Author’s response to reviews

Title: Adverse pregnancy outcomes, ‘stillbirths and early neonatal deaths’ in Mutare district, Zimbabwe (2014): a descriptive study.

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Author’s response to reviews:

Dear Editor

RE: Cover Letter / Rebuttal letter

Title: PRCH-D-18-01064 “Adverse Pregnancy outcomes (stillbirths and early neonatal deaths) in Mutare district, Zimbabwe (2014): A Descriptive study”

We have gone through the comments and tried to address the concerns raised as best as we could. We have addressed the issues raised by the reviewers and have included our responses to all the comments.

PLEASE NOTE: Due to the numerous revisions and the many track changes or shading, we submitted the track changed manuscript as a supplementary and provided a copy with no track changes for the revised version

Editors comments

Essential information is missing (Please provide many more details about the study setting and your population - what region is served by these two hospitals, and what proportion of all births in this region have taken place in the two hospitals? How are referrals made, and what are the characteristics of the referral population? These details need to be added to be able to judge how representative your study is (to the whole country/region).

Answer
Study design and setting

Characteristics of referral population

Answer

Line 33

Most Zimbabweans, 67%, live in rural areas.

What about non-hospital deliveries? Are these more likely to be less complicated? More information about this is also necessary to evaluate your study results

Answer

Line 62

Study design

“it would have been much better to make this a simple descriptive paper, using simple statistics, rather than attempt a multi-variate analysis which is not very meaningful given the nature of the sample. I therefore advise you to take on this advice and re-analyze your data”

Answer

Revised to Retrospective descriptive study. Data was re-analyzed

Discussion focusses on results

Answer

Line 172, Revised

Conclusion

Answer

Line 242, Revised
Limitations

Answer

Line 228

Revised

Ruby Jose (Reviewer 1)

Overall, the topic seems to have been arrived at retrospectively as stated, but without much thought about the method of study, aim of the study

Answer

Revised to descriptive

The material and methods section leaves a lot of questions in my mind as it is not comprehensive.

Answer

Line 34

Material and methods section has been revised

All the results are not brought out in the appropriate section on results. In fact, some of the important results are not mentioned in the results or conclusion

Answer

Revised

The English language needs a few corrections

Answer

The words stillbirths and ENND has been added to the topic

Isn't there an AIM/ OBJECTIVE for the study?

Answer
The aim of this study was to describe the prevalence of "Delivery by non-normal vertex method." Does this mean an instrumented vaginal delivery, an assisted vaginal breech delivery, or a Cesarian section? Seems a complex way of describing an "abnormal delivery." Please clarify. Why should delivery by Cesarian section have a high adverse outcome, unless done too late?

Answer

Line 151

Delivery was divided into Caesarean section, breech and NVD

"Gestation age of less than 32 weeks has a nine times odds" should be written in the past tense.

Answer

Line deleted

The conclusions should include the major pregnancy complications that sets the stage for these 2 particular adverse outcomes.

Answer

Line 241

Conclusion revised

Most of the references, especially the first several (1-7) references are at least 6 years old. I am sure newer references are available and should be referenced in place of the older ones.

Answer

Line 297

Revised references

It would be important to know the incidence of hospital/facility delivery at this hospital.
Are there any deliveries attempted at home or elsewhere?

Answer

Line 34

2013 data

Line 62

Home deliveries or community deliveries are at 20% in the country

How many deliveries were there in total?

Answer

Line 43

Page 3, line 45: what were the inclusion/exclusion criteria?

Answer

Line 49

Women resident in Mutare district, aged 18 years and above who had a singleton birth during the period January to June 2014 were included in the study.

Page 3, line 90. Rewrite as "Women sampled were between 17 and 43 years of age {old}

Answer

Line 72

Corrected

Page 6, line 129: "delivery (NVD), 23% (95% CI: 0.19 - 0.28) had non-NVD delivery" does non-NVD include twins/singleton/occipito posterior deliveries?

Answer

Line 168
pregnancy induced hypertension (PIH), prolonged labour and foetal distress. Was PIH the only antenatal complication? Was there no anemia, gestational diabetes, IUGR other medical problems?

Prolonged labour and foetal distress would be considered as labour complications.

Answer

Pge 6, line 142,143,144:" Non-normal vertex delivery (non-NVD) was categorised as caesarean section deliveries for various reasons (including breech) or delivery of a breech presentation (termed breech delivery)". Please clarify this is confusing.

