Author's response to reviews

Title: Adverse drug events with hyperkalemia during hospitalisation: Evaluation of an automated method for retrospective detection in hospital databases

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Author's response to reviews: see over
Dear Dr. Chap,

Please find enclosed the revised version of our article entitled: “Adverse drug events with hyperkalemia during hospitalization: Evaluation of an automated method for retrospective detection in hospital databases” for submission to BMC Medical Informatics and Decision Making. The revised version has been significantly modified.

In line with all of the associate editor’ comments, we have modified the manuscript in order to improve the quality of contents of the manuscript. These modifications are based on all specific comments to which we have responded.

Point-by-point responses are given below.

Dr Grégoire Ficheur
Answers to Associate Editor

Comment 1: I have however noticed a number of areas where the phrasing is unclear or the use of English is non-standard
The manuscript was completely reviewed by a medical doctor native English speaker. Many points have been corrected. We hope that the final result will suit you.

Comment 2: In page 7 line 159, you respond to the reviewers' comments asking for an explanation of "algorithmic-based approaches" by including references to three examples. This isn't helpful. You need to define what you mean by an algorithmic approach. The citations are given later anyway, including them here is simply redundant.
We agree that we didn't explain easily the nature of these "algorithmic-based approaches". The algorithmic-based approach is the most common way for causality assessment of adverse drug reaction (ADR). These algorithms are based on questionnaires and return a score given the likelihood of whether an ADR occurred.

On page 7 line 158 of the previous manuscript, we deleted the citations which were redundant:
"according to Naranjo [35], Kramer [36] or Bégaud [37]"

On page 7 line 163 of the previous manuscript, we added:
"These algorithms are based on questionnaires and return a score given the likelihood of whether an ADR occurred".

Comment 3: In page 13, from line 325 you calculate figures for and precision recall based on the numbers of serious ADEs that are identified by the expert and flagged by the system. But the system does not flag them as serious ADEs. It therefore seems inappropriate to calculate the statistics. You could reasonably highlight that the three ADEs that were judged serious by the experts were among those flagged by the system, but to calculate the statistics seems to me misleading. It is also, as you point out, unsound given the small sample of serious ADEs. I would recommend deleting the statistics here and the references to them in other sections of the paper.
We agree that it is completely impossible to generalize this result and for that reason it is not a good idea to calculate this statistic for serious ADEs.

On page 13 line 325, we deleted:
"thus the recall is 100%. Therefore, among the 80 ADEs found by automated detection, 3 cases were identified by expert and the precision is 3.7%. Obviously, there is no sense to trying to generalise this result because of the very small number of serious ADEs".

We also deleted all the references to these recall and precision in other sections of the paper.

Comment 4: In page 13 from line 329 you point out that two of three patients who died were at the end of their lives. Since, at least in a secular context, death is generally understood to be the end of life, you should probably rephrase this to refer to the general state of health of the two patients.

On page 13 line 328 of the previous manuscript, we deleted:

“were at the end of their lives”.

We replaced it by:

"were suffering from serious illness".