Reviewer’s report

Title: Sustainability of the streamlined ART (START-ART) implementation intervention strategy among ART-eligible adult patients in HIV clinics in public health centers in Uganda: a mixed methods study

Version: 1 Date: 14 Jan 2020

Reviewer: Aaloke Mody

Reviewer's report:

Overall comments:

The authors mostly had satisfactory responses to the reviews. A few additional points: 1) I would work on streamlining the introduction and methods (and try to organize the methods a bit more clearly). Some details in the methods could be moved to an appendix if needed. 2) Table 2, Figure 2, and Figure 3 are not clear and need to be revised and match what is being described in the text, and 3) I would incorporate some the contextual details provided in the author's responses into the discussion as well. The authors have improved the manuscript greatly and the qualitative data is very helpful in understanding the sustainability of the initial study intervention.

Specific comments:

Intro:
I think the first two paragraphs can be condensed into one (and do not need to mention sustainability here).
Third and fourth paragraph could also be condensed into. Discuss the initial study, plans for sustainability, and the need to evaluate where it was successful.
I think intro now has the key parts but I still might recommend streamlining it.

Methods
Would put study setting info under study design
Would shorten initial intervention description. I think making sure the distinction is clear between when you are referring to the initial study vs. the current sustainability study is important (or describing intervention period vs. sustainability period).
I was still confused when reading the methods. After describing the initial study design and initial intervention...I think it might be better to split up quantitative and qualitative aspects of the study. Under each you can describe population (participant description and sampling), study procedures/measurements, and analysis.
Overall, there is a lot of detail in the methods that in the end reduce the clarity (e.g., description of the initial intervention). For example, for describing the sampling of the charts...this sentence is the most important "we used a systematic sampling method basing on probability proportional to size, in which each health center contributed a pre-determined sample size." The remaining...
details about the fishbowl randomization, etc. could be in appendix. I would urge the authors to think about the key information that is needed to understand the methods and consider putting the remainder in an appendix (not just this section but through all the methods).

RESULTS

I don't think it is necessary to put the missing data in the text (can put the number in the table). What is described in the text and what is shown in Table 2 do not match up. The text describes unadjusted and adjusted analyses for the overall population and Table 2 seems to show the results by different subgroups. These should match. And I would choose to present either a risk ratio or risk difference.

I like the forest plot, but am not really sure what Figure 2 shows right now. The x-axis needs to be labeled and I would make it the percentage of patients who started by 14 days. I don't know what the reference line represents. It also seems that in a lot of facilities, the percentage went down in the sustainability period (not statistically significant but there is a trend). I would also comment on the trends and not focus too much on statistical significance (essentially consider facilities qualitatively did better, did the same, and did worse). Once figure is fixed, it will be really great.

Figure 3 is also not clear and I couldn't interpret. For a time series, the dots could be the mean time to ART start (not categorized as they seem to be) and these would be binned over 1 week or 1 month periods. Otherwise they could be the percent starting within 14 days binned over similar period. And then have a lowess line to show the fit…and then a vertical line at the split between intervention and sustainability period. If the time to start are categorized, I would use a stacked bar graph for each year I guess.

Another suggestion is to just show trend lines for each clinic, essentially combining figure 2 and figure 3. I am not sure if it will be hard to interpret because of too many lines (one for each clinic) but it something to consider.

Discussion

I think the discussion is pretty good at this point.

The authors provided reasonable responses to the questions about contextualizing the result. Their responses do discuss important details that do help contextualize the results (treat-all, rapid ART pushes, were done only after the study period), so it would be good to integrate into discussion as well. I think that fits into a discussion about secular trends (which I didn't see). Doesn't have to be long, just mentioned.
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