Author’s response to reviews

Title: Combining information from a clinical data warehouse and a pharmaceutical database to generate a framework to detect comorbidities in electronic health records

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Dear Editor,

Thank you very much for considering our work and for the interesting and productive comments by the reviewers.
We made modifications in the manuscript to take into account the reviewers’ comments and suggestions. We hope these modifications will answer the reviewers’ questions.

Jane Carrington (Reviewer 1): The authors addressed my primary concerns. My point of including nurses was because their data in the EHR can have influence on the other data input and therefore, influence coding. Thank you for removing the agreement percent and using only the Kappa statistic. This removes some confusion. Also including more about those doing the coding helps as well. Thank you for your response to comments and strengthening the paper.

Thank you for your remarks. It is true that nurses can have influence on the other data input and we need to include them to the next version of the process to further improve our results.

Simon Poon (Reviewer 2): I thank the authors for addressing the comments from our earlier review. I find the responses are reasonable and provided sufficient details to evaluate the manuscript. I only have 2 more further comments:

1. The efficacy of the research results rely heavily on the quality of the data sets and experts. Authors have provide additional confidence for the validity of the data. Thank you for this remark.

2. The title of the manuscript suggested "... an algorithm to detect comorbidities ...", I my opinion "framework" of integration of different data sources may be a more appropriate term than computation "algorithm". We agree with this suggestion. We hesitated to use the term framework at first because we thought that our process was not developed enough, to be actually called a framework, but this was always our final goal. We changed the term « algorithm » to « framework » in the title, as suggested.

Would it be possible to show some measure of quality of the suggested comorbidities from the enriched Theriaque database, e.g. the matched ones compared to the non-matched ones.

Thank you for this suggestion. We added the characteristics of all ICD-10 codes suggested by the Theriaque database to the additional files (Additional file 6_ES.docx)