
   a. We have added some details about the CHESS scale (pg. 6, lines 162-164).

11. Methods, Measures section - should put the abbreviations after describing them "DRS" and "CPS"
   a. This has been corrected (pg. 8, line 197 and line 200).

12. Analysis section - the abbreviation SI is used in the second paragraph but that was not used as an abbreviation in brackets anywhere before to allow the reader to know it stands for "seriously ill"
   a. The acronym SI has been added on pg. 4 line 108, following the initial use of this term.

13. Analysis section - mentions using a change in odds of at least 20% (1.20 to 0.83) but then mentions only keeping covariates with odds of 1.30 to 0.77 wondering why it wasn't kept at 20%?
   a. We used a slightly stricter criterion (i.e., >=1.3 or <=0.77) for a covariate to be considered as a risk adjuster to be in line with previous research.

14. Table 2 title "Seriously-ill" but in the paper that word is not capitalized so should stick to one way of writing it
   a. The title has been modified and the use of capital letters has been removed to be consistent with the text.
15. Results section, last paragraph, CPS and ADL should be abbreviated rather than spelled out since you've already described them
   a. This has been modified (pg. 12, line 292 and 293).

16. Discussion, second paragraph should say "current"
   a. This has been fixed.

17. Discussion, fourth paragraph, should say "than the comparison group" rather than "other clients"
   a. This has been modified (pg. 16, line 351).

18. Discussion, fourth paragraph - how do you know that they were not already receiving a palliative approach to care? There are many patients on regular community caseloads who receive palliative care with an SRC 95 and so they don't have to be on palliative caseloads
   a. This is true, and we don’t know for certain if some of these clients may have been receiving a palliative approach to care. However, we are attempting to make the point that they could, in theory, benefit from such an approach, whether these services are currently being received or not.

19. Limitations should include the fact that you were not able to identify whether patients were receiving palliative home care services ex. palliative nursing, palliative caseload and that if the research was done on patients known to be receiving palliative care services/on palliative caseloads/community caseload with SRC 95/assessed with an interRAI-PC then perhaps the findings would be different
   a. We agree and have added this on pg. 17, lines 372-375.

20. Did you look at their length of stay on home care? The difference from the first assessment to the second to see if those QIs improved?
   a. No, we have chosen to keep this paper as a strictly cross-sectional analysis since it is the first time we are reporting on these indicators. This type of analysis would be beneficial but something we would include in future work.
Reviewer 2

Methods

1. I assume that the reduction from 17 to 7 indicators occurred through the expert consultation and that the seven indicators were then used in the analysis of the RAI data. This should be stated more explicitly in the methods. Furthermore, there are no details about how the preliminary QIs were assessed by the experts or how the overall decisions to retain or eliminate QIs were made. A sentence to illuminate this process would be helpful.

a. We have added further detail to describe this process on pg. 9, lines 221-223 and again on pg. 9, line 231-234.

2. There's not much said about the fact that all seven indicators were considered suitable based on the results of the RAI data analysis. Was there a priori set of criteria by which the psychometric properties of the indicators were assessed and passed this final stage?

a. No, there were no explicit criteria about the psychometric properties of each indicator

b. Potential QIs were kept if most experts felt it was an important QI to keep, it was cited as being important in the literature and could be created using data elements within the RAI-HC. We have made this more explicit by including some additional text on pg. 9 (see comment #1).

3. To emphasize how commonly homecare is used in Ontario, and the RAI for that matter, you could mention the percentage of individuals who receive home care in the last six months of life (could be added to Sample section).

a. Unfortunately, we do not have a data element in this dataset that specifies the time of death so we are unable to determine how many clients received home care within this time frame.

b. We can however describe the volume of home care clients and number of RAI-HC assessments on an annual basis and this has been added on pg. 6, lines 146-148.

Results

4. It would be of interest to see the 10 indicators that ended up being cut - listing all or at least some of them, to give an idea of the types of measures the experts deemed less suitable.
a. We have provided some further information on why some potential QIs were dropped from further consideration (pg. 12, lines 281-286).

5. There's a lot of attention given to the differences in co-variables between the seriously ill and non-seriously ill groups, as well as, differences in QI prevalences between different diagnoses. These comparisons are not stated objectives of the study so do they tie in some way to assessing the utility and validity of the quality indicators? See point 2 above.

a. We did set out to examine the QI rates by diagnosis and this is an explicit objective (see pg. 5, line 139).

b. The comparisons between those who were and were not seriously ill was to understand whether our criteria for defining ‘serious illness’ were valid since this represented a new way of using RAI-HC data. We have elaborated on this in the discussion section (pg. 15, lines 351-357).

Discussion

6. Briefly, how do the seven indicators proposed in this study correspond to previously recommended indicators for palliative care? Do these correspond or are they comparable with patient reported QIs for community palliative care from other groups (e.g., European Association for Palliative Care Task Force, American Academy of Hospice and Palliative Medicine [Dy], Pasman JPSM review [2009], Europall project [Woitha, 2014], etc.). The QIs in the present study were largely symptom focused, while some prior sets of QIs (e.g., Europall, Robert Wood Johnson Foundation Critical Care Workgroup [Mularski, 2006]) focused on "activities", for example documentation of Advance Care Plan. Are there advantages to reported morbidity QIs as opposed to a process "check-box" approach?

a. We have added some text in the discussion to address this question and highlight how our work relates to the existing QIs (pg. 14, lines 318-326).

b. An advantage to our approach is the fact that most indicators to date have focused primarily on the process of care and we have mentioned this as well on lines 322-323.

7. Page 15 line 326: I am sure that there are one or two organizations outside of Canada that hold this view as well (…critical to look at factors beyond prognosis…) and could also be indicated, to make this statement more international.

a. This has been modified to add some additional organizations beyond Canada (pg.16, line 361-362).