Reviewer’s report

Title: Prevalence and factors associated with one-year mortality of infectious diseases among elderly emergency department patients in a middle-income country

Version: 0 Date: 13 May 2019

Reviewer: Mette Søgaard

Reviewer's report:

The authors have conducted a research study investigating the prevalence of infectious diseases and predictors of one-year mortality associated with infectious diseases among elderly patients presenting at a university hospital in Bangkok from January 1, 2016 through June 2016. The manuscript deals with an interesting topic, however as appears, I have a number of comments that needs to be addressed. Moreover, there are a number of linguistic errors and the language could be improved considerably. I therefore recommend having the manuscript revised by someone who is fluent in English.

Abstract:

Conclusion - I suggested to also emphasize that almost two-thirds of patients presenting with infection at the ED are admitted to hospital.

Background

Please define old and oldest-old.

The Background section is quite long, and I suggest shortening this section to only 1 page by removing the detailed description of previous studies to the discussion

Methods

I suggest providing all ICD-10 codes in a supplementary table in order to improve readability. Do the authors have any information on the validity and completeness of the infectious disease coding in their database?

I think that it would improve readability and understanding if the authors moved the paragraph "Definitions" up before the description of "Data collection process". Regarding definitions and
baseline characteristics: How long lookback period did you use for diagnoses and medication, e.g. for assessment of the Charlson Comorbidity Index score?

Regarding data collection, it is somewhere unclear whether the data were abstracted from the hospital's electronic system (ICD-10 codes) or from the medical record or laboratory information system?

Results

The numbers in Figure 1 does not add up: 3467 patients - 271 non-urgent patients = 3196 patients and not 3217 patients? Please revise this.

Table 1. Please clarify what 30 Baht healthcare scheme is? Moreover, please also define all abbreviations used in the table.

Table 2. Could the patients have more than one type of infection, e.g. pneumonia AND sepsis? Regarding "Hospital admission diagnosis" was this defined as the primary diagnosis?

Discussion

The authors conclude that infectious diseases account for 14.4% of ED contacts among elderly patients in their setting. I wonder how robust this estimate is and whether one could expect some form of seasonal variation in the prevalence of infectious diseases?

While the authors discusses study limitations, the paper could benefit from a more thorough discussion of the clinical implications of the study findings.

**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 recommend additional statistical review

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Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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