Reviewer’s report

Title: Yield of close contact tracing using two different programmatic approaches from tuberculosis index cases: a retrospective quasi-experimental study

Version: 1 Date: 26 March 2014

Reviewer: Elizabeth Soares

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Title: Yield of close contact tracing using two different programmatic approaches from tuberculosis index cases: a retrospective quasi-experimental study
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The manuscript presented by Loredo et al compares the yield of tuberculosis contact tracing, using different programmatic definitions of close contact, in two different periods of time: 2001-2004 and 2005-2008. The setting was an outpatient TB-referral center in Rio de Janeiro, Brazil. The authors discussed how this change in the definition reflected in the detection of newly diagnosed pulmonary TB cases between both groups. In addition, the prevalence of Latent TB Infection was also reported. The main take-home message sent by the authors was that the adoption of a broader or “less conservative” definition of TB close contacts, increased both outcomes.

The question/hypothesis was well defined as well as the study design. The Methods were appropriate for this retrospective study. The Discussion considered the study main limitations and compared the present results to what has already been published in the literature. This is an interesting topic, especially for those who work in TB coordination programs and also in the field. However, it is crucial the authors address a substantial review of the data before I recommend its acceptance for publication. Here follows my comments:

Major Compulsory Revisions

1. Figure 1 shows two considerable mistakes, which can eventually change the final result and hence, the conclusion. The “IC AFB pos” arm shows 609 contacts, among which 600 not presenting active TB. In the next row, if you add 266 (TST1-neg) to 344 (TST1-pos), we come up to 610 and not 600, as stated. In the same way, adding the 344 TST1-pos to 22 TST2-pos, we come up to 366 and not 356, as stated.

2. The numbers shown in the Results part of the Abstract are in discordance of what is shown in the Results section of the main text. In the Abstract, the authors
show a prevalence of LTBI during 2005-2008 of 67% (877/1,310). However, in the Results section the authors stated 69% (877/1,275). I believe the last denominator (1,275) excluded the 35 newly diagnosed active TB cases, which, is a more appropriate approach.

3. Abstract: I suggest showing the p-values when comparing the prevalence of newly diagnosed active TB cases and detection of LTBI between both periods.

4. Abstract (last sentence of the Conclusion): Since times to detect both LTBI and active TB cases were not measured, the use of the term “…early detection of…” is inappropriate.

5. Results (page 6) and Discussion (page 9, first paragraph): Although figures are going to change, I would like to call the authors attention for the contradictory messages in the text. In the Results section it is stated “…but the detection of LTBI was significant higher (62% vs 69%, p=0.003)”. However, the Discussion states “there was no significant difference in LTBI proportion between periods…”.

Minor essential revisions

1. Table 1: Please, clarify why the table of demographic characteristics of the study population excluded the 51 patients newly diagnosed with active TB (794 and 1,275). In my view, these cases belong to the study population, and hence should be included in the table.

2. Table 2: There is a mistake in the header. It is written “Contacts with LTBI” instead of “Newly diagnosed active TB cases”.

3. Discussion, page 9, first paragraph: The reference # 13 is referred as a meta-analysis, but that’s not the case.

**Level of interest:** An article whose findings are important to those with closely related research interests

**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.