Author's response to reviews

Title: Community health workers improve contact tracing among immigrants with tuberculosis in Barcelona

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Author's response to reviews: see over
Dear Editor,

Thank you very much for giving us the opportunity to submit the new version of the manuscript titled “Community health workers improve contact tracing among immigrants with tuberculosis in Barcelona” (Manuscript ID 1444240714587332, section: Disease epidemiology - infectious) to be reconsidered, if appropriate, for publication in the BMC Public Health.

As you suggested, we have included our point-by-point reply to the reviewers’ suggestions (see below). We are thankful for your reviewers comments that have helped to improve the manuscript quality and comprehension.

Please, contact us if you need any other comment or clarification. We are looking forward to hearing from you.

Yours sincerely,

Jesús Edison Ospina, MS

Editor's comments to author:

1. Regarding the multivariate analysis: I required that all the variables included in the multivariate analysis appear in the table, on the basis of the footnote that said (for table 2, for example)”the following variables were not statistically significant: sex, age, injecting drug user.....etc.” These variables now appear in the table, without values for adjusted OR and p-value, although the non-adjusted ORs seem to indicate that the differences are significant for some of them. Please indicate which variables were really included in the multivariate analysis and give the complete results in the tables and further comment if needed. This should also appear clearly in the methods section.”

According to your comments and after reviewing two BMC Public Health papers based on logistic regression and following up your standard models for tables of multivariate analysis, we repeated the statistical analysis for table 2. This time we avoided the inclusion of the sex variable in the multivariate analysis because it’s p-value in the first adjusted model was 0.5. We only included the variables considered as predictors (those with p-values of <0.05). Note that we included the sex variable in the first analysis and that the ORs and their CI were similar to the values of the new model. We think that the new model is more parsimonious since it only includes the significant variables.

We have placed the new values in the abstract and in the table 2.

We have also explained the statistical procedure used in the methods section:
“The variables of epidemiological interest and those found to be statistically significant in the bivariate analysis were included. A p-value of < 0.05 was considered statistically significant. For multivariate analysis, a statistical logistic regression with stepwise method of variables selection was used to determine the factors associated with contact tracing”.

Referees. Comments to author:

Referee: 1
Comments to the Author

I consider the authors have answered the observations well, but the following minor essential revisions are needed

- Abstract, Results: I suggest to create one category which include hospitals B and D (without contact tracing team), and another one that include hospitals A, C and E. The table 2 shows that there are these two groups of hospitals.

We believe that is important, from a public health perspective, to study each one of the five health centers separately to determine in which hospitals the control of this disease should be prioritized.

- Subjects, materials and methods, third paragraph (variables): What is “GP”? General Physician?

GP is general practitioner. We have corrected it in the paragraph.

- In the same paragraph: What is “ACS”

ACS is community health workers (CHW). We have corrected in the paragraph.

Minor issues not for publication

- Contact tracing performed, 2nd paragraph: Says: Given the low coverage of contact tracing performed, observed in immigrant population in the pre-intervention period… It must say: Given the low coverage of contact tracing performed observed in immigrant population in the pre-intervention period.

We have removed the comma in paragraph.

- Discussion: Fourth paragraph, where says: even to those who had no righ of residence. It must say: even to those who had no right of residence.

We have corrected the word in the discussion section, paragraph 4.
Referee: 2
Comments to the Author

All minor revisions
- Abstract – replace “Hospital B”, by “one of two hospitals without a hospital-based contact tracing team.

We have placed it in the text:

“Risk factors associated with incomplete contact tracing of smear-positive index cases included being diagnosed in two hospitals without contact tracing TB unit (OR=3.5; CI:1.4-8.9) and (OR=4.6; CI:1.6-13.5) respectively, birth place in India-Pakistan (OR=4.4; CI:1.9-10.3) or North Africa (OR=4.3; CI:1.8-10.5), having an unknown residence (OR=5.4; CI:1.6-18.0), being HIV-infected (OR=6.1; CI:2.5-14.8) or homeless (OR=3.3; CI:1.3-8.2), and the absence of CHW intervention (OR=2.4; CI:1.3-4.3”).

- Replace “homelessness” with “homeless

We have corrected it in all the text and tables

- P4. After “South Eastern Asia” place in brackets” (which includes India but not Pakistan)

We have updated the data in the text according to the new WHO report:

“According to the WHO in 2010, there were an estimated 8.8 million incident cases of TB (range, 8.5 million–9.2 million) globally, equivalent to 128 cases per 100 000 population. Most of the estimated number of cases in 2010 occurred in Asia (59%) and Africa (26%); smaller proportions of cases occurred in the Eastern Mediterranean Region (7%), the European Region (5%) and the Region of the Americas (3%). The five countries with the largest number of incident cases in 2010 were India (2.0 million–2.5 million), China (0.9 million–1.2 million), South Africa (0.40 million–0.59 million), Indonesia (0.37 million–0.54 million) and Pakistan (0.33 million–0.48 million). India alone accounted for an estimated one quarter (26%) of all TB cases worldwide, and China and India combined accounted for 38%. In addition, 1.1 million (range, 0.9–1.2 million) deaths from TB among HIV-negative people and an additional 0.35 million (range, 0.32–0.39 million) deaths from HIV-associated TB [2]”.

- Correct punctuation

P4 “,” after “year”, not “;” and no comma before “and”

We have changed it in all the text
P5. “a” becomes “an” before a vowel.

We have corrected it in all the text

P9. “dynamic phenomenon. In

We have corrected it in the text

- Correct English

P4. “however is a sentence adverb and should be preceded by a period and have a comma after it

We have corrected it in the text

P8. “birthplace in..” not “birthplace as

We have corrected it in the text

P8. “Pulmonary TB presentation was most frequent” should be “Pulmonary TB was the most frequent presentation

We have corrected it in the text

P9 replace “do not had” with “did not have”. “had not known” with “no known”

We have corrected it in the text

-“But with some cases (homelessness or had not known residence) CHW contacted by phone or directly in public dining rooms” should be “CHW contacted some cases, such as the homeless and those with no known residence, by phone or in person.

We have corrected it in the text

P9. “In all forms of TB cases also were associated with lack of contact tracing: male, incarceration history, extrapulmonary TB and a normal CXR” should be “A lack of contact tracing for all forms of TB was associated with male sex, history of imprisonment, extrapulmonary TB and a normal CXR”

We have corrected it in the text
P10. “Mass immigration observed in some countries like Spain has significantly affected the epidemiology of TB. This phenomenon has led to the development of a consensus document on imported TB to improve TB control for every immigrant, even to those who had no right of residence. It recommends an easy process to achieve a health card, an initial medical exam at the first appointment in the healthcare system, and to include CHW in TB programs” should become “Mass migration has affected the epidemiology of TB. In Spain, a consensus document has been developed to address this problem, even in those with no right of residence. This policy recommends that all migrants have a health card, an initial medical examination at their first appointment and to include CHW in TB control programmes.

We have corrected it in the text

P10. “provides the development of” should be “develops”

We have corrected it in the text

P11. “We believe that these differences didn't affect the results because the increase in the immigrant population may have worsened the contact tracing, however, the percentage of contacts done improved after the introduction of the CHW intervention. Another limitation of the study that 8% of cases” should become “The increase in immigrants would most likely have worsened contact tracing and therefore our figures may have underestimated the benefit of the CHW intervention. Eight percent of cases...”

We have corrected it in the text

Define ACS at first use

ACS is CHW. We have corrected it in the text.

Please label the axes of the figure

We have labelled the axes of the figures.