Author's response to reviews

Title: Non-Adherence to the Single Dose Nevirapine Regimen for the Prevention of Mother-To-Child Transmission of HIV in Bindura Town, Zimbabwe: A cross-sectional analytic study.

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Author's response to reviews: see over
Response to viewers’ comments:

Overall changes:

We have addressed most of the important issues that were highlighted by the peer reviewers in this re-submission. We made an effort to improve on the language used in all the sections in the manuscript and we revised the manuscript to the format required by the journal. Of note in the revision we added some sections which had been omitted in the first submission, these include the conclusions, list of abbreviations, competing interests and acknowledgements sections. We summarized the results and discussion sections by eliminating text that was not adding any importance to the manuscript. We added one figure (figure 1) and one table (table 4) in the figures and tables section respectively. We also added a few more pertinent references. In the results section of the abstract we removed the bivariate results and only left the regression results which we thought were more relevant.

Specific responses to reviewer concerns are highlighted in the following sections.

Reviewer 1: Elizabeth M. Stringer

1. The language in the body can be tightened and the discussion shortened.

   *We improved the language used in the manuscript and have also shortened the discussion through eliminating redundancies.*

2. I would suggest deleting the first conclusion: educating the girl child: Education is very important, however, in this situation a better conclusion would be that women who are noted to have less education in ANC need better education about taking PMTCT regimens possibly through simpler tools. This is discussed in the manuscript.

   *This has been deleted.*

3. The authors do not provide a reference for the third paragraph in the introduction. Is this a personal communication? Also, were there only 65 HIV infected women who delivered in Bindura Hospital between January and May 2007?......
We added more information on the number of women who delivered at the hospital during the period and added a reference for the source of the information. All the 4 health institutions provide maternity services, referrals are only made for the high risk or complicated maternity cases e.g. those who require delivery by surgical operations.

4. How was the sample size calculated? Was this a sample size of convenience?

We included more information on how the sample size was calculated and the assumptions that we made.

5. The authors need to describe in more detail how women were chosen for the survey. Were these women presenting for their six week check up? To the clinic because their infants were ill? How did the authors know that the women were HIV infected?

We have revised the methodology section to address these issues. For this study we enrolled all women who were on the health facility PMTCT registers and reported for routine postnatal care.

6. I would also like to know the total number of women who presented for a postnatal check up during the time period between March and July 2008. Did women give informed consent for the questionnaire?

During the study period 229 HIV positive mothers on the PMTCT program visited the 4 health facilities for postnatal care (we only included those who were on the PMTCT program). These were all enrolled into the study, though we successfully managed to interview 212 of them, as described in the first paragraph of the results section.

All the women were well informed of the study and they signed consent forms once they agreed to participate. Three (3) women did not consent to the study and these were excluded.

7. The authors should describe all demographic characteristics age, marital status, education, and employment status briefly in text.....

We added a brief description of the general demographic characteristics.

8. Additionally, it seems that the authors switch back and forth between the paragraphs in their presentation of results for “complete coverage, “maternal adherence” and “infant adherence.” I would consider grouping paragraphs according to these different categories. The authors might
want to consider placing sub titles in the text for complete adherence (mom and infant) and then maternal adherence and infant adherence.

We revised this section, reworded the text and added subtitles to the whole results section. We also removed some figures in some of the sections where we had included both absolute figures and percentages.

9. .......The authors do not differentiate between these women and women who were given the nevirapine, but did not ingest it...

   We reworded the text to make that distinction. In addition we added a flow diagram (figure 1) to make the information easier to understand. I hope it will make the section clearer.

10. Fourth paragraph, I would suggest using a different word than stratify since later in the manuscript the authors perform a stratified analysis.

    We removed the word

11. Authors should consider not using POR since this is not a standard notation.

    We found it difficult to avoid using POR, we could not find an alternative way to summarize the phrase 'prevalence odds ratio'.

12. I would suggest shortening the discussion.

    The discussion was shortened and we also improved on the language.

