Reviewer’s report

Title: Institutional delivery service utilization in Munisa Woreda, South East Ethiopia: a community based cross-sectional study

Version: 1 Date: 23 February 2012

Reviewer: Amie Wilson

Reviewer’s report:

This is an interesting question, and a highly topical subject. It is clear the authors appreciate the importance on birth within a health facility, however for the readers that do not understand the importance of institutional birth (I am thinking of a typical UK middle class audience, who have romantic ideas about homebirth), it would be very helpful to mention some of the reasons as to why it is important.

- Major Compulsory Revisions
The author must respond to these before a decision on publication can be reached. For example, additional necessary experiments or controls, statistical mistakes, errors in interpretation.

1. Is the question posed by the authors well defined?
1) Introduction: I feel it would be helpful to use a single term when discussing institutional birth. Stating ‘skilled health worker’ and ‘skilled birth attendant’ and ‘skilled personnel’ could have different meanings. Although this may not be applicable to this setting, ‘skilled birth attendants’ may attend births in the community and at women’s homes, so may not be synonymous with institutional birth (the outcome being measured). Thus I think it is important to focus on the outcome being assessed (institutional birth) for improved clarity for the reader.

2. Are the methods appropriate and well described?
2a) Methods, 2nd paragraph – Details of excluded women have been omitted, the authors have not provided an inclusion or exclusion criteria. The reader should know if any women were excluded, or if all women who gave birth in the last 12 months were included? Furthermore, what gestation were women deemed suitable for inclusion from? What about women who had pregnancy losses or still births, were these included too?

2b) Methods, 4th paragraph – The manuscript could be enriched by providing important information about how women were women approached, and the place in which the interviews took place?

2c) Methods 4th paragraph – The authors do not state how the AOR were adjusted, and what they were adjusted for. This would strengthen the findings.
3. Are the data sound?

3a) Results 1st paragraph-AOR are reported in the results in the abstract but not in the main text, these important figures should be reported in the main results.

3b) Introduction - The authors state that adjusted odds ratios (AOR) were used, yet details are not provided on what was adjusted for.

3c) The authors state that ‘mean age’ is associated with institutional birth, but it is not clear if this is the age at first pregnancy or age of the mother at interview. This data would be helpful.

3d) 3rd paragraph - Antenatal clinic visit: this outcome may be affected by the gestation in which the pregnancy progressed to, therefore it should be stated in the inclusion criteria the gestation in which women were included or excluded from the study.

3e) Table 2:

Assistance during home delivery: How did the authors decide if TBAs were trained or untrained, did the authors rely on women to inform them, if so how did they ensure this report was accurate?

Age at first pregnancy: Age is a continuous variable, there is no explanation given by the authors to why it is presented as a categorical variable (e.g. <20 and >20). Was a statistical method used to decide on this?

Parity: The same applies for parity, this is a continuous variable, why is it presented as a categorical variable (1,2-4,>5). The authors do not provide a reason for this

Number of ANC visit: The same applies with this continuous variable – no reason is provided.

3f) Table 3:

Legends: While the data is interesting the table is not adequately labelled with legends to enable easy interpretation by the reader. The abbreviations AOR and COR need to be spelt out fully so the reader can understand what is being reported.

Percentages: Percentage of the variables (rather than just the numerical values) would help the reader understand the proportion of women in each variable.

AOR: The authors do not say what has been adjusted for in the analyses (AOR), if all of the variables have been adjusted for or just a select few.

Variables: The questions regarding the reasoning for using categorical variable in place of continuous variables also arises here (distance from health institution, age, family size, parity). The authors should provide a rationale for this.

5. Are the discussion and conclusions well balanced and adequately supported by the data?

5a) While I found the paper interesting I do not feel it added much in terms of illumination. The conclusions that the authors have drawn are not particularly
strong or precise.

5b) Table 3 is particularly interesting (especially if confounding factors were adjusted for), yet there is no mention of this within the results, references are only made to table 1 and 2. It is a shame that potentially the most important data is not acknowledged anywhere else other than in the abstract.

6. Are limitations of the work clearly stated?

6a) Bias: The authors do not consider any potential sources of bias. This may be particularly pertinent for the question relating to reasons given for home delivery (results; obstetric characteristics, paragraph 2). For example if the husband or relatives are present during the interview, and did not allow the woman to attend an institution for delivery she may not state this. This could also be true of asking women if they had had an abortion previously – the truth of this reporting could be also affected by the legal status of abortion in the region, the sex and occupation of the interviewer. The interviewer may have an impact of the information given, such limitations are not acknowledged.

6b) Result 3rd paragraph – Antenatal clinic visit: this may be affected by the gestation in which the pregnancy progressed to, thus it would be helpful to say in the inclusion criteria the gestation in which women were included or excluded

6c) Table 3: The confidence intervals on some outcomes are very wide (e.g. age of the mother: COR: 4.38, 44.9; AOR: 1.54, 23.78), the authors do not acknowledge this, or do not provide possible reasons for this.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?

7a) YES: The authors nicely acknowledge previous work on this topic conducted in other areas as given in the discussion paragraphs 1 and 2

- Minor Essential Revisions

The author can be trusted to make these. For example, missing labels on figures, the wrong use of a term, spelling mistakes.

1) Introduction: I feel it would be useful to use a single term when discussing ‘skilled Birth attendant’, as ‘skilled health worker’ and ‘skilled birth attendant’ and ‘skilled personnel’ could have different meanings, this would avoid confusion for the reader.

2) Background: The statistics given in the background paragraph 1 do not comply with reference number 1, the reference source gives different figures. The authors give the figures 1:22 and 1:7300, and the WHO report says 1:31 and 1:4300.

3) Paragraph 2: authors say the stats are less than 1% with this reference, this is correct for reference 2, but reference 1 gives the figure as 1.7%

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
4a) The authors may find the STROBE checklist helpful for assistance in a greater depth of reporting.

- Discretionary Revisions
These are recommendations for improvement which the author can choose to ignore. For example clarifications, data that would be useful but not essential.

1) Title: The title could be changed to improve clarity; institutional delivery service does not always incur associations with hospital birth. Perhaps something similar to ‘Factors associated with institutional births in Munisa Woreda, South east Ethiopia: A community based cross-sectional study.’

2) Introduction: ‘institutional birth’ you are measuring state only ‘institutional birth’ or ‘health facility delivery’ rather than ‘institutional service utilisation’. Furthermore, institutional service could imply antenatal or postnatal or neonatal care in other contexts.

3) Methods 1st paragraph - As you cite distance from health centres as one of the factors, it would be helpful to give the reader some idea of how many health centres/hospitals were in the area, or how far away the nearest health centre and hospital are.

4) Results 1st paragraph: The only figure not to have a whole number as well as a percentage is the amount of mothers married.

5) Throughout: It would be very helpful to spell out all abbreviations such as ‘EDHS’, ‘ANC’, ‘MDG’, ‘DHS’

6) References: mixed up 1,2,3,6,7,5 etc, Reference number 4 does not seem to feature in the text yet is given in the list. Formatting of references needs attention, mixed font in refs 10,11,12

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

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

Declaration of competing interests:

'I declare that I have no competing interests’