Reviewer’s report

Title: EFFECT OF MOBILE-HEALTH ON MATERNAL HEALTH CARE SERVICES UTILIZATION IN EASTERN ETHIOPIA: STUDY PROTOCOL FOR RANDOMIZED CONTROLLED TRIAL

Version: 1 Date: 15 Nov 2017

Reviewer: Gianfranco Di Gennaro

Reviewer's report:

I consider this study of sure interest in its field. Anyway, several aspects has to be clarified.

First of all: the study population. In your exclusion criteria I find "those mothers who are critically ill". This sounds to me as a very large criterium.

What does "critically ill" mean?

With the aim of having more powerful results and improving the external validity of this study, I suggest to define more carefully the mothers who can't receive this type of intervention.

Secondly, in your sample size determination and statistical analysis, you don't consider the design of the study. This is a clustered trial (two districts, more health centers) and the data structure has to be accounted. In the sample size calculation you have to quantify the "design effect". In the analysis you have necessary to account the cluster introducing at least cluster as fixed or random (preferably random, in my opinion) effect.

You have data collection in three phases: don't you think it could be possible to have ad interim looks to the data and consider possible stopping rules for the study?
Concerning the primary outcome: you call it "level of antenatal...". It's only my opinion, but this could be misleading for the reader in that it sounds like a continuous measurement. I suggest to use the word "proportion of antenatal..."

Lastly, sometimes in the text I found errors (or misprints): for example, in the chapter "statistical methods" I found "Q-square test" instead of "chi-squared" or "kaphan-meier insted" of "Kaplan-Meier". I suggest to double check English carefully.

In the end I want to thank you for this study. It was interesting for me to read it. I hope you will consider my revisions and to receive back the new version soon.

**Level of interest**
Please indicate how interesting you found the manuscript:

An article of importance in its field

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Needs some language corrections before being published

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