Reviewer’s report

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

Version: 2 Date: 29 Dec 2017

Reviewer: Giuseppina De Iaco

Reviewer's report:

Tuberculosis control among prisoners is challenging, thus addressing this topic in a scientific article is very important and appreciable.

This study underline very well how the weak integration between civilian and prison services can interrupt the continuum of care of the released prisoners and lead to a negative treatment outcome.

1) The main limit of the study is represented by the fact that underline only 2 negative predicting factors for treatment outcome: TB category (new episode or retreatment case) and smear not conversion at 2nd month. Only few words are spent on all other factors that can play a role such as comorbidities, substance abuse, malnutrition, HIV, lack of family support, type of prison (high security prison? high turnover of inmates?). The 4 sites of the study are similar for population and or human resource /diagnostic availability? Any role of NGOs? Any involvement of visitors of civil society to be treatment supporter? Any incentives to strengthen compliance to treatment?

2) any information about the rate of clinical diagnosis of EPTB versus histological - microbiological diagnosis?

3) The use of diagnostic service external to the prison system may lead to a delay in the diagnosis and the beginning of the treatment. Do you think this influence negatively also the monitoring of the treatment or could be a possible explanation to the overdiagnosis of EPTB?

4) As far concern the in the method section I would add, if feasible, some data on population of the prison (denominator). Something should be also said about TB prevalence
compared to TB prevalence in the region or TB incidence/year with some possible explanation or comment on the drop of TSR during the last year of the study 2014-2015 which is not addressed in the text (line 166-170; line 180-182 and Figure 3).

5) in the Methods section it could be advisable to add something about the availability or not of performing DST or GeneXpert at least for retreatment cases (line 242-245). In the discussion in fact the author mention that it could be advisable to suggest this test (line 274-275).

Thank you for your answers

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Unable to assess

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable
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