Reviewer’s report

Title: Patient and health care system characteristics are associated with delayed treatment of tuberculosis cases in Taiwan

Version: 0 Date: 06 Aug 2018

Reviewer: Riris Andono Ahmad

Reviewer's report:

Manuscript title: Delayed factors analysis from patients' characteristics and health care systems for incident tuberculosis in Taiwan

General comment:

Overall this is an important topic in TB control program and the manuscript is generally well written. The data source and the analysis is robust. However there are several assumptions which were not mention that need to be clarified, so that the findings is not over estimation of health system/diagnostic delay.

1. The authors did not mention what is the TB diagnostic procedure/work up in their setting, what is/are the criteria to screen respiratory illnesses as suspected TB cases, and how many of those with respiratory illnesses in the study had that symptoms but were not tested for TB by health care providers. Are all respiratory illnesses should be tested for TB diagnosis in Taiwan?

2. What are the tests used to diagnose TB cases? (X ray, sputum smear microscopy, culture, Gen Expert)?

3. How the TB test are performed to suspected TB cases, subsequent test between the available test or simultaneously?

The above assumptions will significantly affect how we define and calculate the diagnostic delay, and the data should be re-analysed if the first assumption (screening criteria) was different with the current definition used in the manuscript. And if the data did not support, it should be written as study limitation.
Additional comments/clarification:

Line 105-106: Based on their regulation, researchers can only take out summarized statistical results, without any raw data.

Does this mean that the analysis was performed by the staff from the Health and Welfare Data Science Center and not the study team?

Table 1. The authors used severity of the disease as one of the determinants of delay. This should also be reflected in Table 1 for consistency.

Line 161-164: Compared to 62 patients whose initial visits at a hospital (median HSD = 33 days), patients whose initial visits were at a primary care clinic suffered from prolonged HSD (median HSD = 164 68 days). The finding may be confounded with the severity of the disease, as the more severe cases might prefer to go to the hospital as their first facility visit. A stratified analysis should be considered.

Table 2. It would be more informative in table 2 to show the frequency for each of the category.

Line 205-206. Meanwhile, potential risk factors of prolonged TB treatment were assessed.

The author did not mention this in the method and result section. It should be deleted.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
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