Reviewer's report

**Title:** Risk factors for pulmonary tuberculosis in Croatia: a matched case-control study

**Version:** 2  **Date:** 25 July 2013

**Reviewer:** Marieke J. van der Werf

**Reviewer's report:**

This is a case control study in which the authors set out to assess the risk factors for tuberculosis in Croatia. Their argumentation to do this is that even though many studies have looked at risk factors for TB none has done so in a middle incidence country.

**Methods**

**Major compulsory revision**

The main challenge in a case control study is the selection of the control group which has to come from the same source population as the case population. The description of how the cases were selected is not completely clear but it seems that cases were not selected from general practitioners offices. Since it is clear from the methods section that the controls were selected from general practitioners offices there is an inherent risk of bias as the cases and the controls are not from the same source population.

**Minor essential revisions**

Please specify from how many counties the 7 were selected randomly.

Page 6: The sentence ‘Dual TB notification ….had been made’ is not clear. Please rephrase.

Page 7: In the sentence ‘Many demographic variables ….Tables 1, 2, 3’ the word ‘demographic should be deleted.

Page 7: The description of how household equipment is graded is not clear. It is suggested that the number of items is counted however, this is not clearly written down.

Page 7: The authors should check the numbers. I believe that the mean underweight (<18.5), however, they use a comma and a space which makes it difficult to understand.

Please also specify how the cases were contacted.

The authors mention that they used the Pearson Chi-squared test for categorical variables. Since the result section does not provide any Pearson Chi-squared test result this sentence can be deleted.

**Results**

**Major compulsory revisions**
The data were collected in 2006-2008. This makes the study a historical description of a situation of 5 to 7 years ago especially since the TB situation has changed considerably with only 14 TB cases notified per 100,000 population in 2011, which makes Croatia no longer a middle incidence country. It is unclear how the presented data are useful today or why the study is only submitted for publication now.

To make the results section accessible to the reader I suggest to only report on very interesting findings and not to repeat everything that is also illustrated in the Tables, especially for the bivariate comparisons.

Minor essential revisions

Page 8: Please explain why the other 6 cases were excluded.

Page 8: Please delete the sentence 'The study population was gathered on the basis of 300 cases and 300 controls'. This sentence should be in the methods section.

Page 8: The sentence 'Frequencies of demographic .... Table 1, 2, 3' should be in the present tense.

Discussion

Minor essential revisions

Page 11: The statement 'Social dimension of tuberculosis ....' needs a reference.

Page 11: The sentence 'but it can have much greater impact can have' seems to be incorrect.

Page 12: The sentence 'This study showed that the likelihood of developing diabetes' seems incorrect since the study is about developing tuberculosis.

Page 13: Please clarify the sentence 'Study design and complex statistical analysis may control the effect of potential confounding variables'. Does this sentence refer to the current study?

Figure 1

Minor essential revision

The title of figure 1 does not describe the content of the figure.

Level of interest: An article of limited interest

Quality of written English: Not suitable for publication unless extensively edited

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