Reviewer's report

Title: Effect of Home-Based Counselling on Newborn Care Practices in Southern Tanzania: a Cluster-Randomised Controlled Trial One Year after Implementation

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Reviewer: Gertrude Namazzi

Reviewer's report:

Overall this is a good manuscript presenting scientifically sound work that gives an insight on use of community volunteers to cause behavioural change for newborn care practices. However I propose some revisions for the authors’ consideration for improvement of the quality of the article

Background:
• This can be enriched by a brief description of the maternal and newborn health situation in Tanzania and the policy environment.
• The objective of the study is clear but the rationale of the study needs to come out clearly

Methods:
A good attempt has been made to describe the methods, however;
• Under Design and implementation of the INSIST intervention section the phrase ‘see for example’ could be deleted. The statement ‘The development of the intervention will be reported separately’ is not necessary and authors may consider omitting it since a brief description is given
• The implementation period is not clearly stated. Although it is mentioned that piloting was in first half of 2010, followed by recruitment and training of 800 volunteers, one wonders for how long such preparatory activities took before implementation.
• Under the implementation the authors mention that ‘for home births the volunteers were trained to measure foot size as a proxy for birth weight’ yet the results for low birth weight babies describe them as perceived ‘smaller than normal at birth’ by their mothers. Thus making it un clear whether the volunteers ever measured the foot lengths of the babies born at home
• Data collection and quality control: Were the data collection tools pretested? What were the exclusion criteria?
• Data Analysis: Be more specific on how you adjusted for clustering

Results:
Coverage of home-based counselling visits:
• The data are silent about the proportion of women who received the three CHW
visits in pregnancy and those who received the two visits after delivery. Since each visit had targeted messages for behavioural change it is important to know the coverage of the prescribed visits in order to understand the effects of the intervention better

• There were 12 smaller than normal babies in the intervention area but there is no mention on the extra visits they received by CHWs or results of foot measurement

Discussion:

• Although the authors made comparisons with other studies, they did not give explanations in areas where their findings varied. Where they attempted for the low babies breast fed within 1 hour the explanation (paragraph 6) of ‘the different categories for answers to questions on breastfeeding initiation’ is not clear

• Explanations and implications for the low uptake of some practices like drying and wrapping of babies < 5 minutes after birth need to be pointed out- what are the lessons from the study for the readers?

• Limitations and mitigations specific to the home-based counselling intervention are not mentioned

• Weaknesses in the health system are acknowledged but no mention of strategies put in place to mitigate them in the intervention area

Abstract:

• Background: The statement that ‘we developed a counselling intervention in rural southern Tanzania: trained volunteers made home visits during pregnancy and after childbirth to promote recommended newborn care practices including hygiene, breastfeeding and identification and extra care for low birth weight babies’ fits better in the methods than background. I suggest that this statement gets shifted to the methods section of the abstract.

• The conclusion where the authors mention that a volunteer-led home-based counseling strategy, supported by the health system; the health system support does not appear in the methods

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I have no competing interest