Reviewer's report

Title: Factors associated with HIV infection among children born to mothers on the Prevention of Mother to Child Transmission programme at Chitungwiza Hospital, Zimbabwe, 2008

Version: 2 Date: 10 June 2013

Reviewer: marianah atieno onono

Reviewer's report:

A. Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Abstract:
There are a few typographical errors that need to be corrected

Methods section: need to include a sentence on the analytical methods used

Conclusion section: last sentence beginning, “so we recommend that – is incomplete and unclear

B. Major Compulsory Revisions

Background

II. Paragraph 1: Need to cite the most recent data: According to UNAIDS, about 330,000 children were newly infected with HIV in 2011

III. Paragraph 2: Use the statistics from the UNAIDS report of 2012 or the WHO progress report of 2011

IV. Paragraph 4:
Some very good points made. Also talk briefly about Africa and how breastfeeding/mixed feeding is the norm and the challenges of formula feeding in resource limited settings.
VI. Paragraph 5:
Numerous citations are missing.
Need to link with the importance of breastfeeding within and without a high HIV prevalence setting

VII. Paragraph 6
Consider merging this with paragraph 3 on the goals of the Zimbabwe PMTCT program and compare, contrast and link with global goals

VIII. Paragraph 7
You state that 25% of the HIV exposed infants (HEIs) tested positive at 18 months. Do you have figures for an earlier time point say 6 months? What is the breastfeeding prevalence of Zimbabwe as per the Demographic health survey?

Question – its not clear whether the phrase, “already on the PMTCT programme) means that mothers are on ART for PMTCT or ART for their own health or both. Are you implementing Option A or Option B for PMTCT?

Methods
I like the case control design.

I. Paragraph 1
What is the rationale for not matching? Statistically speaking if we assumed median duration of breastfeeding among women living with HIV is 12 months and transmission is 1.57 per month among those with CD4 counts less than 350 and 0.51 per month among women with CD4 counts more than 350, It may not be proper to compare a child who is 2 months to that one who is say 9 months. They have had longer exposure. – Please add a sentence justifying the reason for not matching at least on age of child.

II. As stated above – please include a brief description of the PMTCT program. At the time the protocol was being implemented, what PMTCT guideline was being implemented for example: did the women all receive HAART, or were they on short course ART and from what gestation age?

III. Also include what was your inclusion and exclusion criterion mentioned at the end of the paragraph

IV. Paragraph 2
Please include details on
What was the study period?
How were potential mothers (participants) identified and approached?
Was mother’s permission sort to check the status of the infant?

V. Paragraph 3:
Subtitle “permission to carry out the study and ethical considerations” – can be
rephrased to simply say “ethical considerations”

VI. Paragraph 4
Subsection on limitations is misplaced and should move to after the discussion section

Results

Paragraph 2: Maternal factors

VII. Include the median and range CD4 for the controls

VIII. Data on STIs – state it as n (%)

IX. Clarify if all vaginal deliveries were by skilled birth attendants or home deliveries. This will also affect your MTCT rate

Paragraph 3: Nevirapine Adherence

X. Sentence 1: Clarify that this is Nevirapine for mother as in single dose Nevirapine.

XI. Nevirapine for babies – how long was the Nevirapine given (short course or extended Nevirapine (I think that this can be catered for, if in the methods section you expound a little bit on the PMTCT protocol being used in Zimbabwe.)

XII. Paragraph 5: State the duration of time that the cases and controls had practiced exclusive breastfeeding

Discussion

Paragraph 1

XIII. Phrase “mother infant transmission”: the standard term is mother to child transmission (MTCT)

XIV. Please verify the citation for this paragraph on factors affecting MTCT. There are multiple literature on this

Paragraph 3

XV. The statement – most women had their children tested between six weeks to three months – this is new information most suitable in the methods or results section.

XVI. Please merge paragraph 4 with paragraph 3 since it is strengthening your argument. Also add more literature on this very important point.

XVII. Some suggested literature


Coutsoudis A, Pillay K, Spooner E, Kuhn L, Coovadia HM: Influence of infant-feeding patterns on early mother-to-child transmission of HIV-1 in Durban,


Paragraph 5

XVIII. Sentence beginning, “the most common cause of the hospitalization was pneumonia, ARI and diarrhoea”…”ARI and diarrhoea were not mentioned in the results section. New results should generally not be introduced in the discussion section.

Paragraph 6

XIX. This is an important paragraph. However, you need to contextualize it; discuss implications (pros/cons) in low resource settings

XX. Same as comment above, new data (about the cesarean sections) must first be presented in the results before being discussed. Also clarify if the C-sections being referred to were elective or emergent.

Paragraph 7, 8 & 9

XXI. Merge this with paragraph 6 and make more concise. Always contextualize it. Some of the sentences are redundant e.g. paragraph 8 – the sentence beginning, “the mode of delivery…” and the sentence “caesarean section has been ……”

XXII. Need to include a paragraph on the limitations and possible strengths of your study methodology before the conclusion

CONCLUSIONS:

XXIII. There are numerous research showing benefits of exclusive breastfeeding for a minimum of 6 months and not 4 and even beyond particularly in resource limited settings such as Zimbabwe. Early cessation of breastfeeding is associated with increased morbidity and mortality among infants even regardless of HIV exposure. Coovadia and colleagues in South Africa documented a higher HIV-free survival among the exclusively breastfed than among the replacement-fed infants and that mortality at three months was almost doubled in
the group who received infant formula compared with the exclusively breastfed infants

XXIV. Please reference the 2010 HIV and infant feeding guidelines on this matter

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests