Reviewer's report

Title: Limited Variation in Biomarker-Based Health Indicators by Socioeconomic Status in a sub-Saharan African Low-Income Population

Version: 1 Date: 2 April 2012

Reviewer: Bruce Neal

Reviewer's report:

This is a dense piece of writing that covers many and diverse areas. And while there have been some really worthwhile new data collected, and a significant effort has been made to present them, there are a number of shortcomings with the current piece:

* First and foremost, the breadth of topics covered is enormous. And this means that all are treated rather superficially. It also means that the piece is hard to read as it reports on so many exposures and so many associations of those exposures with other participant characteristics that it becomes almost impossible to follow what is going on. And there is no clear, convincing, valuable message that comes out of it.

* I think reporting on biomarkers for the sake of biomarkers is not especially helpful. I think the data here would be of more value if presented in discrete bits with more detailed review of the data in each specific context. For example, the lipid data could be packaged up as a nice standalone paper and presented to a journal with a specific interest in that field. Likewise the data on renal function. And the data on glycaemia. If the whole lot are to be put together like this there needs to be a clearer rationale. So while somewhere it suggests that these biomarkers are a 'health assessment' I don't think this is really true

* The paper has a rather rambling feel about it. There needs to be more discipline in writing methods in the methods section, results in the results section and discussion in the discussion section. The introduction is also very long and reads more like a book chapter. Brevity and focus would help the reader to understand the really important bits of data and the new findings you have here. It's hard to find the gold at the moment.

* The reader needs to know more about the sampling. What was the response rate? How were individual selected? Is it a representative sample? What are the likely biases? This is key to understanding the validity of the conclusions drawn.

So, bottom line, there are lots of interesting data here. But I don't really think it works in the current presentation format. I think you would do better to write more specific, detailed papers about particular risks rather than try to cover off on the while lot together. Unless you can find a really convincing reason for combining the lot.
Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Declaration of competing interests:
I declare that I have no competing interests