Reviewer's report

Title: Birth weight by gestational age and congenital malformations in Northern Ethiopia

Version: 3 Date: 29 September 2014

Reviewer: Juliet Ndibazza

Reviewer's report:

Major compulsory revisions
However, the section on statistical methodology is still lacking and improving this would enhance the results and discussion sections.

1. Abstract
Methods: the authors could rearrange the covariables, grouping the child variables together then mentioning the maternal variables e.g. Data on child's birth weight, sex, gestational age, and congenital malformations; and maternal gravidity, parity....were collected in a prospective study at Ayder &..between. Results: 'Parity, birth weight, gestational age, sex, and antenatal care were the most significant risk factors for congenital anomalies'... All significant results should be summarised in the abstract i.e. report the effect measure of association here.
Conclusion: 1. Mention is made of the possible role of geographical and nutritional factors on low birth weight and congenital malformations in this population, but none of this analysis has been done/reported. (Did mothers receive folate supplements during pregnancy?) The conclusion section should be improved to reflect the revisions made in the methods, results and discussion sections of the main text.

2. Introduction
Literature review on other known risk factors for low birth weight and congenital malformations is still deficient.

3. Methods
The authors might benefit from obtaining statistical help to clarify which were the pre-specified and the exploratory analyses, and present a more concise summary of the key results; provide more details on statistical analyses, description and categorisation of variables, what other statistical analyses were done - simple frequencies, proportions, linear regression etc. Clarify which variables were considered continous vs categorical, and especially for the variable parity, present a consistent categorisation. State whether multivariable analyses were done and the confounders included in the final regression models.
For the first sentence, first paragraph, see comment for methods section in abstract.
Second sentence, first paragraph is redundant.
Provide more details on how birth weight was collected: type of scale, degree of accuracy.
Sixth sentence would appropriately be your first sentence: 'This prospective...'

4. Results
To reflect additions and changes in the methodology above.

5. Discussion
To reflect additions and changes in the methodology and results sections above.

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

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