Reviewer’s report

Title: Estimating the magnitude and direction of bias in tuberculosis drug resistance surveys conducted only in the public sector: a simulation study

Version: 1 Date: 18 December 2009

Reviewer: Patrick Phillips

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Overall I think this is a paper that is clearly written and the methods seem correct and reasonable as best as I can tell (I don’t have much experience with mathematical modelling, so I haven’t got anything to compare it with). I have been through the appendix and the methods sections and checked the formulae and what has been said and that is all correct. It all seems to accurately depict what I would think is the movement of patients between the public and private sectors and from sensitive to resistant.

I just have a few specific comments:
- Second formulae on page 8. It would be useful if they defined what n_s and n_s^bar are
- The figure caption for Figure 2 refers to ‘the percent of’, but I think this should be ‘the fraction of’ in each case as in the figure itself
- According to the captions, Figure 2 seems to be showing absolute bias, where Figure 3 is showing percentage bias. Is this correct? It’s not clear from the captions. It might be clearer if they both showed absolute bias or both show percentage bias.

One small point about wording. the use of teh word annealed seems slightly unusual in this context. Could thr authors consider an alternative?

The Discussion is short, more could be said which draws together some of the conclusions from the individual figures.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Declaration of competing interests:

I declare that I have no competing interests