Author’s response to reviews

Title: Maternal near miss and quality of maternal health care in Iraq

Authors:

Maysoon Jabir (maysoonjabir@yahoo.com)
Imad Abdul-Salam (the_dr_imad@yahoo.com)
Dhikra M Suheil (thekramohjas@yahoo.com)
Wafa Al-Hilli (walhili@yahoo.com)
Sana Abdul-Hassan (sana.abulhassan@yahoo.com)
Amal Al-Zuheiri (aazuheiri@yahoo.com)
Rasha Al-Ba’aj (rashanajah74@yahoo.com)
Abeer Dekan (abeer_q2008@yahoo.com)
Özge Tunçalp (otuncalp@jhsp.hedu)
Joao Paulo Souza (souzaj@who.int)

Version: 3  Date: 28 September 2012

Author’s response to reviews: see over
September 27th, 2012

Dear Editor-in-Chief,

Enclosed is our revised paper, entitled “Maternal Near Miss and Quality of Maternal Health Care in Iraq”.

We would especially like to thank the peer reviewers for their comments, which have been really helpful to make our paper stronger. We have accepted almost all of the reviewers’ suggestions. Below please find a point-by-point response to the reviewers’ specific comments. We hope that our revision will satisfy the editors and the reviewers and our paper will be accepted for publication.

Kind regards,

On behalf of the co-authors

Özge Tunçalp MD PhD
Department of Population, Family and Reproductive Health
Johns Hopkins Bloomberg School of Public Health
Reviewer: Jose G Cecatti

Major Compulsory Revisions

1) The abstract needs to have a Material and Methods section being included.

*We added a methods section to the abstract.*

2) Table 1 should be better named Box 1 considering it does not contain any quantitative data. In addition it lacks information on what PLTC (potentially life-threatening condition) is. This concept is used in the manuscript but not well defined.

*We renamed it as Box 1 and in line with both reviewers’ comments added a supplemental table 1 to explain the criteria to identify potentially life-threatening conditions and near miss.*

3) A limitation or an operational definition specifically for this study of postpartum period of until 7 days should be better reinforced, considering that the original WHO definition is until 42 days.

*We underlined this difference in the limitations under the discussion section.*

4) The figure of 25,472 live births considered for estimating the health indicators should be better explained. Are these numbers coming from the total number of births occurring during the full study period in these 6 hospitals? If this is the case, this would mean that all hospital included in the study has a mean of more than a thousand deliveries each month. Is this true? Otherwise, from where they come from? Are from the whole city? If this is the case, perhaps it would not be used, considering that, according to my understanding, these 6 hospitals are not the only where deliveries take place in Baghdad. In addition, what is the rate of hospital delivery for this setting? Are there cases included who had delivery at home and then referred to hospital due to a complication? This issue is important because it could imply directly in the estimates of Maternal Near Miss Rate and Maternal Mortality Ratio. If this figure is overestimated, then the rate/ratios are underestimated and then would have an important impact on the study results.

*The 25,472 live births took place at the six study facilities during the four-month data collection period. We have made it clearer in the first sentence of our results section. Unfortunately, we were not able to acquire accurate information on the rate of hospital delivery in Baghdad, however according to the Family Health Survey 2008, nationally 41% of the deliveries were assisted by a medical doctor and 39% by a midwife/nurse.*

5) In which online system data entry was performed? Is it a standard one? Please give details and additional information.

*We have developed an online data management system based on the Google platform. The system has a data entry component consisting of an online form. Data entered in the online form is stored in an online spreadsheet that incorporates a set of consistency-checking rules developed for this project. The system is password protected and the use is free of charge.*

*We have incorporated this information under the methods section.*
7) How data management was performed? Was there a systematic routine for checking the consistency of data, review the information and correction of database? How was this performed? It is necessary to give detailed information on the data analysis plans and procedures as performed.

