Author's response to reviews

Title: Availability and components of maternity services according to providers and users perspectives in North Gondar, northwest Ethiopia

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Author's response to reviews: see over
To: Editorial in Chief

BMC Reproductive Health

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Subject: Submitting a revised version of the manuscript

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We would like to thank the editor and reviewers for sharing their experience and constructive comments. The comments are very important which will improve the manuscript. The point-by-point responses for each of the comments and the revised manuscript are provided in the attached documents.

With regards!
**POINT-BY-POINT RESPONSES FOR COMMENTS**

Title: Availability and components of maternity services according to providers and users perspectives in North Gondar, northwest Ethiopia

**Reviewer 1** (Dr Marion Koso-Thomas)  (6545178339895272 or 4727837249895267)

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<th>Comments</th>
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<td>Major Compulsory revisions</td>
<td>Comments accepted and revisions are made</td>
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<td>The authors need to clearly define the goal of the survey. They report the availability of maternal health services as being important for maternal survival but in actuality, the provision of signal functions are more relevant than antenatal care. They may consider redoing the paper with the objective of describing signal functions and write a different manuscript on general maternity services. Table 1 describes the availability of basic and comprehensive obstetric care and I suggest the rest of the paper should reflect that.</td>
<td>More clarification is provided for the objective of the survey based on the following concept. As we tried to mention on the justification part, increasing coverage of maternity services like ANC, delivery and postnatal care is not guarantee to achieve the goals of maternal health care (reduction in morbidity and mortality). Rather, maternal service utilization is meaningful if women received important service components at the time of their maternity care. This study was mainly focused on whether important service components are provided or not in both routine and emergency situations according to the levels of the facility. For the routine maternal services, the provisions of important service components of ANC and delivery care were assessed. Similarly, for the emergency conditions, the signal functions of facilities were assessed. The scope may be wide when we include emergency obstetric care signals and components of the routine obstetric care like ANC. However, readers can learn the overall quality of maternity service provided by the facilities.</td>
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There is no table or figure that shows the linked facility population- based data.
- Tables and 3 and 5 are not sufficient for that purpose.

This approach significantly helped us to address our objective specified in this paper (to clarify findings). Here, the linked survey gives us an opportunity to evaluate the services of the same facility two times (during our facility survey and from the users report during the population survey) that is not possible in the case of the stand-alone facility survey. The linked data (both supply and demand factors) were also utilized for analysis of determinant factors for utilization of maternal health services in a paper “Factors
The authors do not seem to have utilized the manual appropriately to determine the methodology for this type of survey. I recommend that they revisit the manual and improve on the design of the analysis. If they feel they have done this adequately, they need to describe which of the approaches outlined by the manual they used.

More descriptions about the method is added
With regard to the concerns raised, the descriptions on the method part may not address all the method details used in different manuscripts prepared. To give more clarification, this manuscript is part of the big PhD research project.

According to the manual, about five sampling approaches have been proposed for collecting linked facility and population-based data. Among the listed options (in chapter five), we used the third one (“Determine the nearest facility, or facilities, to each population-based survey PSU and conduct the facility survey in all identified”). In this approach, the sample size is improved by assuring that the number of facilities is no less than the number of population-based clusters. Based on this recommendation, we have identified one basic essential obstetric care facility (health center utilized by the cluster population) for each selected cluster (Kebele). In addition, all the three hospitals found in the Zone were included.

This approach helped us to collect detailed information about individual service components from the provider and user sides.

If estimating the effect of supply factors (program impact) on a certain outcome (in our case maternal service utilization) is needed, the standard method of analysis in such kind of survey is multi-level or contextual analysis. In this case, the linked facility and population surveys provide information about determinant factors at different levels and it allows measuring their effects on the outcome of interest at the individual level. Based on this fact, we also applied multilevel analysis in our published paper mentioned earlier.
They used the perspective of health users and health providers which in and of itself is acceptable but the results and conclusions need to be reported cautiously. Tables that do not seem relevant (Table 4) and tables that can be truncated (Tables 3 and 5) will allow for more space to include these. There appears to be a 2 fold question being asked and the manuscript should be structured as such.

• The issue of the availability of the components with the population-based link
• The description of the type of service (essential vs. basic vs. comprehensive)
The survey cannot be used to measure functioning based on the data collected.
The authors need to clarify otherwise delete this statement. Subjective interviews on training and skills does not infer adequate quality of care.

