Author's response to reviews

Title: A CROSS SECTIONAL STUDY OF MATERNAL NEAR MISS AND MORTALITY AT A RURAL TERTIARY CENTRE IN SOUTHERN NIGERIA

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Author's response to reviews:

Dear editor,

RE: SUBMISSION OF RESPONSE TO EDITOR’S AND REVIEWER’S ADDITIONAL COMMENTS ON OUR ORIGINAL WITH MANUSCRIPT ID: “PRCH-D-15-00479R1 AND TITLE “A CROSS SECTIONAL STUDY OF NEAR MISS AT A RURAL TERTIARY CENTRE IN SOUTHERN NIGERIA”

Thank you for your in depth review of our manuscript. Please find enclosed a point-by-point response to the comments by the editor and reviewers. We have adequately addressed the issues you raised in the review. The revisions are highlighted in a yellow background in the manuscript.

EDITOR COMMENTS:

1. Please note that all manuscripts must contain all the following sections under the heading 'Declarations'. The Declarations should follow the Conclusions section, and be before the References.

   Abbreviations

   Ethics approval and consent to participate

   Consent for publication
AUTHORS’ RESPONSE: We have revised our manuscript to conform to the journal style by including a section on declarations as suggested by the editor which is as shown below:

DECLARATIONS

ABBREVIATIONS:

WHO; World Health Organization.

NDHS; Nigeria Demographic Health Survey

SMO; Severe Maternal Outcome

EMOC; Emergency Obstetrics Care.

ETHICAL CLEARANCE: The study proforma was adapted from the Nigeria Near Miss network which was previously published in a peer review journal with input from WHO Human Reproduction Programme Research Ethics. Ethical clearance was obtained from the ethics committee of Madonna University Teaching Hospital, Elele, Rivers state Nigeria before the commencement of the study. Informed consent from the subjects was not obtained because there was no personal contact with the patients and the data collectors. Patients’ folders were used to extract the relevant information which was periodically updated until discharge without revealing the identity of the subjects.

CONSENT FOR PUBLICATION: Not applicable

AVAILABILITY OF DATA AND MATERIAL: The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

COMPETING INTEREST: The authors declare that they have no competing interests

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ACKNOWLEDGEMENT: The authors appreciate the support of the staff of department of Obstetrics and Gynecology, Madonna University Teaching Hospital Elele.
CONFLICT OF INTEREST: None of the authors has any conflict of interest.

AUTHORS CONTRIBUTION

The study arose from original ideas by MII and EC while the study was designed by MII, EC and OIK. The data collection and analysis were done by MII, OIK, UOS and EN. The initial draft of the manuscript was done by MII with contributions from EC and OIK while the initial draft was edited by EC, OCE and EN. All the authors approved the final draft and submission.

2. Please upload the appendix as a separate Supplementary file.

AUTHORS’ RESPONSE: This has been formatted in a separate file as requested by the editor.

3. Please add a section "Additional files" (after the References/Figure legends) where you list the following information for each additional-supplementary file in the file inventory:

- File name (e.g. Additional file 1)
- Title of data
- Description of data

AUTHORS RESPONSE: This has been done as requested by the editor.

RESPONSE TO REVIEWERS’ COMMENTS

REVIEWER 1’S COMMENTS:

1. In the abstract section some typographical errors detected -need to be corrected.

AUTHORS’ RESPONSE: The typographical errors have been corrected

2. Table 2 has several spelling errors that require correction.

AUTHORS RESPONSE: The errors are regretted and have been corrected

REVIEWER 2’S COMMENTS

1. Abstract: In the results section of the abstract, I recommend first describing the results of the mortality cases, and then the results of the morbidity cases. This will improve the clarity and flow of the results.

AUTHORS’ RESPONSE: The result section has been rearranged as suggested by the reviewer as shown below:
Results: Of the 262 deliveries, 5 women died and 52 women had a near miss event. The maternal mortality rate was 1,908/100,000. The maternal near miss mortality ratio was 11.4:1 while the mortality index was 8.8%. Majority of the deaths (360%) were in the age category of 20-24 years. Abortive outcome was the leading cause of maternal mortality contributing 2 of the 5 maternal mortality. The severe maternal outcome ratio was 218/1000 and maternal near miss incident ratio was 198/1000. Hypertensive disorders of pregnancy contributed 16(28.1%) of the severe maternal outcome while Obstetrics hemorrhage and abortive outcome each contributed 14(24.6%). 6(10.5%) received treatment within 30 minutes after diagnosis while 19(33.3%) waited for greater than 240 minutes before they received intervention. There is statistical significant association between time of intervention and final maternal outcome (p-value=0.003). Administrative delays were noted in 20 cases while patients related delays were noted in 44 cases.

2. Background (para 1): In the last sentence, the authors describe percentages of women who attend ANC and have deliveries with skilled attendants. Are there differences by socioeconomic status and/or geographic location (urban versus rural)? If so, please describe. Given that inability to pay was documented as a patient factor, this is relevant to the reader and provides more context.

AUTHORS’ RESPONSE: The Nigeria Health and demographic survey showed a marked difference in the socioeconomic status of urban versus rural dwellers. It also showed that more women in rural areas have unsupervised deliveries when compared with urban women. This has been reflected in the background section as is shown below: The survey also showed that women in rural areas contributed 70% of the home deliveries without supervision when compared to women in urban areas which contributed 30% of the home deliveries. This may be related to low educational level and socioeconomic status of women in rural area compared to women in urban areas which was observed in the survey.

