Reviewer's report

Title: Use of a trigger tool to detect adverse drug reactions in an emergency department

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Reviewer: Emanuel Raschi

Reviewer's report:

The work by de Almeida et al. estimated the impact of adverse drug reactions (ADRs) on hospital admission in a tertiary care hospital in Brazil.

The article is not new in the literature (and authors properly discussed their data in the light of published surveys), although of interest as it applies a so-called trigger tool (i.e., medications that may be administered in response to ADRs), which might theoretically increase the detection rate, as compared to traditional methods.

Here below, the following concerns are listed:

- TITLE. The authors entitled their work an "active surveillance", although the study was retrospective. Therefore, they should consider to modify the title, for instance by specifying the application of the trigger tool. Moreover, the setting should be specified (i.e., Brazilian tertiary care hospital).

- AIM. The study aims to estimate the incidence of ADRs; however, the retrospective nature of the work does not allow to calculate incidence, but instead PREVALENCE. This should be consistently modified in the text.

- CONCLUSION. The authors' statement is not supported by the data. In fact, to claim the usefulness of the trigger tool, a comparator group is needed, or at least a secondary analysis to evaluate the detection rate through traditional approaches. The limited sample size does not allow to draw firm conclusion. I think that the conclusion should summarize key results and call for additional studies to directly compare the detection rate of different approaches.

- DISCUSSION. The authors discussed the JAMA paper on US data, but no discussion is provided on the most updated survey of 2016 (quoted in the bibliography). The section on limitations should be strengthened, also by discussing the limited sample size.
- ABSTRACT. Apart from issues related to conclusion and incidence, methods and results should be revised. For instance, the trigger tool should be briefly described, and the sample size provided.

- Minor typos should be corrected (e.g. requir line 157, ARDs line 194).

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.

No

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

No

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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Needs some language corrections before being published
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