Author’s response to reviews

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

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Author’s response to reviews:

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 protocol”. 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:

Reviewer #1:

This study protocol was designed to estimate trends in maternal and neonatal mortality in South Africa. This is a very relevant study that aims to reveal trends in maternal and neonatal mortality in South Africa. However, this study will require a major review before considering it for publication.

Introduction

1) The authors did not highlight why the two publications that estimated neonatal and maternal mortality got different results.
- For clarity, the reason has been added in the introduction as follows:

“The reasons for divergent estimates between institutional reporting and WHO metrics, or among global metrics are partly explained by estimation approaches and quality of data.”

2) The authors should state what they will do differently in order to obtain accurate estimates of neonatal and maternal mortality.

- Authors are expecting to obtain more accurate estimates of neonatal and maternal mortality through pooled estimates from studies which are nationally representative, reports providing national-level data (and trends thereof) and vital registration data with high quality and low risk of bias as described in the risk of bias assessment. This is clearly stated in the discussion section as follows:

“More accurate estimates of neonatal and maternal mortality are expected to be derived from pooled estimates from studies which are nationally representative, reports providing national-level data (and trends thereof) and vital registration data with high quality and low risk of bias.”

Methods

3) The authors should change PubMed to MEDLINE

- Changed in the main document as follows:

“Medline, Africa-Wide Information, African Index Medicus, African Journals Online, Scopus, Web of Science and CINAHL.”
4) Since the authors are focusing on South Africa, African specific database such as AJOL should be considered.

- The following African specific journals are added and shall be used for the publications search:

“Separate searches for the two outcomes (maternal and neonatal mortality) will be conducted in the following electronic databases: Medline, Africa-Wide Information, African Index Medicus, African Journals Online, Scopus, Web of Science and CINAHL.”

5) The authors will need to improve the search syntax

- Only keywords used in the search strategy were initially provided in the main text. Although further improvements are possible; search syntax for Medline is provided in the appendix for clarity:


6) The authors mentioned that the study will cover 1990 - 2015. The authors should explain why study published to date should not be included since some of the authors can use data collected before 2015.
- We have realised our initial limit set on the year of publication was excluding some of the important publications reporting data that needed for this analysis. Therefore, we have decided to remove the restriction on the year of publication as follows:

“Searches will be restricted to studies being conducted in South Africa or which have used South African data, and multicentre studies including South Africa, reporting data covering the period 1990 to 2015. No restrictions on the date of publication will be made.”

7) The authors should reference Covidence software.

- The reference has been added as follows:

“Three independent reviewers will be involved in the screening and selection of articles. This will involve an assessment of articles based on titles and abstracts using Covidence software (https://www.covidence.org/).”

8) The authors should define neonatal death, neonatal mortality, maternal death and maternal mortality correctly.

- These terms are defined as follows:

“Maternal death/mortality will be defined as the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes (ICD-10). Maternal mortality ratio (MMR) will be defined as the number of maternal deaths per 100,000 livebirths (ICD-10). Neonatal death/mortality will also be defined as the death of live-born within the first 28 days of life. Neonatal mortality rate will be defined as the number of infant deaths within the first 28 days of life per 1,000 livebirths.”
9) The authors mentioned that the risk of bias will be assessed by 4 criteria but they did not consider methodological issues such as sampling technique, data quality.

- We totally agree with the reviewer and hereby decided to consider the methodological quality of the individual studies in the assessment of risk of bias. Therefore, the risk of bias will be assessed basing on 6 criteria as follows:

“Two authors will assess study quality based on the following quality assessment criteria: 1) definition of maternal mortality; 2) definition of neonatal mortality; 3) completeness of ascertainment of maternal and neonatal mortality; 4) completeness of ascertainment of live-births; 5) sampling technique; and 6) data quality. Studies will be assessed based on each criterion and will be rated as “high risk of bias” or “low risk of bias” accordingly.”

Minor comment

10) The authors should proofread the manuscript to correct the grammatical mistakes. For example the authors stated that "It is aims to provide the context for understanding inconsistencies in reported estimates of maternal and neonatal mortality by the institutional reporting"

- The whole manuscript has been proofread and the fore-mentioned sentence has been corrected as follows:

"It aims to provide the context for understanding inconsistencies in reported estimates of maternal and neonatal mortality by the institutional reporting"