Reviewer's report

Title: Illness mapping: A time and cost effective method to estimate healthcare data needed to establish community based health insurance.

Version: 1 Date: 8 July 2012

Reviewer: Aliya Pardhan-Ali

Reviewer's report:

Major Compulsory Revisions

Thank you for the opportunity to review your paper. The manuscript presents innovative methods that could potentially be useful in developing micro health insurance and other community-based programs, however, it would benefit from clarification, careful editing and interpretation of results.

Title
1. There is no mention of the study area in the title – is there a reason for this?

Abstract
1. In the methods section, you mention the Gaya district but you do not mention where the Gaya district is located - e.g. one of the 38 districts of Bihar State in Southern India

Background/Methods
1. The wording of the first sentence in the background is awkward. Please revise.
2. Please define or explain community based/micro health insurance systems further. How does it work? How does this differ from other types of insurance schemes?
3. Please provide more information on the study area – Gaya district. Where is it located? In what part of India? What is the population, socio-economic status, health status, accessibility and health care utilization, rural/urban and other major characteristics. It is important for the reader to understand the context and these are all factors that are relevant to health insurance. A map of the study area would be very useful. Please define rural area.
4. Why did you choose the Gaya District over any other place in India?
5. Please expand on the Delphi and Nominal group techniques. What are the steps/criteria for the techniques. How do they differ? Perhaps you could have a table with two columns comparing the steps/criteria for each technique so it is clear for the reader. I wonder if this paragraph should be in the methods section.
6. Please define interacting and non-interacting groups, structured and unstructured groups
7. You discuss the advantages of the Delphi and NGT but you do not mention the
8. How did you modify the Delphi and NGT for your study? Please be clear. Why did you choose to use non-interacting group techniques for interacting groups?

Results

1. Under the field process section, please spell out acronyms the first time you use them in the paper (e.g. AHSA, SHG office etc)

2. Under the setting and sampling section, you mention the four winds technique. Can you provide a little bit more information?

3. Under the questionnaire and data collection section, please define acute, chronic, accidents, health care utilization

4. Please quantify agreement. What you mean by close/good/excellent agreement?

5. Under the group process section, you mention the different categories of illnesses (eg. Fever, diarrhea etc). Did you have standard definitions? It would be useful to have a table that defines these terms. Were “experts” made aware of these definitions? This would have an impact on your estimates of specific illnesses.

Discussion/Conclusion

1. In paragraph 3, you said that there was no statistical difference between the estimates given by men’s and women’s groups but under deliveries in the results section, you say that only the female groups were in close agreement with the household survey. Please clarify.

2. In paragraph 3, you mention that you chose experts with the help of local NGO staff. Could you suggest other ways of identifying experts?

3. In paragraph 6, I am concerned about the fact that illness mapping resulted in lower estimates for hospitalization rates and the household survey overestimates it. Please discuss how this would impact insurance premiums and propose some suggestions to work around this issue.

4. In paragraph 8, please expand on the limitations/biases and some ways to mitigate them.

5. Your paper focuses on health insurance among low income persons in rural areas but there is also poverty in urban slums. Are there urban slums in the Gaya district? There are in many parts of India and other developing countries. How would your approach work in these areas or how could it be modified?

6. You mention benefit packages and premiums payable. You have not discussed how the information obtained from illness mapping will translate into customized packages and premiums.

7. In what situations or circumstances do you think illness mapping should be used over traditional methods (e.g. household surveys)

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

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