Author's response to reviews

Title: Incidence and determinants of severe maternal morbidity: a transversal study in a referral hospital in Teresina, Piauí, Brazil

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

All requests have been addressed, with corresponding changes made directly in the manuscript where appropriate (highlighted with red color). Accompanying this letter, please find a revised version of our manuscript. Detailed responses (point-by-point response) are included below. Please let us know if there are any additional points we must clarify.

Sincerely,

Alberto Madeiro, and co-authors.
Editor’s comments

#1 "Maternal mortality ... in development [1,2]." All this is well known - consider leaving out.

We deleted this phrase.

#2 "In Brazil the ratio of maternal mortality was 64.8/100,000 live births in 2011 [3], with worse indicators in the North and Northeast regions [4]." Consider stating the range of MMRs in Brazil. Consider stating where the MMR in the region where the study is located.

We stated the range of MMRs in Brazil and in the region where the study is located.

##3 "Severe maternal morbidity represents the stage immediately before the occurrence of death, ..." Not all SMM results in death, so it does not represent the stage before death. Also clarify the difference between near-miss and severe maternal morbidity.

We added this information in the manuscript.

##4 "Older pregnant women [17] and those with hypertensive syndromes presented the most maternal near misses [18]." It is not clear what this means: that prevalence/incidence of NMM was highest among older pregnant women and hypertensive women, or that older and hypertensive women represent a majority of women with NMM? Please rephrase.

We rephrased this information.

##5 "in a country with continental dimensions, as in Brazil". Better: "in a large country like Brazil".

We rewrote this phrase.

##6 "among Brazilian capital cities". There is one capital in Brazil and it is not Teresina. Better: "among major Brazilian cities"

We rewrote this phrase.

##7 "transversal prospective study" is an odd terminology (even if some authors use it). A transversal study is a snapshot of one point in time and is therefore neither retrospective nor prospective. Only longitudinal studies are either retrospective or prospective. This also holds for transversal studies where study participants are recruited continuously over a longer period of time.

We agreed with Editor.

##8 "All patients who presented complications during pregnancy and delivery, up to 42 days postpartum, according to the definitions provided by the WHO Research Group on Maternal Morbidity and Mortality were included in the study"
The cases of severe maternal morbidity included life-threatening conditions, such as serious postpartum hemorrhage, severe pre-eclampsia, eclampsia, and uterine rupture. Among the cases of severe maternal morbidity, those that included at least one of the clinical, laboratory, or management criteria were characterized as near miss [12]." Women with severe maternal morbidity, women with life-threatening conditions, women with near-miss morbidity - are these all the same or are these different, albeit overlapping groups? Did the case definition include maternal deaths? This needs to be clarified. The case definition should be unambiguous, and it should be provided in a table of box, and not as reference only.

We provided a box with definitions.

"To identify the near miss/death independent predictive factors, a logistical regression model was constructed using a forward stepwise hierarchical selection and only those variables for which p < 0.25 were included in the univariate analysis." I don't understand, there are several issues.

- The sentence should probably begin with "To identify independent predictive factors for maternal near miss or death, a logistic regression model ...".

We rewrote this phrase.

- Since the logistic regression model was presumably multivariable und not univariate, should the sentence perhaps continue "... was constructed using a forward stepwise hierarchical selection, including only those variables for which p < 0.25 in the bivariable analysis"?

We rewrote this phrase.

- Which exclusion criteria did you use, i.e. how did you decide whether a variable should be kept in the final model or be excluded from it. If you have used statistical tests for any of these decisions, state which one(s).

We stated this in the manuscript.

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We stated this in the manuscript.

Table 4: State, e.g. in a footnote, on which statistical test(s) the p-values were based.

We stated statistical test that was used.

Table 5: Footnote (a) should be changed into "Hosmer and Lemeshow test: p=0.471". Footnote (b) should be changed to "Crude odds ratio". A footnote should be added to ORadj reading (c) "OR adjusted for all other variables in the table". Footnote (c) becomes footnote (d). Add footnote (e) stating the statistical test that was used to produce these p-values.

We changed footnotes.