Reviewer's report

Title: Household costs of illness during different phases of tuberculosis treatment in Central Asia: a patient survey in Tajikistan

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Reviewer: Dick Menzies

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Re: BMC Public Health
Title: Household costs of illness during different phases of TB treatment in Central Asia
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In this study 204 TB patients were interviewed twice, once in the intensive phase regarding their pre-diagnosis costs and illness impact and the second time four months later during the continuation phase. This was an interviewer administered survey and the interviewers were trained for 2 weeks then followed closely. All in all a very well executed study.

This is certainly an interesting paper and a very well executed study, but the results could be considerably expanded to provide more detail. There are no ethical or other related issues.

- Major Compulsory Revisions

1. Analysis – I think that it is conventional for studies of cost to use non-parametric analysis and to summarize the data using medians and inter-quartile ranges. Summarizing using standard errors is inappropriate - even if the data is normally distributed it should be summarized using standard deviations. To present medians and standard errors is a bit like mixing apples and oranges. The same goes for the use of T-tests. The authors should use non-parametric tests throughout.

2. Questionnaire – was this questionnaire adapted from another standardized questionnaire that has been already used, or was this developed entirely by the investigators? If the former then a source and references should be given; if the latter then the authors should describe how they developed, pre-tested, and validated the questionnaire - if they did. It would also be helpful to know how long it took to complete the questionnaire, on average. The questionnaire itself should be an online appendix, or a statement added that it is “available from the authors on written request.” This is important to ensure that data on costs in this study can be compared in a sensible way with cost data gathered in other countries using other questionnaires.

3. Results – more information should be provided in the tables. First I suggest a
new Table 1, in which the characteristics of patients are summarized, in particular such basics as their age and sex and their diagnosis - were they all with pulmonary TB or did some have extra-pulmonary TB? Were they all new cases or were any re-treatment cases? And were they smear positive, etc. Also it would be important to know the results of treatment i.e. how many completed treatment, were cured etc. Finally do they have any information on drug resistance in this group?

4. Following this I suggest that they provide more detail regarding the costs. Judging from their description of the questionnaire they must have a wealth of information and it would be useful to share this with the readers. For example, I would like to know more about the pre-diagnosis period in terms of time (the classic intervals of patient delay and health system delay - between symptoms and first health care visit and between that visit and diagnosis), and I would like to know more about the actual costs. In regard to the medication costs, what were these for? Were these antibiotics or other medications? We need to know whether patients were hospitalized as this could be a major contributor to costs. If they were hospitalized, separate information on how much this cost patients in terms of direct and indirect costs would be helpful. Along that line, were the costs of household members counted in terms of direct costs for travel or food and in terms of indirect costs because of lost income.

5. Indirect costs – I would like to see more information about this. Is this related to disability and time off work because they simply could not work due to illness or time spent seeking care and waiting etc, or related to hospitalization.

6. DOT – they mentioned that DOTS has been implemented. A big driver of costs in the continuation phase is patient time traveling to clinics and health facilities for DOT if it is health facility based. I did not see in the description of the program but it would be very important information.

7. Household costs – how much impact did this have in terms of other household members? Either direct costs or indirect in terms of their time helping the patients.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**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