Reviewer’s report

Title: Exploring variations in childhood stunting in Nigeria using league table, control chart and spatial analysis

Version: 1 Date: 11 September 2012

Reviewer: Handan Wand

Reviewer’s report:

OVERALL COMMENT:
This is an interesting manuscript that applies spatial techniques to bring a clearer understanding of the distribution of severe childhood malnutrition, “stunting”. The methods are not well described therefore I am unable to decide if they are appropriate for the data at hand or not. The authors should carefully edit the manuscript to improve the readability & present the appropriate information in appropriate sections.

Major Compulsory Revisions:

1. One major point is: Could authors comment on whether population density is important in this analysis and this should be discussed. Absolute numbers and Graphical presentation may be very important in policy making when comparing say a very small population with a lot of stunting to a larger population.

2. In Background, paragraph 1, first line, the authors state “Stunting, linear growth retardation is the best measure of child health inequalities as it captures the multiple dimensions of children’s health, development...”

But I believe this is a strong claim as there are other types of measures such as “wasting” could authors comment on this?

3. In Background, paragraph 1, line 4, “....and the trend is expected to reach 21.8% by 2020.....” but this is not a trend it is a prevalence as such it should be re-phrased it.

4. In Background, paragraph 2, line 3-4, “....the effect and impact...”, aren’t they the same?

5. In Background, explanations regarding what the “League Tables” are should move and/or incorporated in to the method section.

6. In METHODS section, sampling technique: is this the first study to describe this sampling technique for this population? If not has the method been published anywhere else? If so, perhaps reference should be provided.

7. In METHODS section, sampling technique: outcome variable is “stunting” and should be derived using HAZ with the appropriate referencing, there was no referencing.
8. In METHODS section, Exploratory spatial data analysis: author's mentioned “a test of a null hypothesis”, what is it? Could they state the null hypothesis tested? Also there is no reference how the methodology was applied? Any software used?

9. What is “Spatial autocorrelation”? How did they obtain those plots? There is no explanation in the method regarding how Figure 3 was produced. Was it population adjusted?

Discretionary Revisions

10. I do not see benefit of the funnel plot.

Quality of written English:

Needs some language corrections before being published

Statistical review

No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests

None.

Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

none