Author's response to reviews

Title: Facility and home based HIV Counseling and Testing: a comparative analysis of uptake of services by rural communities in southwestern Uganda

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Author's response to reviews: see over
Dear Sir/Madam,

Re: Submission of Revised Manuscript (MS: 3546848974024230)

Please find attached a manuscript entitled “Facility and home based HIV Counseling and Testing: a comparative analysis of uptake of services by rural communities in southwestern Uganda”. We have reviewed the comments raised by the 3 referees and revised the manuscript accordingly. The revisions in the manuscript have been highlighted (green highlighter). Our responses to each comment are given here starting with referee 3.

Referee 3

1. The title, abstract, and introduction sections make the reader think that the authors’ are reporting the actual uptake of HIV testing comparing those offered home-based testing vs. those offered facility-based testing, however, in my read of the manuscript they are only reporting participants’ willingness/motivation to accept/uptake HIV testing.

All the 994 respondents included in the study received VCT at the baseline visit (November 2007) and thus our manuscript is reporting uptake and not willingness/motivation to accept HIV testing. To clarify this in the manuscript the following revisions has been made:

In the abstract under the methods sub-section, line 2 (page 2) has been revised to read - Nine hundred ninety four (994) respondents were interviewed, of whom 500 received facility based VCT in Rugando and 494 home based VCT in Kablingo at the baseline visit.

Under the Results section (page 12), sub-section on background characteristic, line 1 has been revised to read - A total of 994 respondents were interviewed and received VCT at the baseline visit.
2. The section in the results section labeled “Willingness and motivation to use VCT services” should be in the “Variables” section within the methods.

After re-reading the manuscript, we realize that the section under results on “Willingness and motivation to use VCT services” (page 14) only leads to further confusion of whether the paper is presenting “uptake” or “willingness”. We have therefore removed this sub-section from the paper. We have also removed the related misplaced information that was in paragraph 1 (page 13), lines 5, 6, 7 and 8.

3. The authors need to clearly state the objectives of the paper in the abstract and at the end of introduction, and frame the results and discussion according to the objectives.

We have clarified in the responses above that all the respondents in this study received VCT at baseline and the paper therefore addresses uptake and not willingness to receive VCT. We believe the study aim/main objective is already stated in the abstract (page 2), sub-section on background, last sentence and the Background section of the paper (page 8), last paragraph is relevant to the material presented in the paper. The paper compares the different characteristics of the respondents who received VCT through the different models at baseline. The results and discussion sections of the paper present a comparison of these characteristics and differences between the groups.

4. In the variables section the authors describe how they dichotomized the “knowledge on transmission of HIV” and “risk perception” variables characterizing participants as either “low” and a “high. Their choice of split point between low and high is arbitrary. Those variables should not be dichotomized and should remain as scale (continuous) variables and used that way in the analyses.

The variables on “knowledge on transmission of HIV” and “risk perception” were dichotomized with reference to an approach developed by Norman L R et al in a paper on “The role of HIV knowledge on HIV-related behaviours: a hierarchical analysis of adults in Trinidad (Ref 28). The data Norman used for these analyses were collected as part of the baseline survey of the Voluntary HIV Counseling and Testing Efficacy Study. In our paper under methods section (sub-section on instruments) we report that our questionnaires were an adaptation from the instruments used by the Voluntary HIV Counseling and Testing Efficacy Study Group (Ref 27). The questionnaires were adapted to make them more context specific. We used a similar approach for the split between low and high and therefore did not consider this as an arbitrary cut off. However table 4 presents findings on “knowledge on transmission of HIV” prior to dichotomizing the variable (analysis of knowledge as a continuous variable).

5. Most of the major limitations of the manuscript are not noted in the limitations section. First, the fact that they assessed willingness to received VCT and not actual uptake/receipt of VCT must be highlighted as a major limitation. Second, other limitations such as that the study was not a
randomized study, that they are only reporting data from the baseline assessment and can't compare how the two VCT models affected participants’ behaviors or perceptions, and that STI symptoms not actual biologically confirmed STIs were used also need to be noted.