_The online data management system implements a comprehensive set of consistency rules in order to provide concurrent data quality check. The inconsistencies that were identified concurrently generated queries to the hospital coordinators. In the end of data collection, most of the data quality issues had been sorted out. This project implements the plan of analysis of the WHO maternal near miss approach for maternal health. As part of this plan of analysis there is a standard set of tables that present the project results. The online data management system as an output component and as the data entry occurs, the standard tables of the analysis plan are generated._

_We have incorporated this information under the methods section._

Minor Essential Revisions

8) During the whole manuscript there are no enough information on other causes of severe maternal morbidity not directly related to birth, but to an early interruption of pregnancy, including abortion and/or ectopic pregnancy. This only appears as results in Table 3. This is important because in some settings they are managed in different places from where deliveries take place.

_We included a sentence reporting on complete abortion and laparotomy for ectopic pregnancy under the results section._

9) Table 3: if I am correct, in the title is lacking the word "potentially" before "life-threatening".

_The necessary edit was done to the table title._

10) Table 7: I did not understand the first figure of 132 as the number of women giving birth in health facilities. This is among all cases of severe maternal morbidity/maternal death, only 132 gave birth in hospital?

_We have edited the title of the table to clarify the data presented (Process outcome indicators related with specific conditions among women with severe maternal outcomes (maternal near miss and maternal deaths) _

**Reviewer: Matthias Borchert**

Major Compulsory Revisions

1. Methods: “Cases were defined according to certain potentially life threatening conditions including severe postpartum hemorrhage, eclampsia, sepsis and ruptured uterus, whereas organ or system failure depending on certain clinical or laboratory criteria were used to identify the near miss cases”. The results will depend to a large extent on the criteria used to diagnose severe postpartum haemorrhage (how exactly is “severe” defined?), severe pre-eclampsia, sepsis etc., as
well as on the “clinical and laboratory criteria” used to diagnose organ or system failure, e.g. uterine dysfunction (what exactly is that?). So these “certain criteria” need to be provided – for instance as additional online material - or at least they need to be referenced.

We have added a supplemental table 1 to explain the criteria to identify potentially life-threatening conditions and near miss. We provided detailed information for each of the clinical complications as suggested by the reviewer.

2. Many indicators are used, and not all of them are sufficiently explained. This could confuse the uninitiated. Particularly the less well known indicators like the maternal near miss mortality ratio and the mortality index should be introduced and their interpretation briefly explained in the methods section – including them in the list of indicators (Table 1) is not sufficient. The SMO12 indicators are apparently meant to be indicators for the accessibility of hospital care, not for the quality of care – these are not even listed in the list of indicators, but appear for the first time in the results section – they too need to be presented and explained in the methods section and in table 1. The intra-hospital care indicators are missing in the methods section, are missing in table 1 and the fact that they relate to the period after 12 hours hospital stay is not mentioned in Table 5 – they need to be properly introduced in the methods section and table 1.

We included more information on indicators including maternal near miss mortality ratio and the mortality index in the methods section. Overall, we expanded the methods section describing the indicators collected for the study. We wanted to keep Table 1 (currently Box 1) only for specific maternal near-miss terminology and indicators, therefore did not include other process indicators (use of interventions) and access indicators here.

Minor Essential Revisions

3. Introduction: Replace “damage to the country infrastructure” by “damage to the country’s infrastructure”

Edited accordingly.

4. Introduction: “Intermediary estimates are compatible with this trend” – provide figures and references or omit.

We have included a reference (latest WHO maternal mortality estimates).

5. Introduction: Replace “numbers of women ... is progressively decreasing” by “number of women ... is progressively decreasing”

Edited accordingly.

6. Introduction: Replace “while those with life threatening complications who are treated and discharged home exceeds those who die” by “while the number of those with life threatening complications who are treated and discharged home exceeds the number of those who die”

Edited accordingly.
7. Materials and methods: the formulation “The hospitals were chosen on the basis of annual deliveries; they had to have more than one thousand deliveries per year” could mean that this delivery rate is a criterion for eligibility, and some of such eligible hospitals were selected – in this case it would be necessary to describe the sampling procedure. Or it could mean that ALL hospitals with >1000 deliveries per year were selected – in this case the sentence should be rephrased to “All hospitals with more than thousand deliveries per year ... were selected.”

*We clarified this issue in the text: “Convenience sampling was utilized and the hospitals selected had to have more than one thousand deliveries per year...”*

8. Materials and methods: omit “the” in “treat women with the post-operative”.

*Edited accordingly.*

9. Materials and methods: are “hospital coordinators” the same as “study coordinators”? If so, use the same term consistently.

