Reviewer’s report

Title: Comparison of indoor contact time data in Zambia and Western Cape, South Africa suggests targeting of interventions to reduce Mycobacterium tuberculosis transmission should be informed by local data

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Reviewer: Kevin Fennelly

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This is a well-written, clear manuscript about an interesting approach to better understand the transmission of tuberculosis (TB) in high incidence communities in sub-Saharan Africa. This paper seems to ask the question of where most TB transmission is occurring and is a companion paper to the recently published paper by Dodd et al that addresses the ‘Who?’ My major suggestion is to include a few more comments in the section on limitations. One is the logical paradox of collecting data in households after providing the rationale that most transmission occurs outside of households. Perhaps the surveys did not include members of the population who might be most likely to transmit TB? The other issue with which I grappled is the lack of coherence with outbreak investigations that have identified a variety of settings where there is a high risk of TB transmission: hospitals (e.g., Bamford, 2010; Sissolak, 2010); prisons (e.g. Henostroza, 2013); mines, bars, and others. The potential for zoonotic transmission has been raised in Zambia by others but not addressed here. It seems that another potential limitation of such survey methods is misclassification or erroneous reporting associated with stigma. Perhaps respondents would be embarrassed to report that they had been visiting a relative in prison or in the hospital, or that they had spent many hours drinking in a bar?

However, in spite of these limitations and issues, the authors are to be congratulated on an excellent study and manuscript. The early events of TB transmission have been difficult to study, as TB cases likely progress from a subclinical through minimally symptomatic state before progressing to overt disease that leads them to seek medical attention. Exactly when most transmission occurs is unknown, and studies such as this have the potential to improve our understanding.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
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Yes
Are the conclusions drawn adequately supported by the data shown?
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I am able to assess the statistics

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