Author’s response to reviews

Title: Specialist palliative care support is associated with improved pain relief at home during the last 3 months of life in patients with advanced disease: analysis of 5-year data from the national survey of bereaved people (VOICES)

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Author’s response to reviews:

Reviewer reports:

Reviewer #1: The paper has substantially benefitted from the thorough Revision.
Two minor typos:
Line 153: health not heath
Line 183: "been" after he
Response: We thank the reviewer for pointing it to us. We have now corrected them.

Reviewer #4: Thanks for making changes to the document, it does read much better now. There remain some points that I think need to be clarified in the manuscript.

1. The aim was to identify factors associated with good pain relief in the final 3 months of life. The narrative thread remains disjointed, with too much emphasis given to the finding that people with cancer receive more palliative care - even though this was not the aim or main analysis. ie, see abstract, first para of discussion.
Response: We have now removed some parts in the abstract (from the conclusion), the first paragraph of discussion and the conclusion to keep the focus on the main aim of the analysis.

2. I remain confused about removing from the analysis the people who did not report any pain in the final 3 months of life (line 130). Are these people the same ones as 'does not apply - he/she did not have any pain in the last 3 months of life' (line 160)? In which case, why does the method say these people are excluded twice? This needs to be clarified in the paper. As it is currently written,

Response: Thanks for your comment which helped us to clarify the inclusion criteria. We have now removed the sentence in line 160 to avoid repeating the exclusion criteria. We added a sentence to clarify why we excluded people who did not report any pain in the final 3 months of life (methods, page 6, line 126-127).

3. Line 125: "We were specifically interested in the factors associated with good pain relief at home..." - please explain in the paper that this is because VOICES does not include information about palliative care in settings other than home, as you have in your response.

Why 2 reasons

Response: we have now added a sentence that makes this point (methods, page 5-6, line 123-124).

4. Line 287-289: "Conversely, spouses and partners are more likely to be older and have potentially different (lower) expectations of healthcare services and interventions than younger sons and daughters resulting in inflated views of outcomes. These findings have important implications for clinical practice." - very unclear what the important implications for clinical practice are. Suggest remove this sentence, or make the important implications clearer.

Response: We have removed this sentence.

5. Table 4. I appreciate that residual confounding likely to lead to the swings in direction for ORs from uni to MV analysis. Would be useful to acknowledge this in discussion.

Response: we have now added a sentence that makes this point (discussion section, lines 292 to 299, page 12).
Stats review for BMC Med on VOICES study of pain relief at end of life

Jan 8 2019

Specialist palliative care support is associated with improved pain relief at home during the last 3 months of life in patients with advanced disease: analysis of 5-year data from the national survey of bereaved people (VOICES)

Abstract: if the outcome variable was good pain relief, why do the results have the line “Decedents with cancer were far more likely to receive specialist palliative care and to have a recorded preferred place of death than those with non-cancer advanced disease”, which refers to other outcome variables?

Response: Thank you for your comment. Receiving specialist palliative care and having a recorded preferred place of death were parts of the service characteristics. We included them as they are key findings from our analysis which aimed to examine the factors associated with good pain relief at home and receiving specialist palliative care.

Methods: what is known about how representative the 45% who responded are of the whole target subpopulation? It’s not enough to say that the subpopulation (those who died whose informants were invited to take part) is representative of the whole population (those who died).

Response: As we mentioned (in brief) in methods part (page 5, line 111 to 119) and discussion section (page 10, line 250 – 256); to ensure the sample represents the deaths in England for the given period and covers the main domains of interest, the sample was stratified. The estimates produced were then weighted to be representative of the population for that period (sample weighting). To ensure estimates created take account of non-response bias a non-response weight was created. In addition, we have also combined 5 data sets, 2011-2015 to increase the sample size in order to improve data robustness.

Methods: I agree with the authors’ resistance to the reviewer who asked them to (wrongly) use the term “multivariate regression”. They are right to call it multivariable (or, better, multiple) regression.

Response: Thank you for your comment
Methods: the outcome variable is a dichotomised version of the five-point scale and therefore loses information. A positive response includes pain relief “some of the time”. Ordinal regression is an obvious alternative, but as a minimum, unless there is strong agreement in the literature for clinical reasons, I suggest a sensitivity analysis that puts “some of the time” into the negative outcome.

Response: The primary outcome was a dichotomised version of the four-point scale not a five-point scale. “Complete pain relief some of the time” was a category in the survey not “some of the time”.

We collapsed the response categories for ease of interpretation.

The positive response “good pain relief” includes people with “complete pain relief all of the time” and people with “complete pain relief some of the time”. As these two groups achieved complete pain relief at least at some time during the last three months of life, we consider them as having good pain relief.

On the other hand, the two groups “pain relieved partially, not at all” were considered as having “poor pain relief” as they did not gained complete pain relief at any time in the last three months of life.

Methods: with so few possible predictors and a large sample size, I would just have entered them all at once into the regression model and reported the p values etc, without any elimination unless collinearity / non-convergence is a problem. In the end, all were significant anyway.

Response: Thanks for your comment. We used both the forced manner and a backward selection technique and we got the same results from both of them. We have mentioned the use of elimination in the revised version after the reviewers’ comments.

Methods / Results: Why was age categorised, thereby losing information, and why was this done this way?

Response : We used these three age bands which were provided by Office for National Statistics (the data owner). Unfortunately, age in years of deceased (as a continuous variable) was not available for us.

Results: the authors are right that only pseudo-R2s exist for multiple regression. Some of them are actually useful, but the values tend to be low, which tends to disappoint readers who are only
familiar with the linear regression case. I agree with the authors’ decision not to present R2 values.

Response: Thank you for your comment.

Minor: “compared to” should be “compared with” throughout (they don’t mean the same thing).

Response: We thank the reviewer for pointing them to us. We have corrected them. The term “compared with” has been replaced throughout the manuscript with the term “compared to”.

Table 1 and 4: IMD categories have been mis-labelled (5 should be “most deprived”).

Response: We thank the reviewer for pointing it to us. IMD categories have been mis-labelled but we corrected them in the methods part (page 6, line 135-136) as we wanted 1= most deprived in the tables. This is because most deprived was used as a reference variable in Table 4.