As noted earlier in the responses to comments by the reviewer our manuscript examined uptake (all respondents received VCT at baseline) and not willingness to receive VCT. The assessment of willingness is therefore not cited as a limitation in the manuscript. This manuscript is not comparing how the two VCT models affected participant’s behaviors or perception but is comparatively evaluating what factors (predictor) influence uptake of either model (the stated aim of the paper is to comparatively evaluate predictors for uptake of facility and home based VCT in a rural context). However a limitation the study design has been included (on page 22 under sub-section on limitations). Another limitation about the use of STI symptoms has also been included (on page 21 under sub-section on limitations).

6. The groups should not be compared on each STI symptom but rather on any vs no reported STI symptom.

We have taken note of the above comment however our conviction is that the different STI symptoms are suggestive of particular sexually transmitted infections. Our view is that comparing on any versus no reported STI symptom would lead to loss of this detail. We propose that the comparison remain as stated in the paper.

7. Tables 1, 2, 3 and 6 should be combined into one table since they all report comparisons between the two study groups. Furthermore, the authors need to report the both the unadjusted ORs (when only the variable of interest is included in the model) and adjusted ORs (when all variables that were statistically significant are included in the model).

Table 1 compares the background characteristics of the clients who received FB-VCT to those who received HB-VCT to assess whether the two groups are comparable. Tables 2,3, and 6 assess association of various variables with receipt of VCT through the different models. In our view table 1 should stand alone as is commonly the practice in scientific papers. We therefore propose that table 1 be maintained in the paper. However we have merged tables 2, 3, and 6 which report associations to form the new table 2. We have also added a column to report the adjusted OR where it is applicable.

8. In the methods section and in the abstract the authors should clarify that the study was not a randomized trial. This should also be mentioned as a limitation of the overall study.

We have clarified the design of the study in the abstract and the methods section (“A longitudinal study with cross-sectional investigative phases....”)

9. In the results section the authors’ report data regarding participants’ sexual behavior and other variables but these variables are not described in either the
instruments or variables section. For the variables which the authors report findings the reader needs to know the details of what was specifically assessed and how each variable was assessed.

The paper reports data regarding; background characteristics of respondents, reasons for seeking VCT services, presence of STI symptoms, knowledge on HIV transmission, risk perceptions and discrimination. The paper compares these variables among the respondents who received VCT through the different models. This paper does not report data on sexual behavior in the results section. The variables described section were those that needed to be operationalised to facilitate statistical analysis. We have however added information in the analysis sub-section that broadly describes the variables collected.

10. I suggest that the authors estimate the expected uptake of facility-based VCT using data from the Wolff et al. study done in Uganda and published in Health Policy and Planning, 2005.

We have noted the concern of the reviewer with regard to using the uptake of VCT during antenatal care to estimate facility based VCT. We have also further reviewed the article by Wolff et al. (ref 17 in our manuscript) and also noted that the estimate of uptake of facility based VCT is based on number of clients returning to a counseling office and not a typical health facility to receive results. Whether this would be a better estimate for uptake of health facility based VCT is an issue for future consideration. The parameters we used for calculation of sample size were at the protocol development stage and this formed a basis for the data collection exercise. We propose that these estimates are maintained.

11. Since the authors describe the larger study from which this data comes they should also specify how long after the baseline was the follow-up data collected.

We have clarified in the abstract and methods section that the baseline visit was in November 2007 and follow up in March 2008.

**Referee 2**

**ABSTRACT**

Background: Home based HIV testing has extensively conducted in Uganda both programmatically through TASO, CDC and others quoted. Last paragraph; in the sentence “….to comparatively evaluate predictors....” Could simply be written as “….to compare predictors or to identify predictors....”

