Author’s response to reviews

Title: Hospitalization at the end of life among nursing home residents with dementia: a systematic review

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Author’s response to reviews:

Dear Dr. Booth,

Thank you for the opportunity to revise and resubmit our manuscript to your journal! We are very grateful for the thoughtful and constructive feedback we received from the reviewer. We have revised the manuscript accordingly.

Please find our comments below, in the manuscript all changes are highlighted in track-changes mode.

Yours sincerely,
Falk Hoffmann (on behalf of all co-authors)

Reviewer reports:

Jane Fleming (Reviewer 1): This is a clearly written paper on an important topic with sufficiently detailed description of appropriate methods. As the authors anticipated, meta-analysis was not possible due to the heterogeneity of included studies but the authors’ narrative synthesis succinctly summarises findings from the disparate sources identified.

1. I am uploading a PDF copy of the manuscript highlighting a number of comments, queries, suggested clarifications and corrections, but in addition think the points below need addressing in the Discussion.
AUTHOR RESPONSE: We thank the reviewer for her comments and changed and corrected all points accordingly.

2. The Results section reports on the quality assessment performed appropriately using the JBI tool, but I would expect to see mention in the Discussion of how the uncertain quality scores of a high proportion of the included papers might affect interpretation.

AUTHOR RESPONSE: We agree with the reviewer and are now discussing the low quality of some items of the quality assessment.

3. I would question the statement in the Discussion (page 13 lines 24-26) that "the end of life could be predicted more easily in residents with dementia" and feel that it weakens the paper not to include more recognition of the difficulties of knowing when a resident, with or without dementia, is near the end of life. The question addressed by this paper is framed in terms of an assumption that hospital admissions at the end of life can be burdensome and distressing for nursing home residents with dementia, an uncontentious position with which most would agree. However, withholding the option of going into hospital for diagnostic tests, review by secondary care specialists, possible treatment or palliation for residents with dementia would be a contentious position, and the challenge is knowing when these might be 'appropriate' admissions or 'inappropriate' because death is imminent and unavoidable. Decision-making about whether a resident, with or without dementia, needs hospital admission is frequently far from clear-cut when factors affecting the balance of potential benefits and risks involves unclear diagnoses and prognoses. Barclay et al's 2014 prospective study of trajectories to death of care home residents (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4141615/pdf/bjgpsep-2014-64-626-e576-oa.pdf) found the majority of residents admitted to hospital during their last year of life returned to their care home: "Urgent transfer to hospital did not usually presage the end of life." This study of residents with and without dementia examined trajectories over a year, so these were not just admissions within the last 30 days of life, the longest period examined in Hoffmann et al's review, but it illustrates the dilemma the authors' Discussion needs to acknowledge.

AUTHOR RESPONSE: We totally agree that it is often difficult to know when a resident with or without dementia is near the end of life, which makes it challenging to know whether a hospital admission is appropriate or avoidable. We now mention this point in the discussion section and deleted the statement that "the end of life could be predicted more easily in residents with dementia". Moreover, we thank the reviewer for referring to the study by Barclay et al. which we also included.

4. p.4, line 7-12: Some considerably higher, e.g. Matthews et al 2013
http://dx.doi.org/10.1016/S0140-6736(13)61570-6

AUTHOR RESPONSE: We changed the sentence to “Although there are variations in the literature, most studies found that about 50% or even more of NHR suffer from dementia [4–9].” and are referring also to Matthews et al.
5. p. 6, line 26-27: Do the authors mean "i.e." not "e.g."? Studies limited to residents with "specific diagnoses other than dementia" is surely exactly what they excluded, not just an example? Or have I misunderstood?

AUTHOR RESPONSE: The reviewer is right. We changed this accordingly.

6. p. 10, line 16-19: Does this mean "within both the moderate and severe cognitive impairment groups"?

AUTHOR RESPONSE: Yes that is right. We changed the sentence accordingly.

7. p. 10, line 40: To avoid confusion with the first paragraph of the Results section, re-word this to either "Four of the seven studies which reported in-hospital deaths compared in-hospital deaths amongst NHR between those with and without dementia." or "Four of the six studies which compared NHR with and without dementia reported their in-hospital deaths."

AUTHOR RESPONSE: We changed the sentence to "Four of the six studies which compared NHR with and without dementia reported their in-hospital deaths."

8. p. 10, line 55: Same issue as in my comment on the paragraph above, so need to re-word this too, so either "Three of the eight studies which analysed hospitalizations during the last 7 or 30 days of life compared these between NHR with and without dementia." or "Three of the six studies which compared NHR with and without dementia reported their hospitalizations during the last 7 or 30 days of life."

AUTHOR RESPONSE: We changed the sentence to "Three of the six studies which compared NHR with and without dementia reported their hospitalizations during the last 7 or 30 days of life."

9. p. 13, line 39: I think the authors are saying "On the contrary..." but in fact this isn't exactly contradictory so maybe clearer to say something like "However, in our systematic review on overall hospitalizations of NHR, this finding was consistent: all 20 studies..."

AUTHOR RESPONSE: We agree with the reviewer and changed the sentence accordingly.

10. p. 13, line 59: I think the authors mean "possible reasons for differences between..." - is that right?

AUTHOR RESPONSE: That is right. We adjusted the sentence.