Author’s response to reviews

Title: Retention of HIV Exposed Infants in care at Arua Regional Referral Hospital, Uganda: a retrospective cohort study

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Version: 1 Date: 05 Dec 2018

Author’s response to reviews:

The Chief Editor
BMC Public Health
Date: December 5, 2018

Dear Professor

Re: Point by point response to Reviewer comments

We are pleased to receive the high quality feedback from the peer reviewers for the manuscript titled “Retention of HIV Exposed Infants in care at Arua Regional Referral Hospital, Uganda: a retrospective cohort study”.

We are delighted to submit a revised manuscript after addressing all reviewer comments for further consideration. We have paid critical attention to every comment raised by the reviewers. All changes in the revised manuscript are text highlighted in a blue text color.

We appreciate the consideration given to this manuscript.

Thank you
Editor Comments:

In addition to the referee comments, please address the following editorial points:

STROBE guidelines. In accordance with BioMed Central editorial policies (http://www.biomedcentral.com/submissions/editorial-policies#standards+of+reporting), could you please ensure your manuscript reporting adheres to STROBE guidelines (http://www.strobe-statement.org/) for reporting observational research. This is so your methodology can be fully evaluated and utilized. Can you please include a completed STROBE checklist as an additional file when submitting your revised manuscript?

Response. Dear Editor, thank you very much for this comment. We have included a copy of the STROBE guidelines and uploaded it together with the revised manuscript.

Reviewer reports:

Benjamin Phelps (Reviewer 1)

• Provide page numbers

Response. Page numbers have been inserted throughout the revised manuscript.

• The article would benefit from a grammar review - there are minor mistakes throughout the manuscript

Response. Thanks. We have rigorously reviewed and corrected the minor grammatical errors in the manuscript.

• The article first mentions the EID continuum of care in the introduction and refers to it throughout the paper, but never actually specifies what it is. It would help frame the paper by defining the EID CoC in the introduction.

Response. Thanks for this concern. We have explained the EID continuum of care in the introduction section of the revised manuscript.

• The introduction (p.4 line 47) provides a citation for Option B+ but never fully defines it. The authors should provide information on what it entails for the mother as well, as lifelong ART is one of the factors they evaluated and Option B+ includes ART.
Response. Thanks for this important observation. We have fully explained Option B Plus strategy in the revised manuscript.

•  p.5 line 2 - Write out "World Health Organization" first and then provide the acronym

Response. Thanks. We have written all abbreviations used in the manuscript in full, at the first mention.

•  P.6 lines 29-30 - Again, it is somewhat awkward to refer to a concept in another study and not provide substantial details. Rather than citing a separate study, provide a few sentences and cite them.

Response. We appreciate this comment. We have now provided substantial details about Arua Regional Referral Hospital (ARRH) instead of citing a separate study.

•  p.9, line 22 - The math in this section (Retention of HEIs along the 18-months EID continuum of care) may be incorrect. Adding up all of the HEI lost, died, or transferred out, you get 85. 352-85=267, not 277; math in this section and in corresponding tables/figures needs to be checked.

Response. Thank you for this comment. We have revised the sentence on outcome measure in the results section for clarity. It now reads “HEIs retained in care included; 1) Between enrolment and 6 weeks, 18 HEIs who were started on ART after turning HIV positive; 2) Between 6 weeks and 12 months, 11 HEIs who were transferred out of the EID program to other health facilities and another four HEIs who were started on ART after turning HIV positive; 3) Between 12 months to 18 months, two additional HEIs who were started on ART after turning HIV positive; and 4) At 18 months, the 242 HEIs who remained HIV negative. Accordingly, 277 (78.7%) HEIs were retained in care at the end of 18-months EID continuum of care”. In addition, we have inserted an asterisk as a footnote to denote the number of HEIs considered retained in figure 1.

•  p.10, line 13 - the authors both write the numbers and the word for "170" - this should be written at "170".

Response. Thank you. We have deleted the words “One hundred seventy”. Instead, we maintained the figure “170” as needed.
• The authors need to add a conclusion of some kind.

Response. Thank you. We have now inserted a separate heading for conclusion and recommendation in the revised manuscript.

Brian Eley (Reviewer 2)

• Abstract methods sub-section, last sentence: For improved clarity consider changing this sentence to "Logistic regression was performed to determine factors independently associated with retention."

Response. This is a correct and critical observation. We thank you. We have now changed the sentence to read “Logistic regression was performed to determine factors independently associated with retention”.

• Introduction, 3rd paragraph, 2nd sentence: Consider deleting this sentence as it is not clearly written and adding reference 23 at the end of the previous sentence.

Response. Thanks. We have deleted this sentence.

• Methods and materials: The study period of the first 18 months of life of HIV exposed infants, although suggested at the end of the introduction is not clearly stated in the methods and materials section. This omission should be corrected. In addition, the frequency and number of infant follow-up clinic visits during the study period should also be added to the methods and materials section.

Response. Thanks. We have now described the cohort of interest, the follow-up length, and the place of follow-up under the methods and materials section.

• Methods and materials, sub-section: statistical analysis, 3rd paragraph: This paragraph suggests that if HIV-infected infants were started on ART they were included in the retained group. However, it is unclear whether all of these infants remained on ART and in care at 18 months or whether some had defaulted ART by 18 months. Was retention at 18 months confirmed in those children who were commenced on ART? If not it should be acknowledged as a study limitation in the discussion of the paper.
Response. Thank you for this comment. All HEIs who turned HIV positive and were started on ART remained in care at the end of the 18 months. We confirmed the status of all HEIs considered retained in care in this study. Under the study strengths and limitations section, we have incorporated this wonderful concern as one of the strengths of the study.

- Methods and materials, sub-section: statistical analysis, final paragraph, 2nd sentence and table 2: Is it necessary to display both the 95% confidence interval and the p value? The 95% confidence interval should be sufficient to interpret the logistic regression results. Please justify this decision or revise the text and table 2.

Response. We appreciate this comment. We have revised the description of reporting the effect measure (Odds ratios, OR) without p-values. We have also reported the OR with 95% CI and provided a scientific justification under the methods section. We thank you.

- Table 1, legend title: For improved accuracy consider changing this legend title to Characteristics of infants and their mothers

Response. Thanks. We have adopted the suggested heading for the table as well as in the results section.

- Table 1, row entitled "Maternal age in years": Please expand this title by indicating at what time point the maternal age was documented. For example, was maternal age recorded at the time of the infant's birth?

Response. Thanks. We have revised the sentence for clarity. It now reads “Maternal age at enrolment into EMTCT in years”. Accordingly, we have made this change throughout the manuscript.

- Discussion, 1st paragraph, 5th sentence: This sentence states that deliberate steps should be taken to improve retention. Can you expand this sentence and indicate what specific steps should be / can be implemented within existing resources at Aru Regional Referral Hospital? If specific steps are proposed then indicate whether previous studies have demonstrated the effectiveness of these measures in improving retention and provide suitable references.

Response. Thanks. We have now inserted some of the known steps that improves retention and provided an appropriate reference.
• Correct minor grammatical errors

Response. Thanks. We have rigorously reviewed and corrected the minor grammatical errors in the manuscript.