Answer

Line 151

line 200,201 : " pregnancy outcomes increased if babies are delivered via caesarean section or breech presentation (non-NVD)" How could adverse pregnancy outcomes rise with Cesarian unless done too late?

How are breech presentations managed usually in labour?

Is there no protocol for vaginal/abdominal breech delivery?

Answer

Descriptive design no longer assess risk factor

Line 55

protocol for delivery

Page 9, line 229:" Caesarean section delivery is associated with a risk of pre-rupture of membranes, a complication resulting in perinatal death." Kindly clarify. Why should Cesarian delivery have a high risk for pre-labour rupture of membranes

Answer

Revised to descriptive study, therefore no longer part of study

Page 9, lines 250,251,252: "Women who experienced complications, including cord prolapse, mal-presentation, antepartum haemorrhage (APH), eclampsia, prolonged labour, and pregnancy induced hypertension had a six times greater odds of an adverse pregnancy outcome than women
without complications in our study". This is an important finding. This is not mentioned in the results at all!!!

Answer

Revised to descriptive study

12. Page 10, lines 262, 263: "Low birth-weight (LBW) < 2500 grams is a well-documented risk of an adverse pregnancy outcome" why is this fact not mentioned in the results section????? Were these babies premature as well?

Answer

Line 155

Described in results

13. How could one have a 5% unskilled delivery rate at a hospital????

Answer

Line 153

Reasons could not be established from retrospective records

14. There are Zimbabwean reports and recommendations already, which are not in place in the Institution. In fact, even the basic recommendations for pregnancy care and high risk pregnancy is not followed, from what I understand. There is no point in such a study when these basic recommendations are not being followed. Apply the basic pregnancy care principles and then assess using a similar study.

Answer

I appreciate the comment, however documenting these findings might assist in advocacy towards continuous improvement and implementation of recommendations.

David Alan Ellwood (Reviewer 2):

What is the population of the region that is served by these two hospitals and what proportion of all births in the region took place in these two sites over this 6 month period? As these data only represent births in these two facilities it is hard to draw meaningful conclusions about any associations based on a relatively small sample.
For example, I would assume that all caesareans actions took place in these hospitals, and many of the transfers in must have been for this reason. This will inevitably lead to a strong association of operative or complicated birth with adverse outcomes.

Answer

Line 40

35.7% of population

How many women in this region would have an early pregnancy ultrasound for dating purposes?

I ask this because I am wondering if you are able to distinguish between very growth restricted babies and those who are pre-term?

There seem to be quite a number of 'non-vertex' births but I am wondering how many of these were in very preterm babies that were eaters already dead when they arrived in the hospital or else died in the intra-partum period.

It would be interesting to see if the association with adverse outcomes remains if only term breeches were examined.

Answer

Ultrasound comment: The data was not available in the registers

Line 78 corrected

I appreciate the comment however delivery was maintained by authors

It seems that approximately 20% of births were excluded from the analysis due to missing data of > 20%. Does this mean 20% of the variables that were used in the multi-variate analysis? If some of the important variables were available then could they not have been included in the final analysis?

Answer

Line 51

The exclusion criteria stated that if more than 20% data was missing exclude record

Were there any late neonatal deaths in this sample? You have used the WHO definition but that only includes neonatal deaths up to 7 days. Increasingly there is interest in later neonatal deaths.
Answer

After birth women are referred to local facility for postnatal care. Therefore data is not at the district hospital but 48 health facilities and could not be included

A couple of minor comments is that the usual (correct) spelling of 'fetus' should be used throughout, and I am of the opinion that birth is a more acceptable term than delivery.

Answer

Line 78 corrected

Birth would not be uniform for example statements like birth factors (line 72) and mode of birth (line 73)

I would prefer delivery as per the ame of register

Sarah Karanja (Reviewer 3):

Page 1 line 20 refers to MDGs yet we are currently working on achieving SDGs

Answer

Line 19

Deleted and changed

Include strength and limitations of the study. For instance were there any bias and confounders and how were they handled? What was the strength of this study?

Answer

Line 228

Spell out all abbreviations in full at first mention, eg GOF, ROC etc

Answer

Abbreviations in document

In the methodology section, outline the supplementary data collected from patients' admission notes and ANC register
Answer

Line 69

Were there any health facility related factors that affected the adverse pregnancy outcomes?

Answer

Descriptive study no longer answers the question

Tables: Include p-values in all tables and improve the presentation of the tables

Answer

Line 401

p-values Included