Reviewer's report

Title: Rural Tanzanian women's awareness of danger signs of obstetric complications

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Reviewer: Jean-Christophe Fotso

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The paper seeks address an important topic: the recognition of danger signs of obstetric complications. As the authors rightly acknowledge “Awareness of the danger signs of obstetric complications among pregnant women and in their communities is the first step to accepting appropriate and timely referral to essential obstetric and newborn care, thus, reducing the first and second phases of delay”. The issue being investigated by the authors is quite relevant to public health efforts to improve maternal health in developing countries and seek to achieve the fifth MDG. This notwithstanding, key issues need to be addressed or clarified before the manuscript is deemed publishable in the BMC-PCB journal. I detail below the key weaknesses of the paper.

Major Compulsory Revisions

Quality of writing: Though ideas contained in the Introduction section are quite relevant to the issue being examined, the writing is rather poor and the whole section looks like a collection of sentences with weak interrelations between them.

Sampling method: The authors fail to describe how the women who had been pregnant during the previous two years were identified in the 12 selected villages.

Sample size: This section is not clear and is probably irrelevant, unless the authors seek to justify the number of villages selected to reach a target number of women. If this is the case, it should be part of, and come before, the description of the sample design.

Data collection: It would be good to describe briefly the issues covered by the questionnaire. Most of the current writing (e.g. review of questionnaires and correction or errors) may not be necessary as these are routine activities in all data collection undertakings.

Variable definitions: This section actually describes the content of the questionnaire. In this section we expect to see the definition and description of the dependent and independent variables used in the study.

Data analysis: It is not clear what the author seek to achieve with both the Chi-square test and the bivariate logistic regression. Importantly, the authors mentioned the design effect which is inherent to multi-stage sampling frames, but
do not say anything about how they account for the clustering of observations (village or ward effects). If the number of Vitongoji is enough (e.g. 30 or higher), one approach might be to use multilevel model (two levels: women nested in vitongojis). Also, it is not always advisable to remove from the multivariate analysis the variables that were did not reach statistical significance in the bivariate investigation, partly because this would lead to over-estimating the net effect of the remaining variables. Besides, it some cases, variables insignificant in the bivariate model may become significant in the multivariate analysis.

Results section: The section is quite slim compared to other sections. The fact that the variable “advice to deliver in hospital” was not significant deserves further explanations. Unfortunately, the authors chose to only highlight results that were expected (education, number of deliveries, number of ANC …).

Limitations of the study: Not mentioned. For example, the coding of women’s responses to open-ended questions to exhibit the danger signs therein may introduce a bias, because in a way, the coder is trying to give a meaning to the responses.

Conclusion: In its present form, the conclusion section looks rather flat. A recommendation to increase provision of formal education to all women sounds simplistic. Why not emphasizing the need for improved health education during ANC visits, or sustained health campaigns in the community? What do the authors mean by “individualized according to the women’s needs”?

Minor Essential Revisions
Introduction, first sentence: It is not advisable to use a Tanzania study (Reference 2) to illustrate a global health problem.

Study design section: The section is too short (a one-line sentence). It could be merged with the following section.

Setting section [1]: A few sentences could be removed as they lack relevance to the subject on interest. For example why is the fact that “Each village has hamlets (Vitongoji) under the leadership of a hamlet chairperson” important?

Setting section [2]: After Rufiji district, a space before the phrase “one of six ..”

Data analysis: Replace “logistical regression” with “logistic regression”.

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**
I declare that I have no competing interests