Author's response to reviews

Title: Peer education: The effects on knowledge of pregnancy related malaria and preventive practice in women of reproductive age in Edo-State, Nigeria.

Authors:

Petra F Mens (p.mens@kit.nl)
Pauline F Scheelbeek (pscheel@kit.nl)
Ehije O Enato (ehijeenato@yahoo.com)

Version: 2 Date: 20 June 2011

Author's response to reviews:

To Dr. Chris Drakeley
To Mr. Victorino Silvestre
Editors
BMC Public Health

Dear Dr. Drakeley,

Please find enclosed the revised manuscript Peer education: The effects on knowledge, and preventive practice of pregnancy related malaria in women of reproductive age in Edo-State, Nigeria. (MS: 7430221085302267)

We adjusted the manuscript following your suggestions. In addition we revised the manuscript in the light of the reviewers comments. A point-by-point response to the reviewers’ comments and a summary of the changes that were made to the manuscript are given below.

Reviewer 1

1) The reviewer comments that the paper cannot draw conclusions on the effect of peer education on preventive practice of malaria in pregnancy as there is not enough data to support this in the manuscript. The reviewer states that the same holds for the conclusion that peer education can lead to an increase in knowledge but not necessarily an increase in preventive practice. We agree with these comments and have now rephrased the conclusion into: This study found that the knowledge of malaria in general was high but that of malaria in pregnancy and its preventive measures was low. In addition, uptake of antimalarials to prevent malaria in pregnancy was also found to be low.

The peer education campaign had a significant impact in raising the knowledge of women of child bearing age on malaria in pregnancy and its preventive
measures. There were, however, limited data to assess whether this increased knowledge also translates in increased uptake of the preventive practices. Future studies and health interventions should thus consider other factors influencing preventive practices such as knowledge, structural barriers and lack of prevention tools (bed nets, nearby health facilities) and should address these issues as well.

2) The policy context of this research is now more detailed and includes issues such as what malaria prevention interventions are being promoted and through which delivery channels. It now states the following: IPTp and ITNs are key components of the National Malaria Control Program of the Nigerian Ministry of Health, and these strategies are expected to reduce the intolerable burden of malaria during pregnancy in the country [19]. The Nigerian government promotes IPTp for pregnant women however not all states are distributing these for free when women visit the ANC whilst pregnant yet. In addition regular ITN advocacy campaigns are being held including free distribution to pregnant women often in collaboration with local NGO’s. Despite the evidence of the successes of ITNs and IPT-sp, the uptake and coverage in Nigeria is surprisingly low [5-7, 14] and thus reasons for the low uptake and subsequent measures to increase the uptake are being sought..

3) In the methods section more details about the intervention is given. The following is added to the manuscript: They were given information on what is malaria, how is it transmitted, how can malaria be prevented etc and special attention was given to the risks of malaria in pregnancy, the need to attend ANC’s, the use of SP to prevent malaria during pregnancy and they were instructed on the importance and the use of bednets. Also tools such as a “ten commandments on malaria in pregnancy list” stating the ten key messages on malaria in pregnancy and a booklet with tips on how to organize peer to peer sessions were given.

The sessions the peer educators gave consisted of house to house visits and group discussions organized by the peer educators themselves. In addition two rallies were organized, one in each LGA, in which the peer educators also spread their knowledge via discussions and workshops.

4) The information on the sampling and actual recruitment has been separated and the relevant sections are now transferred from the methods to the results section.

5) More details on how the knowledge score was constructed is added. The knowledge scores is a percentage of correctly answered questions out of total answered questions, taking into account the difficulty of the question: correctly answered multiple choice questions were awarded with 1 point, where open questions were granted up to 3 points. This is now added to the manuscript.

6) Within cluster dependency was taken into account in the mixed model analysis. This is added to the methods section. This section now states: Mixed model multivariate regression analysis, controlling for dependency per individual
and per household, was performed to investigate the association between the education campaign and level of knowledge of malaria in the community, adjusting for socio-economic and demographic confounders.

7) The reviewer is missing information on women who dropped out. The reviewer states that in order to interpret the analysis it is important to show the characteristics of all those interviewed in both surveys and to know more about who dropped out. After redoing the analysis it showed that there is not a great difference in the characteristics and responses of the whole population in comparison with the group that has been interviewed twice. We have stated this in the discussion and added a remark in the discussion that one has to be careful doing this. As the problem of missing records mainly is due to visitors these results could have been confounded by the fact that the visitors could have come from different policy surroundings/states or have been exposed in the past to different information channels.

