Author’s response to reviews

Title: The association between tuberculin skin test result and active tuberculosis risk of college students in Beijing, China: a retrospective cohort study

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Author’s response to reviews:
Point-to-point response to reviewers’ concerns

INFD-D-19-00781 (Research Article)

Title: The association between tuberculin skin test result and active tuberculosis risk of college students in Beijing, China: a retrospective cohort study

Authors: Demin Cao; Zhiguo Zhang; Zhen Yang; Shubo Ma; Zhaogang Sun; Huijuan Duan; Baoli Zhu; Fei Zhao

Thank you for the valuable suggestions to improve this article. All concerns have been addressed in the revised version. All changes have been underlined in the new version to facilitate easy evaluation. The responses are summarized below.
Editor Comments:

I appreciate the efforts from the authors on improving their manuscript. However, there are still some points needed to be clarified. A final decision will be made once the 3 minor comments have been addressed.

Reviewer reports:

Sheng-Yuan Ruan, MD, PhD (Reviewer 2): Thank you for your responses. I have three questions for the revised manuscript.

Concern #1. (Page 5 Line 134) The authors stated that "few" students received LTBI treatment. Please report the number of treated cases and TST results of them. Are these treated students all with TST induration > 2cm? If that is the case, the risk of active TB for those with TST >2 cm might be underestimated in this study. Please comment on this.

Answer: Yes, all these treated students are with induration > 2cm. The standard was based on “Standard for tuberculosis prevention and treatment (Beijing, 2013)”. Unfortunately, the details of students received LTBI treatment were unavailable during 2013-2016. As you said, the risk of active TB for those with TST reaction size ≥2 cm might be underestimated in this study. It has been commented in section discussion, page 10, lines 273-275.

Concern #2. (Page 5 Line 137) "the students who had TB symptoms would be reported to BCITPT by head teachers of classes". Does it mean that teachers were responsible for the TB case identification? Have they been qualified for doing this work?

Answer: No, teachers were not responsible for the TB case identification. The students who were not well would go to the hospital for some physical check-ups. If one was suspected to be TB case, the teacher would take he/she to BCITPT for further diagnosis in the first time. Beside, BCITPT carries out activities in various forms to publicize the knowledge of prevention and control of TB in colleges every year.
Concern #3. (Page 8 Line 218-220) "As indicated in Figure 2, the distribution of the absolute risk of active TB of different induration sizes had similar features." I'm confused with this sentence. Could the authors explain it to me?

Answer: In response to this concern, this sentence has been rewritten as “As can be seen from Figure 2, there was little difference in the absolute risk of active TB between TST reaction size 0~4 mm and 5~9 mm, but it was increased rapidly with TST reaction size greater than 10 mm”.