Reviewer's report

**Title:** Millennium development health metrics: where do Africa's children and women of child bearing age live?

**Version:** 1  **Date:** 10 December 2012

**Reviewer:** Archie Clements

**Reviewer's report:**

This paper demonstrates that spatial heterogeneity in population age and sex structures is profound, and has a major impact on the accuracies of summaries of disease burden, or of access to health services, that use a fixed age structure for an entire country. The work is presented in the context of evaluating progress towards the millennium development goals 4, 5 and 6 and this provides a compelling motivation for the work. This is important research and will be of interest to readers of population health metrics.

I have no major comments regarding the methodological approach or the scenarios used to demonstrate the approach.

**Minor essential revisions:**

In some instances the language is a little convoluted and could be tightened up – I suggest a thorough going-over with an editorial eye.

**Discretionary revisions:**

Below are some minor typographical errors or suggestions:

1. Page 7, second paragraph, the first sentence does not make grammatical sense – should it be “where applicable”?  
2. Page 7, third paragraph, line 4, remove “here”.
3. Page 8, second paragraph, last sentence – place in past tense (“the focus was on the change”).
4. Page 10, third paragraph, third sentence – should be “data were”.
5. Page 12. Third paragraph – I suggest the authors cite some published references rather than, or in addition to, the websites. E.g., for thiswormyworld, consider citing:  
6. In the discussion section on uncertainty, it might be worth talking about Bayesian methods that have been applied to spatial prediction and the capturing of uncertainty.
Level of interest: An article of importance in its field

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:
I declare that I have no competing interests