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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1. Thanks for adding Table 4. One point of clarification, is the p-value for the SMM vs. CC or the NM vs. CC comparison? Shouldn’t each comparison have its own p-value?
   We thank for this comment. Table 4 was modified. The previous p-value showed was NM vs. CC comparison. In the new Table 4 we choose to show significant p-values only (page 24).

2. Lines 57-58: replace “still relevant public health problem” with “still a relevant public health problem”.
   We replaced this sentence (Introduction section, page 3, line 57).

3. Lines 128-129: need to add a brief definition of “control case”. What were the criteria for selecting these women? Also is it worth commenting on this criteria in the discussion when you discuss the findings shown in Table 4?
   We added definition and criteria for selection of the controls (Methods section, page 5/6, lines 129-131).

4. Lines 156-158: should “10.3% of all births” be 10.3% of C-sections? And the same for the “89.7% of all births” in line 158?
   The sentence was modified and more details were added (Results section, page 7, lines 157-165).

5. Results lines 187-190: “There was a higher prevalence, though not statistically significant, of pre-term pregnancies (< 37 weeks), fetal weight of less than 2,500g and perinatal mortality in the near miss/death group (Table 4).” I would remove this sentence as the p-values are not even close to significance in Table 4 and you also don’t report on perinatal mortality in Table 4 (only neonatal mortality). Given this, you should also remove “higher rates of
stillbirth/perinatal death” from line 266 in the discussion.
The sentences were removed (Discussion section).

6. Line 190: “In the multivariate model, none of the statistically significant variables that were identified in the univariate analysis remained as a predictive factor of near miss/death (Table 5).” C-section is significant (p=0.019) in the multivariable model you present in Table 5.
We modified this sentence (Results section, page 8, line 191).

7. Discussion of significant results in Table 4: some comment on length of hospital stay greater than 5 days is perhaps needed. This is surely likely to be a characteristic of SMM or NM rather than a potential cause of it isn’t it? Same could also be thought for C-sections, especially given 89.7% of the C-sections were emergency C-sections ? presumably because of the SMM? these cases also correlate with foetal distress (and the 1 min Apgar finding), so perhaps your significant results are just descriptive of the symptoms or characteristics of SMM and NM rather potential causal factors or determinants that could be addressed by intervention? This is a key point - you say in the conclusion of your abstract that “The results from the study can be useful to improve the quality of obstetric care” but given the above, how might the results be used for this purpose? We added more comments about “length of hospital stay > 5 days” (Discussion section, page 11, lines 266-268) and “cesarean sections” (Discussion section, page 12, lines 285-287). We believe that that monitoring of severe maternal morbidity may help to identify possible risks for death, and may be an important mechanism for identifying effective preventive measures to improve maternal health practice. We modified Conclusions section to offer this view (page 13, lines 311-316).