Reviewer’s report

Title: Emergency department visits in older patients: a population-based survey

Version: 1 Date: 13 Jan 2019

Reviewer: Yves Chaput

Reviewer's report:

Thank you for once again asking me to review this revised manuscript. This manuscript is much improved from the first version and I appreciate the authors efforts in making this so.

Again, I usually divide my comments into major and minor points. I have but a few Major points left. Again, major points are those requiring a response by the authors, either by changes to the manuscript or, in in disagreement, then a rebuttal in a response letter. Most all of these points pertain, as was the case in my first review, organization and imprecision in the text.

Minor points are mere suggestions that the authors can integrate into the text or not.

NB: Some of the line numbers below may not concord to that of the original PDF. The line numbering on my revision appears to have been a bit out of kilter.

MAJOR POINTS:

BACKGROUND

I have no major points left regarding the BACKGROUND section.

METHODS

(1) Although quite improved I'm still not clear on the first paragraph of the METHODS section. The section (lines 34 and 35) on the catchment area is difficult to follow. They seem to differentiate tertiary and secondary catchment areas tate that the ED as an over one million inhabitant cat Still not really clear why.

(2) They also state in the following paragraph that they were interested specifically in including both primary and tertiary care patients although again, they provide no rationale for this.

(3) Finally, the cost section is not very clear either. From what I can comprehend from the 3rd paragraph there are no detailed actual costs billed per patient but rather, the hospital bills the universal health care system a set fee per ED visit. This set fee per ED visit can be greater depending on the time of day or associated lab/radiology requests. If this reasoning correct then it should be more clearly stated.
RESULTS

(4) Line 19. What does "…admitted…" to primary care services mean? Is this a post triage stage, where patients are directed to either specialist care (surgery for trauma for instance) or remain in the ED under the care of the emergency room physician?

(5) The first paragraph of the results section is just too confusing and some statements simply do not make any sense. For instance, authors state that the patient n count is 750 (8% of the total older patient) and they made 7.9% of all visits and give an n of 1400 visits? I would completely rewrite this paragraph to make it much clearer. For instance;

A total of 6915 older patients (median…..), representing 4.8% of the total ED population, made 17769 ED visits during the 2-year observation period, accounting for 15% of all ED visits (n=…). Sixteen percent (n=…) of older patients made a single ED visit whereas 11 % (n=750) made 5 or more visits during the 2-year observation period, for a total of … visits (7.9% of the total number of visits made by older patients). Twenty-five percent (n=…) of patients were triaged to …. whereas 75% (n=…) were triaged to primary care services. Thirty one percent (n=…) of patients were admitted to hospital, 0.2% (n=…) to the intensive care unit, 38% (n=…) were discharged to home or ….and 31% (n=…) to other health care facilities"

DISCUSSION

(6) I would start the discussion section with this study's primary finding. As such, I would start the paragraph with the phrase on line 24 "In this study we report a high incidence of Ed visits…..". The first 3 phrases of the opening paragraph (Starting with "Older patients..." and finishing with " .... "Consequently we need a …". ) are summary conclusion statements. I would probably put these 3 phrases with the 3rd paragraph, that beginning with "While our aim was not to….".

(7) It appears to me that the 3rd and 4th paragraphs in the DISCUSSION are essentially conclusion statements, rather than an elaboration on the author's results. I have difficulty seeing what the direct relation is between the author's data and these two paragraphs. In addition, some of the phrases in these 2 paragraphs are redundant. I would suggest synthesizing these ideas and shifting the result as a last paragraph of the CONCLUSION section (to which I have made minor grammatical suggestions in the MINOR points below).

MINOR POINTS:

GENERAL COMMENTS

(1) There is a lot of variability in the terms used for an ED visit ("accesses", "presentations"). I would just use the word "visit" or "visits" and standardize on that.
BACKGROUND

(2) Line 22. "...was to assess the burden on ED services caused by population ageing in Finland."

METHODS

(3) Line 36 "...of which 10852 were 80 years or over."

(4) Line 39 "...and the associated costs of ED care."

(5) Line 3 "Finally, we attempted to assess the future need for ED services among older inhabitants using our incidence data and the population estimates provided by Statistics Finland..."

RESULTS

(6) Line 16. "A total of 6915...made 17769 ED visits ...study period". 

(7) Line 28. "The share of older inhabitants visiting the ED was similar..."

(8) Line 30. "The number of ED visits also showed...".

(9) Line 33. "...while those aged less than 80 had 233/1000/year ED visits."

(10) Line 36. "The reasons for an ED visit ranged...".

(11) Line 65 "The mean cost per ED visit in older patients was 422..."

(12) Line 1. "...for example, the mean costs of ED visits were higher..."

(13) Line 6. "Sixteen percent of patients (n=2886) underwent CT..."

(14) Line 34. "It is possible that an ascending trend in ED use by older patients may be observed globally as the proportion of older patients and the projected population demographics in our particular region mimic those in most parts of western..."

DISCUSSION

Line 22. "Older patients frequently require more..., outcome is poorer..."

CONCLUSION

(15) Line 33. I suggest the following re write (this is but a suggestion in order to make the text more fluid, the authors should feel free to rearrange as they please)

"The demographic and clinical characteristics of elderly ED patients need to be more comprehensively described. In our study there was a three-fold increase in ED visits made by patients 80 years or more compared to those under 80. Non-specific diagnoses were frequent and generated similar or higher costs to those of patients requiring hospitalization.

***{(NB: following this paragraph is where I would probably put the authors more general discussion/conclusion about the MED ED, the revised 3rd and 4th paragraphs of the DISCUSSION section.)}
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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