We acknowledge that home based HIV testing has been used by non public health care providers in Uganda since 2005. We have therefore modified the first sentence in this section of the abstract by deleting the word “currently”. In the last paragraph the sentence has been modified to read ....”to compare predictors”
Methods: Clarify what the intervention was. “employing quantitative methods” is not necessary to include. Second sentence which starts “Nine hundred could be put in the results instead. Describe the intervention(s)
The part on “employing quantitative methods” has been removed. The second sentence “Nine hundred....”, has been put in the results. A description of the intervention has been given in the sentence “During the baseline visit....The nature of intervention is mentioned in this section.

Results: Include a sentence on the demographics of the two communities. A sentence on demographics has been included in this section.

Conclusion: Not stated instead you have put a recommendation
The conclusion has been stated i.e. “Uptake of services provided......”

BACKGROUND:
1st sentence, The number of people living with HIV is what should be quoted since it includes all those with AIDS. The background should be reviewed for flow so it can tell a story rather than it being facts with no connecting words. For example use However, In etc to connect the facts.
The first sentence is derived from a UNAIDS report and is reported as such. The flow of paragraph 2 of the background has been improved by using “An” to link facts in sentence 1 and 2 of this paragraph on page 5.

After sentence ending in reference 5 mention that incidence in Uganda has started rising. This can also be stated at the end of the background as justification for this study.
Statement on rising incidence has been inserted after sentence ending with reference 5.

Page 5 state reference for the second sentence “Matovu et al) Ref? Last paragraph the sentence needs to be rewritten so the word “services” is not used twice in the sentence. Second sentence in the last paragraph needs a reference.
The reference for the second sentence on page 5 has been inserted. The word “services” is not used twice in a sentence. A reference has been added to the second sentence in the last paragraph.

Page 7: Last paragraph the phrase “comparatively evaluate” change to just compare. The last sentence. Home based VCT is not really new.
Revision to use of the word compare has been made and the last sentence has been re-phrased.

METHODS (page 8)
Design and sample calculation. Again get rid of employing quantitative methods! Provide a reference for the last sentence of paragraph one.
The statement has been re-phrased and “employing quantitative methods removed”. The last sentence in paragraph one is statement from the authors of the paper and therefore is not referenced.
Please mention that the two groups were separated in terms of time (2007 and 2008 respectively and mention why you chose that time)
The revision made to the first sentence now clarifies that the baseline was in November 2007 and the follow up in March 2008. The reason for the time chosen has now been stated after the first sentence.

Paragraph2: sentence 2. Add that prior to providing the intervention of....... And in the same service clarify which service (VCT?) A map and picture may be good to show where the two areas are.
The sentence has been re-phrased to highlight the “VCT intervention” and this clarifies that the service is indeed VCT. We acknowledge that a map of the two areas would be good to show, however we are unable to provide an appropriate map showing the two areas at this point in time.

Page 9: No need to state the formula just reference it and mention the assumptions. Provide a reference for the figures you used in the assumptions even if unpublished e.g Hospital records, MoH report etc. Provide a reference for Hayes et al
We have removed the formula, however the assumptions had already been stated and a reference for Hayes et al provided ref 25).

Page 11: Analysis; State what was compared in both groups and both time periods.
The variables compared have been included in the sub-section on analysis (now on page 12).

Ethics: The first sentence is enough. Once IRB approval has been given it is assumed that the right procedures were used.
We have revised this sub-section accordingly.

Results: Page 12. 1st sentence should go to methods. In general for results just explaining some results and not all would be good since you have very good tables.
We have put the first sentence in the Methods section, i.e. last sentence under analysis and removed the paragraph under the Results from which this sentence was extracted.

Page 15: Last sentence “did not predict” may be a better word than “was not associated”
We believe that since the odds ratio here is not adjusted for influences of the other variable use of “was not associated “ is more appropriate and therefore has been maintained.

