Author's response to reviews

Title: Do the Malnutrition Universal Screening Tool (MUST) and Birmingham Nutrition Risk (BNR) Score Predict Mortality in Older Hospitalised Patients?

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Author's response to reviews: see over
Dear Editors,

Please find enclosed details of revised article for consideration for your journal. In the light of the helpful reviewers comments we have made the following amendments to the paper:

Reviewer: Carrie H Ruxton

Minor Essential Revisions

1. We have included information on types of scales and calibration in Methods paragraph 2.
2. All patients were included with no exclusions. We have clarified this in Methods paragraph 2, line 1.
3. We have amended the results to consider only the 115 patients with height and weight data. We have discussed this in Methods Paragraph 2, Results Paragraph 2.
4. Use of the screening tools was modified to take account of fluid overload and amputation. We have included detail on this in Methods paragraph 2
5. Data collected at time of admission and so no weighing regime was employed to measure unplanned weight loss. This was self reported or calculated from old weights in the patients notes. We have included discussion under Discussion Paragraph 2.
6. This study did not require ethical approval; we have included a note to this effect in Methods Section Paragraph 4.
7. After consideration of both reviewers comments, we have recalculated all the data using the 115 patients with BMI data as the sample population to improve the clarity of presentation.
8. Please see point 7 – we have amended all the figures, tables and results
9. We have amended the results to use only the patients with BMI data. Details of deaths in each category are now given in Table 2.
10. We have added further discussion about the limitations in Discussion section

Discretionary Revisions

11. There was no statistically significant difference in any of the groups of the Birmingham Nutrition Risk Score groups. This is now shown with the log rank scores and with Cox regression analyses (Figs 1,2; Table 2). We have also included extra comment about the BNR results in the discussion section.

Reviewer: Elaine Bannerman

1. 2.5 years was chosen to allow adequate numbers of deaths in each group. We have included comment about this in the Methods section. The lack of data regarding short-term death is indeed a weakness, and we have now commented on this in the Discussion paragraph 6.
We have included the up to date BAPEN data as suggested (Introduction Paragraph 4)

2. We have included further detail on the methods used to collect the screening tool data in the Methods section. We are unable to adjust for a wide range of covariates, and we have acknowledged this in the discussion. We have however included Cox regression analyses with adjustment for age and sex (see Table 2)

3. -

4. We have added dispersion data as suggested. We have explored the possibility of a scatterplot including length of stay; neither a straight scatterplot or a plot of log(length of stay) vs category appear to add to the numerical data however. We would be more than happy to send one for examination if the reviewers thought this would be helpful.

We have given 95% CIs for the hazard ratios in Table 2 and added further information about the log-rank calculations on the figures as suggested.

5. We agree that the term external validity is open to being misconstrued. We now refer to predictive validity in the discussion. We have also added some discussion about the possibility of misclassification, together with extra references in the discussion as suggested.

6. We have added further discussion regarding the limitations of the study

7. We have included further references to existing work, and have expanded the discussion to include a fuller review of how our results fit in with the existing knowledge base

8. –

Minor Revisions – we have now referred to table 1

We hope that these revisions answer the reviewers points satisfactorily; please let us know if you would like further information or changes.

Yours sincerely

Dr Miles Witham