Author's response to reviews

Title: Evaluating Adverse Drug Event Reports in Administrative Data of Emergency Department Patients: A Validation Study

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Author's response to reviews: see over
Re: Authors’ Response to Reviewers  
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Review 4

Dear Dr. Jones,

We have revised the manuscript according the reviewer’s comments, and have responded to their concerns below (in blue). We list the reviewer comments in the order of their appearance.

Thank you again on behalf of the investigative team, for providing us with an opportunity to revise and improve our manuscript.

We look forward to hearing from you again.

Sincerely,

Corinne Hohl
Referee:

1. Discretionary revision: The addition of specificity calculations in the revision are useful. However, in reviewing the revision, it's noted that while the primary objective of the manuscript is to calculate sensitivity of admin codes for identifying ADEs and it is calculated and reported in the abstract and methods and sensitivity of previous studies is discussed in the discussion, the actual term "sensitivity" is not used to describe the primary findings (From the abstract "15 (6.8%, 95% CI 4.0-11.2%) adverse drug events were documented..."). Readers might wonder why the familiar term sensitivity is not used, particularly when the term "specificity" now is used? We have revised the manuscript accordingly in the “Abstract” and the “Results” (pages 12 and 13) sections.

2. Final discretionary revision: As the manuscript now reports specificity as well as sensitivity (although the term is not used explicity), readers might also wonder about PPV and NPV. Of note, it appears the PPV of admin codes that clearly link the event to the culprit medication is 45.5% (15/33) and the PPV of admin codes indication a very likely/likely/possible relationship to a medication 27.2% (62/228). These PPV findings would seem to also be quite supportive of the manuscript conclusions that admin data alone may not appropriate as a stand-alone means of identifying the ADEs (as defined in this study).

We have revised the manuscript and presented the PPV and NPV in the “Results” section (pages 12 and 13) We have also added the following sentence in the “Conclusions” reflecting the statement above: “The performance characteristics of the code sets examined, in terms of their sensitivity, specificity, positive and negative predictive values, indicate that administrative data alone may not be appropriate as a stand-alone means of identifying adverse drug events in these data.”