Reviewer's report

Title: Epidemiology of Anti-tuberculosis Drug Resistance in a Chinese Population: Current Situation and Challenges Ahead

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Reviewer: PENG WU

Reviewer's report:

The authors conducted a well-designed study with a clear research gap. The findings from the study suggested that multi-drug resistant tuberculosis (MDR-TB) is still a serious problem in China, even in an economically developed province. Meanwhile, some risk factors which are probably related to the occurrence of MDR-TB in Jiangsu Province were identified in the study.

However there are some concerns which might need further clarification:

Major Compulsory Revisions

1. In the multivariate logistic analysis which was used to identify potential risk factors possibly associated with MDR-TB, including patients' age, sex, treatment history, residential location, tobacco use and alcoholic drinking, the authors mentioned that there was unexplainable relationship between alcoholic drinking habit and occurrence of MDG-TB. Meanwhile the association between tobacco use and MDG-TB was not detected in the study. I suggest the authors to look into the data and the statistical analysis carefully to try to find out what kind of reasons might lead to the results which were reflected as the odds ratios in Table 4. Age, treatment history and residential location were found to be associated with MDR-TB in the study, however could these associations and even the associations between tobacco use, alcoholic drinking and MDR-TB, be confounded by some interactions between different independent variables? Before the authors present the findings of analyses without interactions between the independent and dependent variables, it might be safer to carefully examine the data, conduct appropriate analyses, and then draw solid conclusion based on the findings from refined analyses.

2. Most of the interpretation on odds ratio in the study is problematic, mainly in page 10 of the manuscript. Please check to make it correct.

Minor Essential Revisions

3. There is undefined term “concierge DOTS” which might make the reader confusing. Would you please define it?

4. The authors mentioned “mono-therapy” in page 12. Does that sentence suggest that mono-drug therapy might be routinely implemented for drug-sensitive TB patients, but was wrongly prescribed to MDR-TB patients because of the lack of or delayed DST? If yes, I would suggest the authors to
recheck the local guidelines for treating TB patients; if no, please re-organize the discussion here.

5. There are some typo and inappropriate words shown in the main text. Correct please.

6. Some of the grammar in the main text definitely needs to be improved before resubmission.

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

**Declaration of competing interests:**

I declare that I have no competing interests.