Reviewer's report

Title: Selection bias: neighbourhood controls and controls selected from those presenting to a health unit in a case control study of efficacy of BCG revaccination

Version: 5 Date: 29 January 2007

Reviewer: Philip Hill

Reviewer's report:

General

Congratulations to the authors for largely addressing the reviewers' concerns and improving their paper. As it is clear from the below, the authors should be more sensitive to the fact that most of their readers will not be from Brazil.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. The authors believe that all TB cases are identified and treated in this population in Brazil. While this may be true, it is unlikely to be correct. Some self-cure and some will be dying in the community. The latter is certainly the case in Africa and this issue should be mentioned here. This is crucial as study cases could be over-represented for BCG scar. If those who die in the community are also those less likely to have been BCG vaccinated, which could indeed be the situation, then this becomes important. I feel strongly this issue should be discussed-the authors may feel strongly that this could not possibly be an issue in Brazil, but at least it is an issue for other, developing countries.

2. The authors have not included any information about the local health system structure. Those of us not from Brazil need to know how it is basically structured-eg. how does health unit relate to hospital and what sort of number of these are there per unit of population. Do you have to go to a health unit before hospital in all situations. are the health units evenly distributed across the population etc. A short paragraph would be very helpful in this regard.

3. The issue on socio-economic measures –they should atleast reference the article they refer to, as this is very relevant for other developing countries where these measures are a more blunt instrument. The discussion at present is relatively short and there is plenty of room for a paragraph on this issue. There is also no mention of the issue of scar formation not being 100%.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. The investigators clearly did not record refusals formerly-so it would be good to put some sort of an estimate eg. <5%, rather than say ‘very few’.

2. MW in table 3 still needs a footnote.

Discretionary Revisions (which the author can choose to ignore)

The background is improved, but is still cumbersome. I would encourage the authors to rework this to make it easier to read. There a grammatical errors here and in the rest of the document and the authors should review the paper for these and correct them. It is not my remit to point them all out.

What next?: Accept after minor essential 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: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.