8) In order to avoid confusion about what the numbers in table 3 are about “N=1105 women interviewed before and after the intervention” is added to the title of the table and in the text. In addition more basic information is added to the table.

9) Indeed table 4 only presents information from the ‘pre’ interview. No post intervention data is given as this data is based on women who are pregnant during the study or who have been pregnant before. Although this list of answers is indeed not a proxy for the effect of the peer education campaign it does show where at baseline there is lack in preventive practice at baseline and that an increased uptake is desired. We agree with the reviewer that it would be good to have an insight at the effect peer education on pregnant women before and after the campaign but the numbers of women who were pregnant at the start of the campaign were too limited to do this analysis. We therefore suggested in the discussion to do a follow up study with specific focus on this issue.

10) The discussion has been revised and potential biases in the estimation on uptake of interventions such as recall bias and/or responses reflecting different policy environments are discussed.

Reviewer 2

1) The abstract has been rewritten and shortened to a 232 words and has been restructured. The section on the results now reads: In the pre-assessment women on average answered 64.8% of the question on malaria and its possibility to prevent malaria correctly. The peer education campaign had a significant impact in raising the level of knowledge among the women; after the campaign the respondents answered on average 73.8% of the questions correctly. Stratified analysis on pre and post assessment scores for malaria in general (68.8 & 72.9%) and MIP (61.7 & 76.3%) showed also significant increase. Uptake of bed nets was reported to be low: 11.6%

2) The section on data analysis in the methods section is revised and restricted
to the statistical analysis of the data.

3) The reviewer suggests that the result section should be an interpretation of the data and a systematical and sequential description of the obtained results. In the original manuscript we have chosen not to do this for all the results as this would in our opinion be a repetition of the results presented in the tables. We have now revised the manuscript by adding a narrative part in the results section on the in our opinion striking or interesting results. Also we have made a narrative part on the characteristics of the respondents.

4) Parity data of the women is not available and therefore could not be included in the characteristics table or be part of the analysis.

5) Where missing percentages and statistical values of data and levels of significance were added to the text as well as to the tables. Table 3 has been revised.

6) Wherever possible we have included pre and post intervention data and all women of reproductive age as the reviewer suggests. However as also mentioned in the comments of reviewer 1 for the sub section for the results on women who have been pregnant during the intervention the sample size is too small to do a pre and post intervention analysis. For table 4 (preventive practices amongst pregnant women only the women who have been pregnant were included and not all women of reproductive age as these questions can only be answered by women who have been pregnant or are pregnant at the moment of survey.

7) The reviewer mentions that the discussion should be based on the actual results obtained in this study. We agree with this remark. Also the reviewer comments that “All the results should be taken one after the other and elaborately discussed. In essence we also agree with the reviewer however we feel that it is not necessary to discuss every single result one by one. We have chosen to discuss the striking results and those results that are in contrast with other papers. Although in our opinion we have done this already in the first draft we have now revised the paper and added an extra comparative sections between our results and previous studies. In addition references regarding this discussion are added to the manuscript

Minor revisions:

1) In the background "Sulphadoxine Pirmethamine" now reads "Sulphadoxine Pyrimethamine"

2) line 3 of the methods section is now changed in: consent was asked from 2112 eligible women” and in line 6 "post measurement” is changed into "post assessment"

3) the second paragraph is rephrased into: Overall knowledge of both malaria prevention in general and on malaria in pregnancy was low. However, almost all (>90%) women had heard about malaria and the way it is transmitted.
4) “preventative measure uptake” is changed into “preventive measure uptake”

5) The reviewer suggested to rewrite Paragraphs 3 and paragraph 4 of the discussion section in order to make more sense. However unfortunately the reviewer did not make any comments on what part of these paragraphs are not making sense at the moment. However we have made some changes in the discussion including paragraph 3 and 4 and trust that these now do make sense to the reviewer.

We hope that these changes are sufficient and that the manuscript is now ready for publication.

Yours sincerely,

On behalf of all authors,

Dr. Pètra F. Mens,

Koninklijk Instituut voor de Tropen (KIT) / Royal Tropical Institute
KIT Biomedical Research
Meibergdreef 39
1105 AZ Amsterdam
The Netherlands
Phone: +31.20.566.5463
Fax.: +31.20.697.1841
E-mail: p.mens@kit.nl