Author's response to reviews

Title: Observed intra-cluster correlation coefficients in a cluster survey sample of patient encounters in General Practice in Australia

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Author's response to reviews: see over
The Editor,
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RE Observed intra-cluster correlation coefficients in a cluster survey sample of patient encounters in General Practice in Australia, Manuscript ID 1403013119430300.

Thank you for providing accepting this manuscript for publication. We are delighted to submit the latest edited version with the revisions and formatting changes that you suggest.
1) Author list: we have placed number in superscript as requested and checked that the authors names are correct.
2) References: we have placed citations in text before the full stop and have included authors names in full in the reference list. The reference list has been moved to before the tables.
3) Competing interests: we have declared no conflicts of interests
4) Acknowledgements and authors contributions: these sections have been completed
5) Figures: we have cropped the figures, removed the legend and included the legends after the references.
6) Conclusions, Methods, headings etc: we have edited these as requested.

We look forward to seeing the final paper in press.

Yours faithfully

Stephanie Knox
Patty Chondros
Major Compulsory revisions

In this study we were interested in looking at a number of factors that may affect the number of visits a patient makes to a GP in Australia, in reference both to what is reported in the literature and to what are seen as major health priorities in Australia. We did not set out only to examine psychological problems, rather we were interested in a range of health problems and demographic factors. Psychological problems became an important part of our discussion because anxiety and depression were two of the major significant predictors we found and we sought to explain this finding. Also, most of the available literature on visit frequency focusses on psychological problems which gave us more material to discuss the possible explanations of our findings.
We have rewritten the discussion to change the emphasis from depression and anxiety to expand our discussion of other health problems and demographic factors. We have made it clearer in the methods sections that we have focussed our analysis on the National Health Priority Areas in Australia and the discussion includes more emphasis on the Australian context.
We have dropped lipid disorder and hypertension from the analysis as suggested by the reviewer. In the discussion we have sought literature that could help explain the findings on back pain and have also discussed the null findings for diabetes in the light of other available research. We hope this revision provides a more balanced discussion of the findings of the study.

Other compulsory revisions

We have clarified the inclusions in the first paragraph of the results. There is also an extended discussion on the possible causes of over-estimation in the self-reported visit rate.

Minor essential revisions

We re-fitted the models using poisson regression as suggested and found no differences in the significant findings compared with linear regression, however we have used linear regression in the analysis. We examined the relationship between visit frequency and other ordinal/continuous variables and found a linear relationship between visit frequency and the number of reported health problems. Number of health problems was therefore fitted as a numeric variable. Age was fitted as a set of dummy variables because it was non-linear in relationship to visits for children under 15 years (although even if age was fitted as continuous this did not substantially change the results). We were interested in the mean difference in number of visits for each morbidity and therefore used linear regression as the preferred model because this gave us readily interpretable co-efficients in terms of mean visits.