Author's response to reviews

Title: Socio-demographic and clinical characteristics of re-presentation to an Australian inner-city emergency department: implications for service delivery.

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Author's response to reviews: see over
Dear Sir/Madam,

Re: MS: 5496307521385688 - Socio-demographic and clinical characteristics of re-presentation to an Australian inner-city emergency department: implications for service delivery

Thank-you for your feedback and the opportunity to revise the above manuscript.

The approach used in this study permitted identification of specific socio-demographic and clinical risk factors for ED re-presentation in a total population over a period of two years. The authors used re-presentation within 28 days of discharge to align with readmission to hospital and give a clearly defined binary outcome for the logistic regression modeling. In this context, our work describes eleven key variables that represent significant patient and emergency department visit characteristics. This is a new approach to the measurement of ED service use that may be used to inform the development of evidence based interventions to improve the safety and quality of service delivery in EDs.

In line with the reviewers’ comments, we have made a number of changes to the revised submission and these are detailed on pages 2-3 of this document.

I look forward to further communication with you about the revised manuscript.

Yours Sincerely

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### Table 1 – Reviewer 1

<table>
<thead>
<tr>
<th>Reviewer Comment</th>
<th>Author Response</th>
<th>Manuscript Revision</th>
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<tbody>
<tr>
<td><strong>Minor Essential Revision</strong></td>
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<tr>
<td>Page 11, paragraph 2, line 11 “Australian” should read “Australia”</td>
<td>Correction completed.</td>
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<tr>
<td>Page 12, paragraph 1, line 2 “Patients that…” should read “patients who……”</td>
<td>Correction completed.</td>
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<td>Page 13, paragraph 3: Suggest to delete the first sentence of the discussion.</td>
<td>Correction completed.</td>
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### Table 2 – Reviewer 2

<table>
<thead>
<tr>
<th>Reviewer Comment</th>
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<tbody>
<tr>
<td><strong>Major Compulsory Revisions</strong></td>
<td></td>
<td></td>
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<tr>
<td>1 Background</td>
<td>The suggestion of including the listed articles has been extremely helpful in giving a broader view of the different approaches used to research multiple visits to the emergency department. An additional paragraph has been added with changes in the text of the background section to reflect the broader approach. There were additional articles reviewed as suggested by the reviewer and included in the manuscript. When referring to the lack of re-presentation in the literature the author was referring to literature based on the specific definition used in the manuscript (within 28 days after discharge).</td>
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<td>b The authors' statement that there is no literature on representation is not correct. For example, the following review included several studies in elderly population: McCusker J, Karp I, Cardin S, Durand P, Morin J. Determinants of emergency department visits by older adults: A systematic review. Acad Emerg Med 2003; 10(12):1362-1370. The following are some older publications not restricted to the elderly – the authors should easily be able to find more recent studies: 1. Keith KD, Bocka JJ, Kobernick MS, Krome RL, Ross MA. Emergency department revisits. Ann Emerg Med 1989; 18(9):964-968. 2. O'Dwyer F, Bodiwala GG. Unscheduled return visits by patients to the accident and emergency department. Arch Emerg Med 1991; 8:196-200. 3. Lerman B, Kobernick MS. Return visits to the emergency department. J Emerg Med 1987; 5:359-362. 4. Hu S-C. Analysis of patient revisits to the emergency department. Am J Emerg Med 1992; 10(4):366-370.</td>
<td>The suggestion of including the listed articles has been extremely helpful in giving a broader view of the different approaches used to research multiple visits to the emergency department. An additional paragraph has been added with changes in the text of the background section to reflect the broader approach. There were additional articles reviewed as suggested by the reviewer and included in the manuscript. When referring to the lack of re-presentation in the literature the author was referring to literature based on the specific definition used in the manuscript (within 28 days after discharge).</td>
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<tr>
<td>2 Methods</td>
<td>Of the 2000 medical records, 80% were reviewed by the lead researcher. Two research assistants were employed to complete the remaining medical records.</td>
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condensing the methodology as directed this information was deleted. It has been re-inserted and the word 're-examined' correct to read 'examined'. The only categories that were not recorded in the patient dataset were homeless (yes/no) and level of homelessness. The inter-rater reliability was tested as reported with the 20 medical histories.

3 Results

Your response is not adequate. As currently presented, it is not possible to disentangle the roles of age and pensioner status. One way to do this is to create a composite variable with the following categories:
- Pensioner, age 65+
- Pensioner, age <65
- Non-pensioner, age 55-64
- Non-pensioner, age 45-54
- Non-pensioner, age 25-44
- Non-pensioner, age <25

Other age groups could be used of course for the non-pensioners.

A composite variable is not necessary to disentangle the roles of age and pensioner status. The referee seems to believe that there were no non-pensioners who were aged 65 and over. This is not the case; there were 2461 people in the study who were non-pensioners and aged 65 and over. In fact, in our original cross-classification of age (6 categories) x pensioner (yes/no), the minimum number of people in any of the 12 possible categories was 980. We later reduced the number of age categories to 2 (25 or less, over 25), but that was not related to the pensioner variable. Table 1 has a breakdown of ‘age’ into suggested categories.

Minor Essential Revisions

Other: Tables 1 and 2 should be re-formatted in the standard way, so that the numbers and %s in each category are arranged in columns.

Correction completed.

Discretionary Revisions (which the author can chose to ignore)

Response to reviewer 2, comment 2a: the significant interactions should be described, even if they did not improve model fit.

We have chosen not to describe the interactions, because we don't believe this would add to the clarity and usefulness of the paper, and may even create a distraction from the main results.