Author’s response to reviews

Title: Transforming Tuberculosis (TB) service delivery model in China: Issues and challenges for health workforce

Authors:

Ziyue Wang (ziyuewang@bjmu.edu.cn)
Weixi Jiang (weixi.jiang@dukekunshan.edu.cn)
Yuhong Liu (liuyuhong0516@126.com)
Lijie Zhang (88623953@qq.com)
Anna Zhu (anna.jo.zhu@outlook.com)
Shenglan Tang (shenglan.tang@duke.edu)
Xiaoyun Liu (xiaoyunliu@pku.edu.cn)

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Author’s response to reviews:

Dear Editors,

The authors would like to thank Chief Editor, Associate Editor and anonymous Reviewers for their constructive comments and suggestions to improve the quality of the paper. Those comments are all valuable and very helpful for revising and improving our paper. We have studied comments carefully and have made correction which we hope meet with approval. The main corrections in the paper and the responds to the reviewer’s comments are as flowing:

Title: Transforming Tuberculosis (TB) service delivery model in China: Issues and challenges for health workforce
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Full author names: Ziyue Wang, Weixi Jiang, Yuhong Liu, Lijie Zhang, Anna Zhu, Shenglan Tang, Xiaoyun Liu

Response to Reviewer #1:

Major concerns 1:
In my opinion, there are two major limitations to the study. The authors do not provide data on the pre-transformation TB workforce of the Zhejiang and Ningxia provinces. Without this information, we cannot determine whether the deficiencies in TB service delivery are attributable to the new model or have always been present.
Our reply:
Thank you for the valuable comment. This is a key issue in the study. We performed a cross-sectional study (with no pre-transformation data), the main purpose of our paper is NOT to examine changes in "before and after the transformation", rather examining whether or not the new model has been well equipped to tackle the TB challenges facing these project provinces, compared to the old model. We use guidelines/government policies as reference to identify gaps and discuss challenges.
In the revision, we made this clearer in the research objectives and discussion.

Major concerns 2:
Secondly, the authors describe the socioeconomic differences between the three provinces. ……I am not convinced that a mixed methods approach would necessarily mitigate this limitation and would suggest attempting quantitative adjustments, particularly on the income data. If the Zhejiang province is more economically developed, I would assume the cost of living is higher in the Zhejiang province. Are the higher incomes in this province merely reflecting cost of living adjustments and have no relation to the TB service delivery policy?

Our reply:
As suggested, we have added an OLS regression in order to control the socioeconomic differences between the three provinces.
On the income data, the focus is not about the comparison between the three provinces, but on the fact that TB department in designated hospital have limited capacity to generate revenues through service provision, TB health workers in the new model may still only have a modest income and low motivation.

Minor concerns 1:
Pg 9, lines 145 - 155, More detail should be provided regarding the qualitative methods. Please refer to the COREQ reporting guidelines for qualitative research. http://www.equator-network.org/reporting-guidelines/coreq/

Our reply:
We have added more details regarding the qualitative data collection and analysis (page 9), according to the COREQ reporting guidelines (which is also cited in the reference).

Minor concerns 2:
Pg 10, lines 180-184, If possible, please provides detail on the TB prevalence in each province. Is TB staffing levels appropriate for the TB prevalence in those regions?
Our reply:
We have added in table 1 and page 11: The TB detection rates in Zhejiang, Jilin and Ningxia were 53.5, 47.1 and 39.2 per 100,000 populations in 2015, showing that the staffing level was not proportional to the TB prevalence in those regions.

Minor concerns 3:
Pg 15, Line 262-267, one of the study hypotheses was that the new TB service delivery model would be associated with more TB knowledge. As a primary objective of the study, this should be commented on in the opening paragraph of the Discussion. Also, as mentioned under the Major Concerns, can the authors conclude that the new delivery model is associated with fewer TB health professionals without a comparison to the pre-transformation workforce levels in the region? With pre-transformation data for Zhejiang and Ningxia, the author could make some inferences on the degree to which the TB workforce in these regions is still transforming towards the intended policy objective.
Our reply:
We have added in the first paragraph of discussion:” TB health workers showed limited TB knowledge.”
As explained previously, we have not obtained health workforce data before the transformation, therefore we had cross-sectional comparison of HRH staffing level between the three provinces and with the national staffing norm. This is now also discussed in the limitation.

Response to Reviewer #2:

Reviewer’s concern 1:
On line 189-191 of results part, the OLS regression results should be described in this paper, and the sentence should be moved to the "Data process and analysis" part.
Our reply:
The OLS regression results are described in page 12 and in Appendix 1.

Reviewer’s concern 2:
On line 242 of "Income level and motivation policies" part, "compare to the previous year", what's the exact years? The duration of the years should be described.
Our reply:
The previous year is 2014. We have made this clear now.

Reviewer’s concern 3:
Table 1 shows the data in 2015, I think 2015 is too long from now, it can't reflect the current situation.
Our reply:
Thanks for the comment. This paper was based on the data collected in the baseline survey of China-Gates Foundation TB Control Project (Phase III), which was done in 2016. So, the latest data for the baseline survey was from 2015.

Reviewer’s concern 4:
More sampling details of the questionnaire respondents should be described because the level of hospitals can also have an impact on scores.
Our reply:
We have added more details on the sampling in the Page 7. The sample institutions included provincial designated hospital/CDC, city-level designated hospital/CDC, and county-level designated hospital/CDC.

Sincerely,

Prof. Xiaoyun Liu
Deputy Director, China Centre for Health Development Studies, Peking University
38 Xueyuan Road, Haidian District
Beijing, 100191, P. R. China

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