Page 17 No need to mention the opening section such as the sentence in the last paragraph. Rephrase as Participants perception of ... etc. So the sentence saying “people have different perceptions about HIV risk” and similar ones at the beginning of most sections of the results should be deleted.
This sentence has been re-phrased and a similar sentence under the section on discrimination removed.
Page 18. 1st sentence. The word AIDS virus should be replaced. Last sentence should be based on some statistics so quote the p-value. 
The word AIDS virus has been replaced accordingly and p-value has been quoted for last sentence.

Page 19: Factors associated with use of VCT can be used instead of just “logistic regression. Or put as multivariate analysis of factors associated with VCT. That paragraph may fit more in the methods where you talk about analysis. The heading of this sub-section has been re-worded accordingly however the paragraph has been maintained.

DISCUSSION
Succinctly start with you main finding or a statement to that effect. Paragraph 3. 
Add some connecting phrases such as “as expected”. The first sentence has been re-phrased to reflect the main finding of the study i.e. factors that predict uptake of VCT services. A connecting phrase has now been used within the paragraph.

Last paragraph: Findings show instead of findings reveal. This revision has been made.

Page 21 could be revised. It is not clear. I will send some hand written notes with some edits on the paper. It was not clear what the reviewer meant by this page could be revised and was not clear. This was however not raised by any of the other reviewers.

Limitation: what you have stated is not really a limitation. The limitation section has been revised in response to comments from reviewer 3.

Page 22. Would rewrite the last section to say “our study was confined to two districts in Uganda. These represent typical districts in a resource limited setting etc.” The paragraph has been re-phrased to accommodate the suggested revisions.

Conclusion
The first sentence is not a conclusion from the results described. If it comes then clarify The conclusion has been revised accordingly.

Referee 1
Please describe in a more detail why home-based testing is of such potential significance in terms of HIV prevention. The paper needs to provide more detail on what it means by VCT.
We believe the material presented at the beginning of the background section sets the context for the study and should be maintained. However in the third paragraph on page 7 describes the potential significance of home-based testing i.e. in terms of improving uptake of VCT particularly in resource constrained communities. We have also added content to the background section (last paragraph on page 5, last paragraph page 6 and first paragraph page 7) builds on what VCT means. This additional content clarifies to the reader that the paper refers to client initiated and not provider initiated HIV counseling and testing.

Please provide more detail about the two geographical areas that are being compared. You state that they are comparable because they are both 'average'. Much more information is required to convincingly demonstrate that they are indeed 'average' and comparable. How is average defined for example?

More detail has been provided on the geographical areas under the methods section first paragraph on page 9. Average is defined in terms of health facility coverage and use of out-patient services that include among other HIV prevention and care.

Please provide more information on the questionnaire that was used. Were you adapting a previously validated tool? (if so - which one?). Did you design your own questionnaire? If so - how was it piloted and validated?

On page 10 under the sub-section on instrument we report that the questionnaire use was an adaptation from the instruments (baseline and follow questionnaires) used by the Voluntary HIV Counseling and Testing Efficacy Study Group (ref 27). The questionnaires were only adapted to make them more context specific.

The section on female symptoms of STI sounds a bit odd in the sense that burning urine and itching in the vagina are presented as potential STI symptoms. They may equally be gynaecological symptoms that are unrelated to STIs. How was this form of questioning and content decided upon? Did the questionnaire undergo content and face validation?

This was addressed in view of the comments raised by referee 3 and more importantly cited as one of the limitations of the study.

Please clarify the conclusion to state what the significance of this study was and how it may lead to further research or service development

We have revised the conclusions of the study in view of this comment.

Other revisions
We have also corrected issues related to the language used in manuscript to improve the style of written English.

In the abstract the sub-section on the background has been revised to ensure that readers know the study is the study is about HIV.
Hoping for your kind consideration

Yours sincerely,

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MUST