Reviewer’s report

Title: Tuberculosis Treatment Outcome and Predictors in Northern Ethiopian Prisons: a five-year retrospective analysis

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Reviewer: Emanuele Pontali

Reviewer's report:

This is an interesting report regarding a neglected area of TB control.

In general, English language requires a careful review for better comprehension and smoother reading.

In particular, there are some comments/suggestions to improve the paper.

In most cases Guidelines should be used instead of Guideline

- Introduction, the sentence 'The multidrug-resistant TB (MDR-TB) prevalence as high as 24% has been reported from these settings, making TB control efforts very complicated. [7].' is not clear and needs to be re-phrased

- Introduction, sentence starting at line 60: it needs to be explained if TB treatment programs in Ethiopian prisons are within the NTP or under another Ministry or Department. Are such programs carried out by prison staff or NTP or other staff?

- Methods, study setting: a map of Ethiopia with prisons would be useful for readers not familiar with the country

- Data analysis, line 111: please, replace declare with define

- Results: Sentence starting at line 118 'Extra-pulmonary TB (EPTB) patients accounted 43% of the TB cases and 30% were smear-negative pulmonary TB (PTB-) cases.' could be better written as 'Extra-pulmonary TB (EPTB) patients accounted for 43% of the TB cases; 30% of total cases had smear-negative pulmonary TB (PTB-).'
- Results: line 121: 'smeared' should become 'smear'

- Results: Sentence starting at line 122: any significant difference? Please, state significant or not significant at the end of the sentence.

- Treatment outcome and trends: here is the key point in data analysis. 94% TSR is not based on an ITT evaluation. It is too high to be real, in fact denominator does not include the 74 transferred out. Actually, when reading from line 134 and from Table 2 it is clear that TSR is just 79.5%. In other words, true TSR is 79.5%, while among patient who did not transfer out TSR is 94%. But this is not clear in the abstract and in the text. This is a key issue to take care of. Even discussion uses 94% TSR to compare with other studies without reporting if TSR of such studies was ITT per patients still in the same prison at the end of the study. This must be stated for each study evaluated for comparison. Did other studies include transfer out patients among defaulters?

- Discussion, line 175: it is not clear the meaning of 'findings were still smaller'

- Discussion: line 182 the following sentence is not clear: As high as 54% of the study participants in the South African prison [11], for example, were co-infected with HIV and in this [11] and other studies [18,24], HIV co-infections has been shown to be associated with unsuccessful treatment outcome.

- Discussion: some discussion/comments on the very high proportion of pulmonary ss- and EPTB cases. This casts doubts on the performance of diagnostic activities.

- Discussion, sentence starting at line 225: it should be specified where such incidence of MDR-TB did occur.
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?
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Unable to assess

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