Author’s response to reviews

Title: Trends in maternal and neonatal mortality in South Africa: A systematic review

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Author’s response to reviews:

Dear Editor

Systematic Reviews

Date: 16/01/2018

RE: RESPONSES TO REVIEWER’S REPORTS

We thank the reviewers for their critical review and valuable comments. We appreciate your commitment and time taken to review our manuscript entitled: “Trends in maternal and neonatal mortality in South Africa: A systematic review”. Please find below point-by-point responses to the reviewer’s comments. Changes to the text are indicated in red. The changes are also highlighted on the new manuscript using Track Changes.

Reviewer reports:
The peer reviewers have offered detailed and helpful comments, please carefully read and follow those comments. In addition to which, using the examples provided please review and revise the grammar and sentence structure of your paper:

1. Grammar examples

In the last two decades, both maternal and neonatal mortality appear to increase sharply up - should
read ‘In the last two decades, both maternal and neonatal mortality appear to have increased…’ You do not need to say both ‘increased’ and ‘up’

-Corrected

‘Monitoring progress towards MDG 4 and 5 (reducing child and maternal mortality between 1990 and 2015) requires valid…’
-should read ‘required valid’ – the MDG should be written about in past tense.

-Corrected

‘Moreover, the massive uptake of HIV…’
-this sentence is incomplete, it starts with ‘Moreover’ - this indicates the sentence extends from the previous sentence, but it would read clearer if it started ‘Further to which…’

-Corrected

2. Page 6 line 2 indicates qualitative synthesis was undertaken. This is not a qualitative review, it is a quantitative review with quantitative data. This may be a perspective issue or understanding related to having quantitative data that cannot be analysed via meta-analysis. Please avoid use of the word ‘qualitative’ in this paper.

-Changed

Peer reviewer comments:

Reviewer #1:
Thank you for the opportunity to review this manuscript. MMRs and NMRs are important indicators of health and health care in any country and therefore this topic is of importance. I do have some comments in relation to this manuscript.

1. pg 4 - line 12, mention is made of subsequent chapters - is this one chapter of a larger document?
-Yes, this is one of the seven chapter’s PhD thesis. However, we have rephrased this statement for clarity.

2. I note that the aim is to synthesise data for the period 1990-2015. Can this time period be justified? On pg 5 in lines 3 and 9, it is stated that no restrictions were placed on the date of publication - what is meant by this?
-The researcher’s interest was synthesising data covering the MGD period i.e. 1990-2015 in order to give an overview of the progress towards MDG 4 and 5 goals. We did not place any restrictions on date of publications since its possible for a report/article to be published beyond the MDG period but still reporting data covering this period i.e. 1990-2015.

3. The background / reason for this review is to determine progress towards the attainment of MDGs 4 and 5 - it would be helpful for the reader if the actual goals were cited and what was being aimed for.
- We have changed this to refer MDG 4a and 5a i.e. reducing neonatal and maternal mortality between 1990 and 2015. Our focus was on progress towards maternal and neonatal mortality during the MDG period.
4. pg 6, line 2 - this is referred to as a qualitative synthesis - I do not agree that this is a qualitative synthesis; it seems to me to be a narrative synthesis.
- Corrected

5 pg6, line 5-7 - were there any instances in which a third reviewer was required?
- Yes.

6. pg 6, lines 12-14 - were there any instances in which a third reviewer was required.
- Yes.

7. pg 8 - I don't see a table showing reasons for study exclusions.
- The reasons for exclusion of studies reporting maternal and neonatal mortality data in the final analysis are presented in figure 1 i.e. a flow chart.

8. I think it is accepted in SA that MDGs 4 and 5 have not been achieved, but there is no indication of how well things have progressed or how far off the mark the attainment of the goals are.

- It is true that the two goals were not achieved but we cannot generalise how well things have progressed due to uncertainties about the true estimates of maternal and neonatal mortality in the country.

9. the manuscript needs editing throughout.
- Done

10. is there any reason why the following databases were not searched: Stats SA; National Department of Health and WHO?
- These are not electronic database for literature search but rather the reporting authorities in which their data/reports are included in other databases like African Wide information etc.

Reviewer #2:
The paper reports trends of mortality and neonatal mortality in South Africa using systematic review methods. My comments only pertain to general methodological and/or presentation aspects of the review.

1. The abstract states, "…maternal and neonatal mortality appear to increase sharply up to 2009, followed by a gradual decrease…", this is not reflected in the figure for neonatal mortality. I suggest rewording this sentence slightly to more accurately reflect the data representation.
- We agree with the reviewer that; neonatal mortality did not increase with the same pattern as maternal mortality. We have rephrased the statement as follows: -

   “In the last two decades, both maternal and neonatal mortality appear to have increased up to 2009, followed by a gradual decrease, but with low rate for neonatal mortality than for maternal mortality.”

2. The abstract (results section) states, 14 studies on neonatal mortality were found, however figure 4 (page 17) presents 16 sources.
- Corrected

3. The risk of bias criteria is clear however does not seem to take into account the different types of
publications being assessed. For example were reports by government or other agencies assessed with the same criteria as empirical studies? Additionally, page 20, line 16-17 suggests that data obtained from vital registration, household surveys and census are 'subject to misclassification and under-reporting', which suggests they are at a higher risk of bias, yet these sampling techniques have been assigned 'low' risk of bias according the assessment criteria on page 8. Some further explanation around this decision would be helpful.

-Table 1 clarifies the assessment of risk of bias for different studies whereby every publication fit to the listed criteria.
- Although they are subject to misclassification and under-reporting; our risk of bias assessment criteria did not classify all the included empirical studies as having high risk of bias. There are some empirical studies classified as having low risk of bias as they qualified all criteria for overall low risk of bias.

4. Please revise the added sentence on page 14 (line 6-7) for clarification.
  - Rephrased as follows: -

  “Notably, four studies that ascertained maternal mortality using empirical53,55 and modelling39,66 approaches reported extreme estimates of MMR compared to other sources.”

5. Taking into consideration the limitations and issues with data collection methods and reporting of data that have been identified and discussed, it would be beneficial to include additional comment on the implications of or recommendations following the review findings. The abstract mentions the capture-recapture method for estimation techniques which does not seem to be included in the discussion section.

  - We have added the discussion on the use of capture-recapture method to improve estimation of these outcomes. Moreover, we have highlighted the data collection methods and reporting issues in our recommendations briefly.

6. Please check the reference list for consistent formatting and citation details. There are also some corrections required in the reference list - e.g. reference 65 and 73 seem to be the same, as do references 64 and 76.

  - We have cross-checked the references and omitted the duplicates.