13. In the first paragraph, last sentence, the authors should reference Stringer AIDS 2005, 19:1309–1315 which does address combined mother-baby pair coverage.

    We have included the references.

14. Table 1: I would suggest putting the total column first and having p values to show any differences between the groups.

    The columns have been rearranged as suggested and p-values were included.
15. Table 3 is difficult to read. I would suggest removing the yes/no and presenting only data for the yes rows.

   *We removed the yes/no and presented only the yes rows. In addition we also included the percentages columns.*

16. There are no page numbers.

   *Page numbers have been included.*

17. In the methodology section paragraph 4, change consumption to ingestion.

   *This has been changed*

**Reviewer 2: Eric Schouten**

1. The sampling used in the study group is not described.

   *We added more information on sample size calculation on the sampling method used in the study, as discussed in 5 and 6 above.*

2. It is essential to understand how many pregnancies are expected in the catchment area of the 4 health facilities, the number of pregnant women that were seen in ANC in the 4 health facilities, how many of those were tested for HIV (or HIV status ascertained), how many were tested HIV positive, and how many entered the PMTCT programme and consequently were seen in the post natal care. Without this the ‘extent of non-adherence’ cannot be determined. This is a major flaw in the article.

   *We added figures on the number of deliveries, the number who were tested for HIV, the number who were positive and the number who took the recommended prophylaxis. We felt that adding too much figures about the ANC bookings etc may be going too much out of context since this study was focusing only on the non-adherence to NVP prophylaxis by those who had already been tested for HIV and had already delivered.*
3. Zimbabwe is going through a severe crisis that influences many aspects of society and I understand that this is also having an effect on the health services. Possible results of the crisis such as availability of drugs and adequate human resources are not mentioned in the article.

   It is true that Zimbabwe has been going through an economic crisis. I have added a section on the availability of PMTCT resources at the end of the results section. PMTCT supplies have generally not been affected by the economic situation since almost all the supplies are donor supplied.

**Reviewer 2: Eric Schouten**

1. Where did the data come from for previous 2007 study? Reference? MINOR
   
   *We added a reference from where we got the data from.*

2. Dates need to match those in abstract. MINOR
   
   *The dates in the manuscript have been written to match those in the main manuscript*

3. Can you explain the minimum sample size in terms of confidence intervals and margin of error? MINOR
   
   *We added more information on sample size calculation as described above*

4. Why was a cut off of p<= 0.25 used for inclusion in the regression analysis? MINOR
   
   *We added a reference on why we chose that cut-off point.*

5. Can you provide the confidence intervals around the univariate results e.g rates of adherence? MINOR
   
   *These have been provided in table 2*

6. Table 2 is confusing. It would be clearer if it stated: Swallowed NVP at least 2 hours before delivery.....
Table 2 has been re-worded as suggested.

7. Table 2: The combined Maternal-Infant Nevirapine doses is particularly confusing as it does not show clearly adherence to both (57%) MINOR
   This has also been re-worded using less confusing language

8. Could percentage of deliveries at home and antenatal care be including in Table 1? DISCRETIONARY
   Since table 2 is specifically for demographic characteristics we thought the deliveries and ANC attendances would not fit into the table. We have, however, reworded the section to make it easier to understand.

9. What other factors recorded were not associated with non-adherence i.e. not statistically significant? It is important to report negative results. MINOR
   We included two of the factors in table 3

10. Detailed data from tables is repeated in the text e.g. PORs and confidence intervals. Perhaps only mention the factors that were significant and those that were not without the detail. Also do we need all the bivariate data when the regression provides more valuable data. DISCRETIONARY
    We removed the detail in the bivariate analysis results

11. Could the stratified analysis and the regression be put in a table? It makes it easier to read. DISCRETIONARY
    We added table 5 for the logistic regression results. We did not add a table for the stratified analysis data because we thought our tables would be too many. However we re-worded the stratified analysis text in the results section to make it easier to read.