Reviewer's report

Title: Nutritional status of children under 5 years of age in the Brazilian Western Amazon before and after the Interoceanic Highway paving: a population-based study.

Version: 1 Date: 14 March 2013

Reviewer: Marcelo Bönecker

Reviewer's report:

GENERAL

This is an interesting study as it draws attention to the link between nutritional status and geographical location in preschool children in Brazil. There are about fifty pages of manuscript, so it turns the reading extremely heavy. The text needs to be rewritten and focused and in doing so it could be shortened substantially.

ABSTRACT

Results: it is necessary to mention the meaning of BMI (Body Mass Index?)

INTRODUCTION

The entire introduction should be shortened. For example, paragraph 4 and 5 can be removed. It is necessary a paragraph describing the main purpose of the study at the end of the introduction.

METHODS

This section is generally confused. There is a lot of unnecessary information in the methods, information that is not related with the variables associated to the outcome. The authors can summarize the information concerning the “study area” and “comparison of city characteristics before and after the Interoceanic Road” sections.

Concerning study design and population: Did the authors include in the study patients with systemic and neurologic diseases? It is possible to have bias in the study depending of these criteria (eg. Children with diabetes or anemia)

You could usefully include a section on who collected the data (outcome and variables). Who collected anthropometric measures? It was a trained examiner? This information is not in the manuscript.

The authors assessed the family socio-economic status based on a household wealth index, however data on family income is a better predictive of socio-economic status. It will be useful to include this data in the study.

Please summarize statistical analysis.

RESULTS

There are too many tables and additional files for a manuscript. The authors
need to focus on main results.

DISCUSSION
The are many results (values) repeated in the discussion. There are many unnecessary paragraphs. It is better to focus to discuss main results.
It is recommended to not use unpublished data.

CONCLUSION
There are many results (values) also repeated in the discussion. The authors need to focus and write the conclusion succinctly and according to the objectives of the study.

POINTS:
1. Is the question posed by the authors well defined? No
2. Are the methods appropriate and well described? No
3. Are the data sound?
4. Does the manuscript adhere to the relevant standards for reporting and data deposition? No
5. Are the discussion and conclusions well balanced and adequately supported by the data? Yes
6. Are limitations of the work clearly stated? Yes
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? Yes
8. Do the title and abstract accurately convey what has been found? Yes
9. Is the writing acceptable? No

Recommendation:
- Major Compulsory Revisions (which the author must respond to before a decision on publication can be reached)

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

Quality of written English: Not suitable for publication unless extensively edited

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