Reviewer's report

Title: Do women with complications of an incomplete abortion have different HIV infection status than women without complications?

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Reviewer: Eliud Wekesa

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Title: Do women with complications of an incomplete abortion have different HIV infection status than women without complication.

Authors: Carolyn Othieno, Joseph B. Babigurmira, and Barbra Richardson.
Reviewer: Dr. Eliud Wekesa, Population Services International.

General comments
The manuscript is on a highly relevant topic, particularly in sub-saharan African, in general, and Uganda and other similar countries, in particular. It is an important contribution to the literature on HIV status and women’s decision to obtain an abortion in the event of an unintended pregnancy. I believe that this manuscript stands a chance of publication if the changes and corrections outlined below are fully addressed.

Major compulsory revisions
The authors have not presented any literature that directly links HIV status with (unsafe) abortion to justify their hypothesis. This manuscript will benefit immensely from this body of work that is beginning to emerge. The authors should read the following article as a starting point:

The main explanatory variable is HIV status and so the reader would expect some substantial discussion on HIV prevalence levels, HIV testing rates and HIV status knowledge levels in Uganda. These should be included in the background/introduction section of the manuscript.

I found the discussion regarding the unexpected findings to be quite underdeveloped. I would have liked to have seen more on this. The authors need to discuss the counter-intuitive finding of lack association between HIV-positive status and unsafe abortion. This is very important and warrants more attention. They should provide a plausible explanation/hypothesis. In the absence of a plausible explanation, the reader will intuitively ascribe your finding to the sampling error, which essentially kills your paper. The major weakness is the
sample size; you only have 18 HIV positive cases and you need to convince the reader that your important finding is not a function of the sampling error/sample selection bias. Your discussion of why people are hesitant to test is tangential to the crucial point.

Minor comments

Abstract
The objective of the study should be a separate component of the abstract and clearly stated.
The primary outcome variable and explanatory variable should be incorporated and clearly stated in the methods section of the abstract.
The sample size should be clearly stated in the methods section of the Abstract.
The hypotheses that you are testing should be clearly stated in the methods section of the Abstract.
Conclusion: Your conclusion section contains some recommendations; Could you rework on the conclusions and recommendation?

Background
The first paragraph needs a citation. Which WHO report are you relying on?
Unsafe abortion: Line 74; please correct the citation for 4 and 5.
Please have one referencing style in the whole document. Some are numbered while others author –date.
Line 92: please correct the references for 7 and 12.

Methods
The sampling method is not entirely clear to me. The methods section is silent on the sampling/sample selection procedure of the initial study (your data source). The reader needs to know your sampling procedure i.e probabilistic/non-probablistic and how you ended up with a small number of HIV positive cases. Are standard means of statistical inference appropriate for this kind of sample design?

Tables & figures: There are no titles for tables and figures in the appendix. It would be helpful to state titles and accompanying notes.

Limitations
One major limitation is that this is not a probabilistic sample, which suffers from selection bias and limits its generalizability. This must be acknowledged as a limitation.

Title
There is a grammatical error in the title. Replace “than” with “from/with”?

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

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I have no competing interest