3. Background (para 5): The authors describe the "classic triad of delays," but provide minimal elaborations. Please provide the appropriate reference for the 3 delays model, as well as state the delays (Delay 1: Deciding to seek care; Delay 2: Identifying and reaching the medical facility; Delay 3: Receiving adequate and appropriate treatment. Thaddeus, S., & Maine, D. (1994). Too far to walk: maternal mortality in context. Social science & medicine, 38(8), 1091-1110).

AUTHORS’ RESPONSE: The classical triad by Thaddeus and Maine has been fully elucidated and relevant reference has been provided as suggested by the reviewer. The classical triad of delays (Delay 1: Deciding to seek care; Delay 2: Identifying and reaching the medical facility; Delay 3: Receiving adequate and appropriate treatment) propounded by Thaddeus and Maine were noted and accompanied by several instances of inappropriate management consistent with findings by other studies.10-11

4. Methods (study area): Are there any midwives in the Ob/Gyn department? If so, please include this information in the list of staff.
AUTHORS’ RESPONSE: We have midwives in our department and this has been added in the method section.

5. Methods (Methods/Study Procedure): Throughout this section, the authors describe recruitment procedures. However, as presented, there do are not any consenting procedures, and this seems to be a chart/case review. Also, please describe the considerations for the subjects' privacy, confidentiality, and anonymity.

AUTHORS RESPONSE: Our study adapted the proforma for Nigeria Near Miss study whose proposal was peer reviewed and published in Reproductive Health journal13 with input from WHO Human Reproduction Programme Research Ethics and original work was published in British Journal of Obstetrics and Gynaecology. Like in the above survey, there was no informed consent because there was no direct contact between the data collectors and the subjects. We followed the methodology by Nigeria Near Miss Network which was peer reviewed as stated earlier. Our study is a cross sectional study not case review

We have described the considerations for the subjects’ privacy, confidentiality and anonymity in the manuscript as stated below: “The study proforma did not contain the names of the subjects. This was done to maintain subjects’ privacy, confidentiality and anonymity. Informed consent from the subjects was not obtained because there was no personal contact with the patients and the data collectors.”

6. Methods (data analysis): The information about the ethical clearance does not belong in this section. I suggest moving this to the Study procedure section, or create a unique section called "Human Subjects Research Protection," or something similar.

AUTHORS RESPONSE: This has been moved as suggested by the reviewer.

7. Results (para 1): I suggest restructuring the first paragraph to first describe the total number of deliveries during the study period, then the number of near miss and mortality events. Then, discuss the results in terms of all the mortalities, and then the near miss events. Then, clarify that the remainder of the results will be reporting on the 57 women with near miss or mortality.

AUTHOR’S RESPONSE: We have restructured the first paragraph of the result section as suggested. During the study period, there were 307 deliveries; 262 live births and 45 stillbirth. A total number of 57 severe maternal outcome was recorded; 52 women had a near miss event while 5 women died as a result of complications of pregnancy. This gives a severe maternal outcome ratio of 218/1000 live births and maternal near miss incident ratio of 198/1000. The maternal mortality rate was 1,908/100,000 live births.

8. Results (para 2): Please clarify that the denominator is 57.

AUTHORS’ RESPONSE: We have clarified that the denominator is 57 for clarity. Among the women with severe maternal outcome, 50/57(91.2%) were currently married while 5/57(8.8%)
were not married. Majority 55/57(96.5%) were Christians while 2/57(3.5%) were Muslims. Three out of the five (60%) of the maternal death was in the age category of 20-24 years.

9. Discussion (para 3): The authors state that "health institutions in rural Nigeria offer epileptic services to the populace because of the weak health sector and lack of political will." Regarding the use of "epileptic services" as a metaphor to describe the health system, I suggest using more objective language. What is it about the health institutions that are "epileptic"?

AUTHORS’ RESPONSE: The statement has been rephrased for clarity as shown below:

Most secondary health institutions in rural Nigeria offer poor services to the populace because of the weak health sector and lack of political will. These health institutions are characterized by poorly motivated staff due to poor remuneration and delay in payment of salary. Other contributing factors to poor services include lack of equipment and infrastructure and high attrition of staffs to health institutions in urban areas.

10. Conclusion (para 1): Sentence #3 is a bit unclear ("There are few functioning..."). Please clarify.

AUTHORS’ RESPONSE: The sentence has been rephrased for clarity as shown below:

There are few government hospitals in rural areas and most of them offer poor services as a result of poor motivation of staff and lack of equipment hence private hospitals has a huge potential in offering reproductive health services in the rural settings.

11. Table 1: Please correct the percentages for the Occupation variable. Semi-skilled is 24.6%, not 24.7%. Professional is 8.8%, not 8.7%.

Table 2: Please correct the percentages for the Trimester at Presentation variable. 1 is 15.8%, not 15.9%. 2 is 19.3%, not 19.2%.

Table 4: The total percentage for administrative delays is 100.1%. Please correct so the total is 100.0%

AUTHORS RESPONSE: The errors are highly regretted and have been corrected.