Reviewer's report

Title: Risk factors for unsuccessful treatment among new sputum smear positive tuberculosis patients in Yunnan, China

Version: 1 Date: 28 October 2010

Reviewer: Andrew Wilson

Reviewer's report:

General comments by section

Abstract
Use of terms ‘treatment success rate’ and ‘cure rate’ is ambiguous (P2 para 1). The initial impression is that they are interchangeable. Treatment success is later defined (p5 para 3) as ‘cure and treatment completion’, with a WHO target of 85% (p3 para 1). P3 para 2 states 24/129 counties with a success rate lower than this target but counties with cure rate <85% (26/129) are used for data collection. It would be better to examine “cure” not “success”.

The background should describe what is already known about the research question (as discussed in the introduction of the main paper). The research aim is mentioned in the background not the methods section. There is duplication in the background and method section. The study type is appropriate for the research question. The finding that interrupted treatment is associated with better outcome is not mentioned in the abstract.

Background
P3 para 2: It would have been interesting to contrast with other regions in China/national figures to set the study in context and provide an indication of generalisability. It is not clear why this province was chosen in preference to others.

Literature review – found over various sections, may be better organised into this section.

Methods
Sample size calculation seems adequate. I suggest that “cure” is used rather than “successful treatment” as the later does not include many more patients. Patient who completed the treatment but are not cured cannot be considered to have a successful outcome. Sticking to “cure” would be less confusing and would probably not change the results.

Results
P7 para 3 line 4 – ‘….refusal of direct observation of taking drugs (table 2).’
Presented in table 2 as ‘Patient not seeing the need for treatment observation’
does not equate to refusing observation.

Discussion
P9 para 2 first sentence. Poor readability + introduces new information which may have been better in the ‘background’ section. (p8 para 3 last sentence)

It seems a major issue that interruptions in treatment increase the chance of successful treatment. Do those with interruptions received DOT?

I am not sure what new information this study brings.

Major compulsory revisions
Assessment of “cure” rather than treatment
Remove duplication of data in results and in table.
First paragraph of discussion to state the new information that this paper provides

Minor essential revisions
Modification of abstract layout
There are several typographical errors.

Discretionary Revisions
None

**Level of interest:** An article of limited interest

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests