Reviewer’s report

Title: PREDICTORS OF LOSS TO FOLLOW-UP AMONG CHILDREN ON LONG-TERM ANTI-RETROVIRAL THERAPY IN ZAMBIA (2003-2015)

Version: 0 Date: 30 Aug 2018

Reviewer: Heena Brahmbhatt

Reviewer’s report:

Overall, a well written paper about retention into care for children on ART in Zimbabwe. The following areas need to be further clarified, especially in the results section to make the manuscript clearer:

- Figure 3: the stats here are confusing. You state that lfu was highest during 1st 3 months where it was 4% and then say "losses decreased in 2nd year..." but the rate there is 11% and then state that by end of study period, losses were at 30%. So does lfu increase over time? Also, difficult to see where these numbers come from in Figure 3? Need to find better way of representing these data on the figure so its clearer

- Figure 4: when looking at figure 4, it appears that the cumulative incidences for outcomes increase over time? perhaps have the 1st year expanded on the curve so the loss to follow up that is higher in 1st year is clearer

- Line 41 page 8: perhaps restate to indicate exactly what the "event" here is

- Figure 5: perhaps make sure the axis are labeled clearly so that the outcomes measured in those curves are clear. if outcome is lfu which includes mortality but not limited to that, then survival probability is misleading

- Line 51 page 8: Please rephrase "....the harzard ratio- of loss to follow up-for children who started treatment......was 5.1.." need to indicate the outcome when stating the hazard ratio. or another way of stating it is that the hazard or risk of lfu is 5.1 if treatment was initiated between 2013-2015

- Line 56 page 8: similar to above-harzard risk of what?? lfu. This sentence is incomplete-need to state year "2013-2016" and the bracket at end of p=0.0002 also needs to be removed

- Line 7, page 9: perhaps to make this clearer, instead of saying "had a shorter time to event" can rephrase to "hazard of loss to follow up was higher among partcipants without a phone" also, there is an extra bracket on line 9 at start of "survival probability...."

- Line 31, page 9: check the footnote to this as in text you state > 5 years and in footnote its older than 10 years
Discussion: Would like a little more detail and synthesis of results: Can you go over in more detail what was done to retain children and why only 18% were disclosed their HIV status at baseline? Also, why do you think in that setting the losses to follow up are highest in the 1st 3 months and what specifically would you recommend needs to be done to minimize these losses? For individuals without phones, what other methods can be applied to improve retention into care? Perhaps a little more details in the conclusions and implications of your findings both for implementation and policy.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
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Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

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