Reviewer's report

Title: Decreasing household contribution to TB transmission with age: a retrospective geographic analysis of young people in a South African township

Version: 3
Date: 9 December 2013

Reviewer: Neela Goswami

Reviewer's report:

The authors of this manuscript use multivariate logistic regression to evaluate the association between exposure to adult TB on a residential plot and incident and prevalent TB infection in three age groups. They conclude exposure on a resident plot is significantly associated with prevalent TB infection in children aged 5 to 9 and 10 to 14 years of age, but not in adolescents 15 years and older.

Major Compulsory Revisions:
1. The authors refer to a subset of participants receiving repeat TST in 2009 for the incident TB analysis. How was this subset determined (random or selected under particular circumstances)? Why was repeat TST performed in 2009 and not 2008?
2. Is notification of TB cases by the community clinic mandatory, and did rollout and/or implementation of this mandate change over the 1996-2009 time period?
3. Multivariate logistic regression models are used in this analysis, but given that the study outcome (prevalent TB) is frequent (>15%), a different model (e.g. binomial regression, Poisson) would be more appropriate.
4. Can a reference be provided for rationale of using these particular age categories for analysis?
5. What is the upper age limit of participants in the adolescents greater than or equal to age 15? Assuming from conclusions/discussion of paper that there is a distinction between adolescents and adults.
6. In Data Analysis paragraph of Methods section, sentence with ArcMap 10... was used to assess the spatial distribution.. should be revised to ArcMap10... was used to visualize the spatial distribution of..

Since it appears that this software was used to produce maps, but not to facilitate more complicated quantitative spatial statistics analysis

Minor Essential Revisions

1. Figure 2A is redundant with 2B and can be eliminated.

Level of interest: An article whose findings are important to those with closely related research interests
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