Reviewer’s report

Title: Investigation of Household Contacts of Pulmonary Tuberculosis Patients Increases Case Detection in Mwanza city, Tanzania

Version: 0 Date: 25 Aug 2017

Reviewer: George Praygod

Reviewer's report:

Dear editor

Thanks for the opportunity to review this manuscript addressing a very important public health issue. Overall the manuscript is written well, however, there are few issues that if addressed could improve the presentation of the work.

Title: Could this be clearer if is restated to: Active pulmonary tuberculosis among household contacts of bacteriologically-confirmed tuberculosis patients: A cross-sectional study in Mwanza, Tanzania

Abstract

Lines 31-32 (page 1) reads:"This study aimed to determine the prevalence of active TB cases among active TB household contacts", I suggest this be changed to:"This study aimed to determine the prevalence of active TB among household contacts of active TB patients..."

Line 39 (page 1)-screened for TB using smear microscopy, GeneXpert and culture-the word screened bring a false impression that after these tests samples were subjected to better tests, I think authors should replace screen with "tested" or "investigated"

Lines 40-43 (page 1) could be shorten and become clearer. Suggestion: Prevalence of TB among TB contacts was computed and logistic regression used to determine predictors of TB among contacts
Methods

-Since this is cross-sectional study, the readers will be interested to see if these results are representative of the Mwanza city situation. The authors should justify why only a few TB clinics in Mwanza city were involved in selection of index TB cases as this has a potential to produce findings which are only applicable to parts of the city

-The selection of household contact is not well explained. If the TB index household had more than one contact, how many contacts were selected and how was the selection done? In other words, are the household contacts selected in this study representative of all the household contacts in Mwanza city? Also, it would be nice to say how many contacts were invited and how many consented to be included in the study for readers to rule out bias

-It seems that the study inclusion criteria were not the same for adults and children (page 3, lines 6 to 18). Adults were only included if they provided at least one sputum sample, but children were included even when they did not produce sputum, is this case? I think authors need to include the section on inclusion and exclusion criteria so that it becomes clearer for readers as to how potentials participants were included

-In lines 20-22 (page 3), it is not clear what nurses collected and how they collected the data. We see what was collected in the results section, but would be nice to include this information in this part of your manuscript so that people can judge and see if the data collected is valid. For example, how the nurses ascertain that contacts had weight loss, were smoking or lived more that 1 km from health facility. Authors need should how data included in the analysis were collected.

-In lines 29-30 (page 3), it would be nice to have a reference to justify the definition of household contact provided.

-In lines 34-37 (page 3) the sample size plan is okay, but the text should be revised to be clear.

-in lines 3-4 (page 4) say if double were double entered

-In line 13 (page 4), replace summarization with management

-in line 17 (page 4) you missed the word-factors assessed for relationship with...
-lines 24 and 25 (page 4), the last sentence -starting with Factors with 99% CI.... is redundant should be removed.

-lines 33-34 (page 4), you say consent form was translated in the local language of Swahili. I think Kiswahili is not a local language it is a national language.

-Lines 34-35 (page 4). Ideally a person witnessing a consent process for to an illiterate participant should not be part of your research team.

Results

-Why is 18yrs used as a cut off for classifying Tb contacts. I think in TB epidemiology you should have 0-4, 5-14 and above 14

Discussion

-The explanation of results provided in paragraph 2 (page 6 lines 5-14) are very convincing. For example having TB if you are >1km from a health facility could be an indicator of low socioeconomic status or in ability to access services due to lack of fare or consultation fee and having TB if your spouse has TB could be due to closeness with infectious agents.

-Authors need to have a section on strengths and limitations of the study.
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?  
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?  
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?  
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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Please indicate the quality of language in the manuscript:

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