

## **Author's response to reviews**

**Title:** Reproductive health issues in rural Western Kenya

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**Version:** 2 **Date:** 25 February 2008

**Author's response to reviews:** see over

The Editor-in-Chief  
Regina Kulier  
Reproductive Health

Harare, February 25, 2007

Dear Ms. Kulier,

We would like to thank the reviewers for their work. Please find attached the revised manuscripts (a version with marked changes, and a clean version) and below our responses, in italics, to the comments of the reviewers.

We hope the manuscript is now acceptable for publication.

Yours sincerely,

A handwritten signature in black ink that reads "A. van Eijk". The signature is written in a cursive, slightly slanted style.

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## Report reviewer 1

**Title:** Reproductive health issues in rural Western Kenya

**Version:** 1 **Date:** 24 January 2008

**Reviewer:** Landon Myer

### Reviewer's report:

*Response: First of all we would like to thank the reviewer for his useful suggestions.*

**\*\* Minor essential revisions \*\***

The background part of the abstract is a little stilted ~ MDGs, then HIV and ITNs? Maybe drop the MDGs from this, and save for the main text.

*Response: We dropped the first sentence from the abstract as suggested.*

Abstract: no need to define MUAC if you don't report it in the abstract

*Response: We agree and removed MUAC from the abstract.*

The results section of the abstract should specify "symptoms" of zoster and thrush, unless these were more definitive diagnoses?

*Response: We inserted "symptoms of" as suggested.*

Methods, second para: do you mean "loss to follow-up" or "non-response"?

*Response: We mean indeed non-response here and changed it accordingly.  
Thanks.*

Discussion ~ it would be nice to pick up the thread of MDGs in the discussion (since it was introduced earlier). Specifically, what are the implications of these findings for interventions to achieve the MDGs?

*Response: We thank the reviewer for bringing this up, and added a paragraph on this as follows (at the end of the discussion section, before conclusion):*

*"It is obvious there are many challenges in this area to achieve the MDGs of reduction of child mortality, improvement of maternal health and combating HIV/AIDS, malaria and other diseases. Programs are underway to decrease HIV-transmission, and improve the care for HIV-infected persons. In the antenatal clinics, programs have been implemented to improve maternal health and decrease mother-to-child transmission of HIV. ITNs are promoted and used. Family planning programs are present in the area. It will be important to continue evaluating if the existing programs are optimally functioning, and if the target group is optimally using them; in addition, if programs are not used, it is important to evaluate what barriers*

*exist, and how programs can be changed to achieve their goals.”*

**\*\* Major compulsory revisions \*\***

Results: the results current read as a simple description of proportions/means, etc. While these descriptive statistics are valuable, the authors could greatly enhance the paper by providing a more detailed analysis of the demographic characteristics associated with different reproductive health states. Multivariate analysis is not necessary (but would be nice), but the crude associations between different repro health measures and participant age, education, SES, etc, would be very interesting. This could be reflected in the tables, also.

*Response: Although we had added quite some information with regards to the above in the text, we now changed the tables as well. We split table 1 in table 1 and table 4, whereby table 1 contains the basic characteristics and table 4 contains the different health issues stratified by age. We also examined other characteristics (level of education, marital status, and SES), but concluded that age was the most interesting variable, whereas the others were not associated with any of the health indicators in table 4. There is co-variance between age and gravidity, and for this reason factors associated with age were likely to be associated with gravidity. For some health indicators, the association with gravidity is covered in figure 1.*

*We added the information of (previous) table 2 to the text, and replaced this table with a table showing the univariate and multivariate analysis of factors associated with the use of modern contraceptives (definition and method added to methods section). We looked at factors associated with outcomes in table 3, but did not find an association between marital status, SES or education level and these outcomes, and included this in the text discussing this table.*

The stratification in table 1 according to the availability of SES data is not particularly helpful, and could be mentioned briefly in the text. instead, why not provide a breakdown by participant age groups?

*Response: See above: We agree with the reviewer and removed the SES stratification from table 1.*

Table 2 is interesting, but could also be analysed by participant age/education levels, to give a better sense of the patterning of contraceptive use in the population

*Response: We changed the table as suggested.*

In figure 1, it would be useful to provide the N's for each gravidity category

*Response: We added the N's for each gravidity category.*



## Report reviewer 2:

Discretionary revisions 1. Abstract -End of last sentence: nets....and (high) prevalence HIV -My initial thought was, what is Gem, maybe state it is an area/district.