**Minor essential revisions**

such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct

**The editorial and language use were corrected with the assistance of an experienced language editor.**

There should be consistency in the terminology used. Table 5 is titled Essential Services whereas the text describes antenatal care, postnatal care, basic care and the like. What does the author consider to be essential care and is this based on health policy or Ministry of Health definitions by the Ethiopian government? What is the standard being used to define these as

**Corrections made based on comment**

• The word essential refers important service components under delivery or ANC (interventions or services supported by evidence). Now it is revised.
• The definition of skilled maternal care is taken from WHO document (making pregnancy safer: the critical role of the skilled attendant. A joint statement by WHO, ICM and FIGO in 2004). It refers to the care provided to a woman and her newborn during pregnancy, childbirth and immediately after birth by an accredited and competent health care provider.
• As mentioned on the limitation part, some women
“essential “services? I am unclear what the term “skilled maternal care “is. Also inconsistent use in the tables – doctor, health officer, midwife / nurse. How would the health user be able to differentiate?

| There is mention of health officers but is unclear what category of health provider this is. The authors need to include a description of their qualifications or skill. | Comment accepted and descriptions about the qualification of health officers provided
Health officers are those trained for four years to get their Bachelors degree and they work as clinician in the rural set up (health centers). |
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<td>The author used population-based survey that included women with births in the last year although the methodology in the manual and the author’s text recommends concurrent surveys. What was the rationale for using skilled antenatal care and delivery care as opposed to pregnancy and immediate postpartum in January to March of 2012 for your sample? It appears that an unnecessary recall bias was introduced.</td>
<td>The data collection time was so long to cover the dispersed clusters which were located in six districts of the zone. However, the month of the data collection was the starting period to count one year back for each woman (similar for all women). During our data collection, clusters and their linked facilities in four of the districts were surveyed in January. The other district (two clusters and their facilities) was covered in February. Lastly, the most difficult district (two clusters and their linked facilities) was covered in March.</td>
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| There are several statements (paragraph 4 and 5 of the background) that are not referenced properly. | Statements are checked and corrections are made
The first two/three statements we used to introduce contents of the paragraphs. Now some of them are deleted. |
| The second paragraph of the results section is unclear with regards to the percentages reported. Are these the percentage of equipment or facilities with missing equipment? | Comments accepted and statements are revised
The percentages were facilities which have no the listed item. |

Thank you so much!
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<td>Minor essential revisions</td>
<td>All comments are well taken and recommendations are incorporated</td>
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| **Abstract**<br>Line 2: can you please specify the language used. "kebele" means clusters or districts? For me you have to give more precision about this. | More descriptions about kebele are added in the abstract and method part.  
In Ethiopia ‘Kebele’ is the lowest administrative unit (having clear geographical boundary and administrations) with an average population size of around 5000 and 1000 households. In our study, we used as cluster. It is frequently used for such purposes. |
| **Background (Method?)**<br>Paragraph 2, line 4: it is about the recall. Did you meet some difficulties? Give precision? | The issue is addressed in the limitation part  
To reduce the recall bias, only women who gave birth one year preceding the survey were included. Some women also faced difficulties to differentiate the type of skilled providers who gave them care. Fortunately, health care providers were well known by data collectors (residents of the kebele) except those providers working at the hospital. This helps data collectors to reduce the problem by considering some clarifications. Errors may occur in knowing the categories of health professionals, especially for those served at hospital. However, there were no serious difficulties in categorizing service providers as skilled or non-skilled, so it did not affect the interpretation of results. In addition, we believe that the design in the flow of the questions and training of data collectors contributed to reduce the problem. So, the potential limitations were minimized. |
| Paragraph 3: you performed observation. Can please give more precision how you do it and how you analyze the information? | Based on the comment, clarification statements added.  
As we mentioned in the method part, observation was one of the components of the facility survey tool. Infrastructure, equipment, drugs, and supplies including laboratory tests were observed using a checklist. Based on adequacy and functional status, most of the findings were rated as 0) not available (not functional), 1) available but unsatisfactory and 2) available and functional. Though we did not present all the tables in this paper, we have analyzed the collected data according to the categories of recorded findings. Our facility assessment tools were adapted from WHO Safe Motherhood Needs Assessment methodology and Family Health International facility survey tools. |
Among women who gave birth one year preceding the survey, 538 and 231 of them received antenatal and delivery care from skilled providers, respectively. These were interviewed about components of the services.

Yes, the consent form was prepared according to the local language in a way understandable by respondents and efforts were made to reduce related problems. I share the experience you have. Respondents may not be comfortable, especially when they requested to sign on the form. However, the problem can be minimized when respondents believe that their response is strictly confidential. We did this major solution during our survey. Mothers were also comfortable to discuss and understand concerns since they were interviewed in their home by data collectors recruited from the same kebele. We expect that being familiar with the community norm/language and their training can help data collectors to clarify statements without difficulty.

**Conclusion:** I think you must discuss more the results. You have good results and it is possible for you to make strong recommendations or propositions for policy makers. Also, to achieve MDG, skilled birth attendance could be a good strategy and you must evoked it in your discussion or conclusion.

**Table 2:** please review the alignment of the numbers.

Many Thanks!