Author’s response to reviews

Title: Change in quality of life and potentially associated factors in patients receiving home based primary care: A prospective cohort study

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Version: 1 Date: 15 Oct 2018

Author’s response to reviews:

Responses to Reviewer 1’s Comments

Dear Professor Ambagtsheer,

Thank you for the recognition of our ideas and efforts. In accordance with your comments, we have revised the manuscript (marked in red) based on the following responses, and minor edits were made to the original text to incorporate the changes.

Comment 1:

1) Regarding recruitment (line 40); the authors do not report the total number of patients invited to participate in the study, the number of patients subsequently excluded due to poor health or the ultimate participation rate. I would strongly encourage the authors to report these figures, perhaps with the aid of a flow diagram.
Response 1:

Patients receiving home-based medical care were eligible for inclusion if they provided signed informed consent. No other exclusion criteria were set for this study. As suggested, we have included a flow diagram and the relevant information have been incorporated into Fig. 1 and the Follow-up section of the Methods in the revised manuscript (page 8).

Comment 2: The second concern regards attrition, which is of central relevance to longitudinal studies. I suggest that the authors provide an indication of the attrition rate per year, along with reason for attrition (e.g. distinguishing between mortality and withdrawal), and discuss any expected impact on the study results. Again a flow diagram might be relevant here, and perhaps a table comparing characteristics of those leaving the study with those remaining.

Response 2:

Thank you for the valuable comments. Accordingly, a flow diagram including the attrition rate and reasons for attrition, a comparison of dropouts and non-dropouts, and any relevant information have been incorporated into Fig, 1, Table 5, and the Discussion section of the revised manuscript (page 14).

Comment 3: The authors do not provide any information on the extent of missing data values or how these were handled in the analysis - this issue should be addressed.

Response 3:

Overall, 28% and 19% of values were missing for the self-perceived and family-reported QOL ratings, respectively. After use of the mean imputation method to handle missing data that might not be completely random, the results of the GEE model showed the same significantly associated variables. The relevant information has been mentioned in the Statistical analyses section of the Methods (pages 9 and 10) and the Outcomes section of the Results (page 12) of the revised manuscript.

Comment 4: I would like clarification regarding which measurements were collected at the annual follow-up; and how follow-up was conducted (by post? Face to face appointment etc?)
This is important because it is not clear in the analysis whether change in QoL over time is being analysed against baseline demographics/health variables or whether these are also being updated each year. This has implications for interpretation of the results as a key study finding was that marital status (specifically being divorced or widowed) was associated with increased QoL over time. Perhaps these participants are re-marrying, hence the increase?

Response 4:

QOL ratings were followed up annually by face-to-face interviews. The remaining demographic and health variables were measured only at the initial visit. The relevant information has been incorporated into the Follow-up section of the Methods in the revised manuscript (page 8).

Comment 5: One limitation to note might be that carer status was not collected/controlled for. There is a growing body of research exploring the links between carer status and poor QoL; and so being released from caring duties on the death of a partner might be another reason why QoL might increase for the widowed.

Response 5:

We completely agree with the Reviewer’s opinion; however, caregiver burden was not evaluated in our study. Future studies are warranted to explore the link between carer status and patients’ QOL. This limitation of our study has been incorporated into the Discussion section of the revised manuscript (page 16).

Comment 6: A minor point - I would counsel against the use of the (uncited) direct quote about the global aging tsunami. I believe this type of hyperbole is best avoided when discussing population ageing.

Response 6:

Thank you. We have rewritten the sentence in question in the Background section of the revised manuscript (page 4).
Responses to Reviewer 2’s Comments

Dear Professor Lam,

Thank you for the recognition of our ideas and efforts. In accordance with your comments, we have revised the manuscript (marked in blue) based on the following responses, and minor edits were made to the original text to incorporate the changes.

Comment 1:

In the introduction, the authors would need to discuss more potentially associated factors of quality of life in patients receiving home-based primary care. Also, there should be more literature support for the newly developed instrument and how it is related to HrQOL. Last but not least, the authors will need to further elaborate on the last paragraph of the introduction, I don't quite understand the standpoint of this paragraph.

Response 1:

Thank you for pointing this out. As suggested, we have added discussion of the associated factors (page 5, Paragraph 2) and the newly developed instrument (page 5, paragraph 1) to the Introduction section of the revised manuscript. The validity and reliability of the instrument is described in the Measurements section of the Methods (5. HrQOL; page 8, paragraph 2). We have also rewritten the last paragraph of the Introduction to clarify the aim of our study (page 5, paragraph 2; page 6, paragraph 1).

Comment 2:

- In the methods, the authors could consider organizing the measurement tools used by giving them subtitles. It be easier for the readers. Also, please report the reliability of each measurement tool and indicate whether those were used in older adult population.

Response 2:

We have added subheadings and mention of the reliability of the measurement tools to the text. The relevant information has been incorporated into the Measurements section of the revised manuscript (pages 7 and 8).
Comment 3:

-In the results, please report the sensitivity and validity of the newly developed scale in relation to HrQOL or other proxies of quality of life. Please also provide the reference to support this same size is adequate for the analyses especially when there are so many covariates included in the multivariate regression model in this manuscript. Also, please clearly state and describe what were the dependent and independent variables in each analysis and corresponding table.

Response 3:

Thank you for these valuable comments. The validity and reliability of the QOL-HC scale are reported in the Measurements section of the Methods (5. HrQOL; page 8, paragraph 2). The post-hoc achieved power of the study is 0.966 and the relevant information is presented in the Outcomes section of the Results (page 12). Finally, we detail the controlled variables in each analysis. The relevant information has been incorporated into the Outcomes section of the Results (page 10 and 11), Table 2, and Table 4.

Comment 4:

-In the discussion, I am confused about the main argument of the first paragraph. This study was done because other traditional QOL scales were not sensitive enough to detect the changes over time? I didn't see this literature in the introduction. Please clearly discuss this argument in the introduction. Last but not least, please also discuss non-significant results in this study.

Response 4:

Thank you for these comments. Because not all patients receiving home care are candidates for traditional QOL measurement instruments that obtain information mainly from the patients themselves, the newly developed instrument can use the family-reported QOL rating as a surrogate. The relevant information has been incorporated into the Introduction (page 5, paragraph 1). We have also added comments on nonsignificant results to the Discussion (page 15).