Author's response to reviews

Title: Beneficial Newborn Care Practices in Rural Eastern Uganda: a Cross-sectional Study.

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Author's response to reviews: see over
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The Editor,
BMC Pregnancy and Childbirth

Dear Editor,

Re: Response to the Editor’s Comments for Manuscript#: 1261033346145405

We thank you for reviewing the above-mentioned Manuscript and for providing us with an opportunity to revise changes we did not adequately address in our previous version.

We have addressed the comments raised in the previous Manuscript and provided a point-by-point response to the comments raised. We have also used this opportunity to make typographical, language and statistical improvements in the revised version.

We look forward to receiving your further guidance on this subject.

Regards,

Owor Michael Odoi
Corresponding Author
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| #6a     | In the chapter "Statistical analyses" I miss the indication which statistical tests have been used for which purpose, and which significance level was chosen.  
Authors' response: We thank the Editor for making this important observation. We have now included information on the statistical tests used and explain how the significance levels were chosen. Specifically, we used the maximum likelihood ratio test ...  
SE: You have used maximum likelihood estimation for the model parameters, e.g. the adjusted odds ratio. The statistical test is view called "likelihood ratio test", not "maximum likelihood ratio test". Please correct text and footnote to the table accordingly.  
*Authors’ response: We thank the Editor yet again for this observation. We have corrected the text to read, ‘likelihood ratio test’ (page 8, lines 166 and 169) and provided a footnote at the bottom of Tables 3 (page 27) & 4 (page 29) as advised.* |
| #6b     | I understand that the sample was comprehensive - all 1616 mothers were included. It would be useful to present a power calculation - which difference or odds ratio can demonstrated as significant at the 5% level with such a sample size.  
Authors' response: Our study aimed at assessing the prevalence of use of beneficial newborn care practices and the factors affecting their utilization in two districts to inform the design of a maternal health intervention in the two districts. The power of the intervention to detect a difference in the utilization of beneficial newborn care practices between the two districts will be determined at an appropriate time.  
SE: My request to present a power calculation was not based on any intervention. Even in an observational study it is good practice to reflect on its statistical power. You have, for instance, studied the influence of education on the outcome of your choice. The question then is: which difference between education level is a study of this size able to identify as significant at the 5% level?  
*Authors’ response: We thank the Editor for this observation. We have now included a power calculation based on post-hoc statistical analysis. We estimate that the study has got a power of 80.5% to detect a significant difference in the utilization of all beneficial newborn care practices between the two districts at an alpha level of 0.05. The text has been amended to reflect this (see page 9 (line 178-9) for details).* |
| #7      | Lines 228-230: "distance to health facility (Do not know vs. ≤ 5km: OR=0.62,95%CI=0.43,0.89) were significant predictors of utilization of all beneficial |
newborn care practices among mothers." This is difficult to understand - an unknown distance protects against beneficial newborn care compared to a short distance. I think this should be presented as inverse, i.e. short distance predicts beneficial care. Not sure that unknown distance is a good category - should it not be short vs. long distance?

Authors’ response: We thank the Editor for raising this issue. We have reversed the reference category in order to have “distance unknown” as the reference category as opposed to our earlier analysis where the reference category was ≤5km. Using the new reference category, we found that the adjusted OR associated with living in a distance ≤5km was 1.57 (95%CI: 0.99-2.51) while that associated with living in a distance of >5km to the health facility was 1.69 (95%CI: 1.00, 2.85). Based on these data, we can infer that living in a distance of >5km from the health facility was associated with using all beneficial newborn care practices. We have amended the text to reflect this level of description. (Please see page 10, lines 313-320 for details).

SE: This is not what I wanted to suggest. I think what one would like to compare is "women living close to health facility" with "women living far away from the health facility" - because distance is a meaningful determinant of health service utilisation. One could in theory compare "women living in a known distance to the health facility" with "women living in an unknown distance to the health facility" - but how should one interpret such a comparison as long as it is unclear why the distance is known for some women but unknown for others. To compare "women close" with "women unknown" and "women far" with "women unknown" - and that is what you are doing now - does not make sense to me. Unfortunately, the category "women living at an unknown distance" is the by far largest category - had it been only a few women in this category I would have suggested to eliminate these observations. In the end, because for most women distance is unknown, you can't say much about the distance at all, and you should therefore not include this variable in the model and discuss its absence as a limitation of your study. Among the relatively few women for whom distance is known you could in a bivariable analysis compare "close" with "far" - does not look like there is much of a difference.

Authors’ response: We performed a bivariate analysis for women whose distance was known and compared the odds of utilizing all beneficial newborn care practice for those who delivered from a facility ≤ 5 km vs. >5km. There was no observed significant association (see page 10, lines 215-16; and Table 3, page 27). On the basis of this observation, we were unable to include this variable as a covariate in the multivariable analysis. Again, while it would have been preferable to discuss the limitation posed by many women not knowing the distance to the facility where they delivered from, we have opted to keep any reference to distance outside the discussion section.