Author's response to reviews

Title: Do inter-hospital comparisons of in-hospital, acute myocardial infarction case-fatality rates serve the purpose of fostering quality improvement? An evaluative study.

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Author's response to reviews: see over
Dear editor,

Herewith we submit the revised manuscript entitled “Do inter-hospital comparisons of in-hospital, acute myocardial infarction case-fatality rates serve the purpose of fostering quality improvement? An evaluative study.”

Taking into account the reviewer’s report following changes have been made:

1. The two study aims in P7 Line 144-146 were inconsistent with those three in abstract “line 38-41”.
   The abstract has been reformulated as follows (Line 37-40):” In this study we aimed, by determining the existence of inter-hospital differences in AMI-CFR, (1) to evaluate to which extent Belgian discharge records allow the assessment of quality of care in the field of AMI, and (2) to identify starting points for quality improvement.”

2. There are two kinds of unit of analysis for the study: one is hospital for inter-hospital comparison; another is patient or case for comparison between different databases. Result part of Line 415-425 should be moved to statistical methods. The link between study aims and analysis methods is a little confusing in this manuscript.
   Please move the content and make necessary alignment.
   Part of lines 415-425 have been removed to lines 204-213 and slightly reformulated:
   “However, to formally assess the completeness of the data we intended to compare on register level the number of cases as well as the case-fatality rates of the Ghent and Bruges registries with the corresponding MCD. To do so log-linear models were to be fitted with the number of cases as the dependent variable, and gender, place and registry as covariates. The need to include registry as a covariate was to be examined by leaving registry out from the explanatory variables. Fitting log-binomial regression models[40] would allow us to observe a possible difference in risk ratio between both registries and MCD, implying an important underestimation of case-fatality rates. Notice that, according to the MONICA protocol, fatalities occurring within the first hour after hospitalization were recorded by the registries of Ghent and Bruges.”
   Apart from this move towards the methodology lines 426-430 have been changed into:” Regarding the number of cases, we were unable to determine a significant difference between both datasets, the difference in the Pearson chi-squared statistics of our log-linear models being not significant (p = 0.19). Conversely, we observed a significant difference in risk ratio implying an important underestimation of case-fatality rates by the MCD (RR:0.39[95%CI:0.31;0.51]).”

3. In p43, there is inconsistent use of terminology in Table 3 and note (“B” vs “I”). These inconsistencies have been removed.
4. In P22, line 485-487, There is no any OR=1.41 for CCI in Table 4. We explain how this OR=1.41 can be obtained from table 4. “and severe co-morbidity (for example in the Initial model 1 a CCI of four has an adjusted OR of 1.09^4 = 1.41. Indeed, CCI being modeled as an interval variable, an adjusted odds ratio between successive levels of CCI equals 1.09.) (Table 4).”

5. In P23 line 515-516, Initial model showed significant difference between community and tertiary level hospital. Please check one more time for essential revision if necessary. We hope to have removed the lack of clarity of our text by reformulating lines 518-520 this way “except for “Initial 1 model” (Table 4) where, in spite of a statistical significant difference, no firm conclusion could be made, the excess being situated in the inconclusive region.”

6. P8, the use of “gender” and “sex” is inconsistent in different database. Please check again. Sex has been changed into gender.

7. P9, line 183, the use of victim is better to be replaced by “patient”. The reviewer’s suggestion has been adopted.

8. B2-B3 versus B2B3 (Ex p 17, line 377-380) was inconsistent used across manuscript. We now adopted consistently across the manuscript the expression B2-B3.

9. P11, line 234, “an” inconclusive zone The correction has been made.

10. P19, line 424, there should be a comma between gender and place. “….number of cases as dependent variable and gender, place and registry as covariate,…” The correction has been made.

Note: reference 21, no longer available on internet, has been replaced by a referenced article within a journal.