*Edited accordingly and clarified in the text.*

10. Materials and methods: Replace “data was collected” by “data were collected”. Likewise: data were sent, data were entered etc.

*Edited accordingly.*

11. Materials and methods: Replace “ethical committee” by “ethics committee”.

*Edited accordingly.*

12. Results: change to “whereas the ICU admission rate among women with severe maternal outcomes was 37.2%, and the proportion of maternal deaths without ICU admission was 50% (Table 6).” Authors may wish to rephrase this in a way that the proportion of maternal deaths WITH ICU admission is specified, to be consistent with the statement before and facilitate the understanding.

*Edited accordingly.*

13. Table 1: replace “fm accidental” by “from accidental”.

*Edited accordingly.*

14. Table 2: explain what “interventional radiology” is in the context of obstetric care

*Edited accordingly (uterine artery embolization).*

15. Table 2: what does the “/” in “Uterine dysfunction/hysterectomy” represent? Uterine dysfunction including hysterectomy (thus also including other forms of uterine dysfunction)? Uterine dysfunction leading to hysterectomy? If the latter, then why is hysterectomy not listed under “critical interventions” instead of “organ dysfunction”?
Uterine dysfunction represents hemorrhage or infection leading to hysterectomy. We believe that with the supplemental table, this will be clearer for the readers.

16. Table 3: I do not understand the term “other locally specified” in “other locally specified contributory causes / associated conditions”. Please explain or change the wording.

We have deleted this row, as it was more confusing than useful.

17. Table 4: Insert the line with the Ns (ref. Table 3).

Edited accordingly.

18. Table 4: There should not be a line “Other/unknown” and a line “Unknown”, since these two categories are not mutually exclusive – they overlap. Either have one line “Other or unknown”, or have two lines “Other” and “Unknown”, respectively.

Edited accordingly by having two separate lines “Other” and “Unknown”.

19. Table 7: Explain – e.g. in a footnote - the asterisk * following “oxytocin” and “Magnesium sulfate”

This has been deleted as it was left there by mistake.

20. Discussion: “This is in contrast to other studies where SMO is relatively higher among referred women [10].” The authors mention studies – plural – but reference only one. Please bring in line.

Edited accordingly.

21. Discussion “The low ICU admission rates observed in this study”. The authors should explain which rates they would have considered adequate, or which rates have been observed elsewhere – the qualification “low” needs to be justified.

Explained in the text that ideally we would have expected to have majority of the women with severe maternal outcomes to be admitted to the ICU given the gravity of their situations.

22. Discussion: there is something wrong in “in those hospitals. e, which can”

Edited accordingly. (...in those hospitals, which can be replicated in other resource-poor settings.)

• Discretionary Revisions

23. Introduction: Consider replacing “A target in the MDGs, reduction of maternal mortality” by “One of the MDGs, the reduction of maternal mortality (MDG 5)”

Edited accordingly.
24. Introduction: the term “near-miss” should be defined earlier on. For example “During the past two decades the number of women dying from complications of pregnancy and childbirth has been progressively decreasing in many countries, and the number of those with life threatening complications who are treated and discharged home exceeds the number of those who die. Therefore, studying those women who nearly died but survived, the so-called near-miss cases, would …”

Edited accordingly.

25. Introduction: insert “based on the near-miss concept” after “tool for evaluating the quality of maternal health care”

Edited accordingly.

26. Materials and methods: shorten to “units to monitor … post-delivery complications, run by specialized obstetricians”

Edited accordingly.

27. Results: “whereas the ICU admission rate among women with severe maternal outcomes was 37.2%, …” Would it be relevant to also specify the ICU admission rate among women with potentially life threatening conditions?

For ICU admission we feel that it’s important to highlight the cases of maternal near miss and maternal death, as they are the ones most likely needing the access to intensive care.

28. Results, Table 6: is it appropriate to say that deaths have been “assisted”? Women have been assisted, or deliveries have been assisted, and in this process women have died. Consider using the word “occurred” instead.

Edited accordingly.