Reviewer's report

Title: Use of peers and community lay persons improves six-week postnatal clinic (PNC) follow-up and Early Infant HIV Diagnosis (EID) in urban and rural health units in Uganda: A two-year implementation study

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Reviewer: Maryse Kok

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Use of peers and community lay persons improves six-week postnatal clinic (PNC) follow-up and Early Infant Diagnosis (EID) in urban and rural health units in Uganda: A two-year implementation study.

Major compulsory revisions

1. The abstract is lacking information on the difference between study and non-study participants. You could consider to replace the clinic-specific information in the results section by this information. However, at the very end of the manuscript, it becomes clear that study participants data were not disaggregated from the general clinic reports, so the proportion from the rest of the clinic includes data for study participants. This makes it necessary to change wording throughout the manuscript, as a comparison between study and non-study participants cannot be made. I agree with the observation that when data would have been aggregated, possibly a bigger difference would have been observed. But the confusing wording should be changed. For example, line 250: “infant HIV testing increased.. for both non-study and study participants”. In fact, this cannot be presented like this. Same for line 148: “compared it with those mothers who were not recruited in the study” should be sometime like “compared with the whole clinic population”. The limitation comes quite late in the manuscript, it would be good to add in the Methods section what was done exactly (for example in the paragraph starting at line 138).

2. The abstracts missed the baseline for EID.

3. In the conclusion of the abstract, you propose that the use of peers “should be implemented” on other health units. Of course this would be great, but what about feasibility, sustainability, costs, incentives for peers and lay persons etc. It would be good if more is added about this in the Discussion. Would an intervention like this be sustainable? In this case, is the peer system going on after the study was conducted? Did lay persons/ peers get incentives? Also, I would like a bit more information about what actually happened in the results section: it is stated that more peer home visits were conducted. How many on average per woman? More detailed information regarding this would be helpful for others in deciding whether such an intervention is feasible in their setting.

Minor essential revisions
4. Could you provide more information about EID? As I am not an HIV expert, I was confused by the fact that most of the manuscript focuses on PNC at 6 weeks, but EID is measured up till 12 weeks.

5. Line 61: “we used peers and lay persons..”: why not (shortly) saying “we trained them and these people assisted in X..” etc. The word “use” does not capture properly what was done. In the same statement line 61-63, EID should be added, as the objective in the Introduction should be in line with the objective provided in the abstract (line 5 and 6).

6. Line 81: could you make clearer that VHTs were existing bodies (I assume), consisting of X volunteers? I understand that VHTs were involved in the rural area, and lay persons in the urban areas. Please clarify. In line 91, you present that lay persons and peers were trained. VHTs are not mentioned anymore, which is confusing. Same in line 102.

7. Line 97-99: follow-up meetings with whom? Regular trainings were organized by whom? Activity reports submitted to whom? Line 108: joint community meetings by study staff and lay women/men: what was the role of the study staff here? The question behind this is, what were tasks of study staff and what did the “regular” health and management staff do? This is related to the question under 3, about feasibility and sustainability of these kinds of interventions.

8. Line 121: general community activities: who conducted these?

9. Line 135-6: this sentence does not read well.

10. Line 144: 588 should be 558.

11. Line 172: urban-paying and urban-free: this has not been explained yet. Earlier in the manuscript, it has been presented that all PMTCT services were free.

12. I do not understand the difference between the figure in table 2 (n=511) and the one presented in figure 1 (n=535). I might be confused and it can be something obvious. Can you shed some light on this? Figure 1 presents the percentages as “PNC attendance among study participants”. These percentages do not correspond with the percentages presented in paragraph 3 of the Results section.

13. Could you rephrase the sentence in line 255 please.

Discretionary revisions

14. Between base and end line, there was 1 year. The title says 2 years. I understand the whole study (from development towards analysis) was 2 years, however, it can be confusing to the reader.

15. I wonder, when I read the paragraph on task shifting/sharing in the discussion section (line 232), if this is really the case. The tasks that the peers conducted, from which cadre were they “shifted”? Or were they just added? The conclusion goes into that direction: “peers and community lay persons are an invaluable addition to the traditional health care team..” The persons are indeed added to the team, but were they executing existing or new tasks?
16. Consider to delete non-study staff in line 278, it’s confusing. Lay persons were part of the intervention.

**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.