*Response: We removed Gem and changed it to a rural area in western Kenya.*

The results presented within the abstract would flow better and be easier to read if they were laid out more methodically i.e ITN use, malaria, anaemia, helminths, underweight, contraceptive methods, conception.

*Response: We changed the order of the abstract as suggested.*

HIV rate is stated to be high, but what was the prevalence?

*Response: We added the prevalence as described for Nyanza Province in the Demographic and Health Survey in 2003 to the abstract and the method section.*

1 Background. promotion of gender equality... form a VITAL role, not simply an important role.

*Response: We changed this as suggested.*

2 Last paragraph is difficult to follow and requires some clarification; 17% women delivered with skilled attendant and (instead of whereas) 18% on their own. A subsequent survey here..... (where, when). This needs clarification.

*Response: We changed as suggested, and described timing and place of the surveys.*

3 Methods. Given the ITN 5 yr trial, a long with the follow up is it really necessary to state that malaria is holoendemic?

*Response: We agree that this sentence is superfluous and have removed it.*

-Last sentence re total fertility rate: was or is 5.3%?

*Response: We added "calculated for 2002" to the sentence, to make clear to what year this fertility rate applies.*

-Procedures. To me there needs to be some clarification here. Were the lab technicians/clinical officers trained up to follow study guidelines, were the same practitioners used throughout the study. One clinician's findings may differ from that of another, were there specific procedures put in place?

*Response: the lab technicians and clinical officers (3) were trained to follow the*

*study guidelines, and the same technicians and clinical officers were used throughout the study. All forms were checked before data-entry and inconsistencies were checked by the investigators with the study staff responsible for the forms.*

Write SP in full.

*Response: We changed SP in sulfadoxine-pyrimethamine throughout the manuscript.*

-Definitions & dat analysis. My only concern here was the use of a Swiss ref. pop for the BMI. Is it possible to add note on validity of MUAC/BMI in preg women in Sub saharan Africa

*Response: We used indeed a Swiss reference population because this study presents BMI data by gestational age. It is long known that applying the norm of BMI for adults to pregnant women may not be appropriate, and this is the best alternative in the absence of Africa data on the subject. One might even argue that this reference group may be better than an African reference group given that infectious diseases or nutritional deficiencies are less prevalent in Switzerland. However, the same article we refer to also evaluated BMI in pregnancy by race and concluded that BMI norms of Caucasians can be used for blacks. The MUAC is a common tool to assess nutritional status among African pregnant women (James et al 1994; WHO 1995; Villamor et al 2006). We added to the section on limitations of the study the following sentences: "For the assessment of underweight we used the BMI norms of a Swiss population as reference group; however, the same study also evaluated effect of race on BMI in pregnancy and concluded that BMI norms for Caucasians can be used for people of African origin. The MUAC is a common tool to evaluate nutritional status among African women."*

-Could all these women read & write their names or were thumb prints used for consent?

*Response: No, not all women could read and write, and when women could not read, the consent form was read to them, and they made a thumb print in the presence of a witness. We changed the last sentence of the method section describing this process as follows: "All women who participated gave written informed consent after reading through the consent form with the interviewer; participants who could not write indicated their consent by a fingerprint in the presence of a witness."*

4. Results.

-As thrush & herpes used as indicator or HIV status, could the 16% be an under-estimate?

*Response: We mention in the 2<sup>nd</sup> paragraph of the discussion that this is likely to be an underestimate.*

-Bed net use. If 93% sleep under ITN 5x/week. What is the 69%, isn't 5x/week regular?

*Response: 69% as mentioned in the section "Bednet use and antenatal care during pregnancy" refers to the regular use of an ITN over the total population (n=673), whereas in the first sentence we talk about the % among the women who reported to have a bednet (n=509). To make this clear, we changed the sentence as follows: "In the total study population, 69% of women used an ITN regularly."*

5. Discussion.

My main concern here is the mentioning of low condom use in sexually active women. How were these women asked? If asked in a FP context they may state that they did not use a condom, but if asked if they had used protection against HIV the results may be different.

*Response: The way these women were asked is reported in the result section and is as follows: "Before the current pregnancy, had you used any method to delay or prevent pregnancy? If yes, which method have you used?" It is indeed possible that results may be different if they were asked if they had used condoms to prevent HIV. Nevertheless, the low use of condoms is of concern.*

-Couple of typos in paragraph 3.1st sentence: ...history with (a) high reported... Last sentence:...interventions (are) needed...

*Response: We thank the reviewer for noticing and reporting, and have corrected the errors.*

**Reviewer 3 did not require changes.**