Reviewer’s report

Title: Adherence to Anti-tuberculosis Treatment among Pulmonary Tuberculosis Patients: a Qualitative and Quantitative Study

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Reviewer: Susan van den Hof

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This manuscript describes which patient characteristics and other factors are associated with more than 10% of missed doses of TB treatment, in Jiangsu province of China.

Major compulsory revisions

The study design is valid but the analysis needs important refinement:

1. Non-response. 15% of the eligible patients were not included. Is there selective non-response that could have influenced your results? In other words, what are the reasons for non-response and in what respect are non-responders different from responders? This can be assessed instead of just mentioning that there may be selection bias.

2a. Half of the 82 non-adherent patients were initial defaulters, and the other half took less than 90% of the prescribed medicines. For this latter group, it should be described how many doses were missed and how many stopped treatment altogether.

2b. It is well possible that factors associated with initial default are at least partly different from factors associated with incomplete adherence. This should be explored and results should be included.

2c. Some of the factors mentioned as associated with treatment interruption (Table 2 and text) in fact are not applicable for initial defaulters. Therefore, these results should be stratified also by initial defaulters and those with incomplete adherence.

3. The adjusted OR’s on risk factors for non-adherence are adjusted only for age and sex, while the other factors may confound each other as well. The authors should preferably build a multivariate model with complete adjustment, or at the minimum give information on the existence of confounding and effect-modification between the other factors and explain why they did not explore complete adjustment.

4. Discussion: the paragraphs on financial burden, treatment of adverse reactions, and social context are not derived in any way from the results of this study but just a review of published literature. The discussion should relate its own findings to those found by others.

Minor essential revisions
1. Background: I suspect more studies on patient adherence from China are published than the one referred to. It is recommended to give the results from other Chinese studies as the factors found there are expected to be more similar to the ones found in other countries.

2. Information should be included on whether a power calculation was performed before the study.

3. Information should be included on how many patients and health workers were interviewed for the qualitative part of the study.

4. Results (and abstract): 83.1% were treated under direct observation. Then it is not correct to say it is more than 83%, it is 83%.

5. The term 'treatment interruption' is not correct for most cases who were classified as non-adherent in this study and this term should not be used this way.

6. Abstract. In the results, instead of mentioning which characteristics are associated with non-adherence, also give the direction of the result. E.g. low education instead of educational background

Discretionary revisions

1. In Table 2, the distribution of different characteristics of adherent versus non-adherent patients is given (i.e. % of males in both adherent and non-adherent patients). This reviewer would rather see the total number of males, and the number and percentage of non-adherent male patients.

2. Data collection. I am sure that selection of health workers was not based on age gender and treatment history. It is not clear whether patients with their own health workers were selected for the qualitative study, or some patients and some health workers without a relation between them.

3. The term laobing is not known to most foreign readers and it would be helpful to give the translation of the word into English.

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: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests