Author’s response to reviews

Title: Operationalization of bi-directional screening for tuberculosis and diabetes in private sector healthcare clinics in Karachi, Pakistan

Authors:

Mashal Basir (mashal.basir@gmail.com;mashal.basir@columbia.edu)
Shifa Habib (shifa.habib@chshealthcare.org)
Syed Zaidi (asad.zaidi@chshealthcare.org)
Saira Khowaja (saira.khowaja@ird.global)
Hamidah Hussain (hamidah.hussain@irdresearch.org)
Rashida Ferrand (rashida.ferrand@lshtm.ac.uk)
Aamir Khan (aamir.khan@irdresearch.org)

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Author’s response to reviews:

I have attached a response letter as supplementary material, which is color-coded and therefore easier to view. I have pasted the contents of the response letter below:

Dear Dr. Anete Trajman,

Thank you for your encouraging email enclosing the reviewer’s feedback. We greatly appreciate your quick response and have carefully reviewed the comments and addressed them in a revised version of the manuscript. Our responses are enlisted in a point-by-point manner in blue text below, while specific quotes within the revised manuscript are in purple text. Changes within the manuscript are delineated in red, underlined text (through the Track Changes option) and also highlighted in yellow for easy retrieval.

We hope after carrying out these essential revisions, the current version of the manuscript is now acceptable for publication. We look forward to hearing from you.
Reviewer 1 comments:

The authors submitted a revised form that is in consonance with my questions, comments and suggestions. Overall, the revised Figure 1 is easier to keep track of tests uptake.

Author response:

Valeria, thank you so much. We really appreciate the time you have taken to provide us with such valuable feedback.

Reviewer 2 comments:

Thank you for addressing my comments. A few additional comments below:

Author response:

Thank you, Akshay. We are so grateful for your extensive feedback throughout this process. It has helped resolve ambiguities in the manuscript, and we have tried our best to address the outstanding concerns you have below.

1. Please include the method for calculating "prevalence".

Author response:

The authors have decided to replace the term “prevalence” with “yield” as we feel that using “prevalence” is problematic given that our sample has a great risk of selection bias. We have replaced the word “prevalence” with “yield” in the discussion section, lines 268-271, page 13.

We have also included the method for calculating DM and TB yield in the Methods section, line 189-194, page 9-10:
“The yield of TB among individuals identified with Pre-DM and DM was computed as the proportion of individuals who tested positive for TB among all individuals with DM and pre-DM who underwent TB testing via chest X-ray and Xpert MTB/RIF in this project. The yield of DM among individuals diagnosed with TB was calculated as the proportion of individuals identified with DM and Pre-DM among all individuals with TB who underwent glucometer-based RBS testing in this project.”

2. Please clarify how uncontrolled vs. controlled diabetes was classified. How many received hypoglycemic drugs?

Author response:

We have addressed both concerns in the Methods section, lines 151-152 and 156-157, page 8 as shown below. Table 1 provides the numbers for previously diagnosed cases of diabetes and pre-diabetes who were already taking oral hypoglycemic drugs when they joined the program.

Lines 151-152: “1,180 individuals with known diabetes (Table 1), defined as all those who self-reported to be taking oral hypoglycemic medication, underwent glucometer based random blood sugar testing and then were channeled into the presumptive DM-TB arm (Figure 1).”

Lines 156-157: “For the purpose of this analysis, uncontrolled diabetes was defined as RBS of greater than 200mg/dl on glucometer testing.”

3. Please clarify what the p-value in Table-2 is calculating.

Author response:

We have included an additional legend under Table 2 describing what the p-value calculates:

“† The p-value denotes the level of significance found when testing differences in sociodemographic characteristics between individuals identified as new DM cases and those identified as pre-DM, among all TB patients who had a glucometer blood sugar test.”

4. Line 334 Conclusion. "...should incorporate greater cost subsidies for patients in the program budget" is not supported by the data presented in the manuscript. As mentioned before, please include this in the discussion rather than the conclusion.
Author response:

This was an oversight on our end, and this sentence has been removed from the conclusion and re-inserted into the discussion section, lines 307-309, page 15:

“Public health practitioners and program managers that are eager to roll out a bi-directional TB-DM screening program in the private sector, should incorporate greater cost subsidies for patients in the program budget.”