Author’s response to reviews

Title: Pretreatment loss to follow-up of tuberculosis patients in Chennai, India: a cohort study with implications for health systems strengthening

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Author’s response to reviews:

Dear Mr. Spofford and BMC Infectious Diseases colleagues,

Thank you for reviewing our manuscript entitled “Pretreatment loss to follow-up of tuberculosis patients in Chennai, India: a cohort study with implications for health systems strengthening” (INFD-D-17-01306R1). We appreciate the insightful and constructive comments of the three peer reviewers, and we have addressed their concerns below and in a modified version of the manuscript.

We hope that our modifications are to the satisfaction of the editorial team and the peer reviewers. Thanks again for considering our research for publication in BMC Infectious Diseases.
Sincerely,

Ramnath Subbaraman, MD, MSc, FACP (on behalf of Dr. Beena Thomas and all the co-authors of the manuscript)

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Jon Zelner (Reviewer 1): This paper addresses an important problem in understanding the determinants of a key point of failure in the TB treatment cycle. The paper is clear, and well-written, and the study design and statistical methods are appropriate to the question and available data. I have no major objections to the manuscript and think that it makes a meaningful contribution to the TB literature

We thank the reviewer for his careful review and encouraging feedback.

Carrie Tudor, PhD, MPH, RN (Reviewer 2): Reviewer's report

The authors have conducted an important study to examine and quantify how patients are lost to follow up between diagnosis and start of treatment and registration.

We thank the reviewer for her careful evaluation of this manuscript.

1. Abstract: in the conclusions the authors provide a nice summary of the results, but it might be helpful to the reader if they could provide a few words on the next steps or interpretation of the results instead of just repeating them.

We appreciate this feedback and have eliminated the last sentence of the conclusion that simply restated key findings. Instead, we have included the following sentence summarizing next steps in addressing this problem:

“Enhancing quality of care and health system transparency is critical for improving linkage of newly diagnosed patients to TB care in urban India.”

2. There are a few typos or misspelled words the authors may want to revise. For example, on page 8, line 4 - it should be "half" instead of "have".

We have corrected this mistake and have also carefully reviewed the manuscript to address any remaining typos.
3. I believe that REDCap has a preferred citation on their website (https://www.project-redcap.org/) the authors may want to consider adding this.

Thanks for pointing us to the REDCap website; we have provided a description of the REDCap application and its utility for research as recommended on the website.

4. In the Methods section, the authors mention qualitative interviews with the patients they were able to find and link back to care. But the results or findings from these interviews are not included in the manuscript. It may be helpful to the reader to cite the other manuscript where the qualitative findings are discussed. This is on page 11 and page 25.

We had initially considered including the qualitative findings of the study as part of this manuscript but realized that the manuscript is quite long even just with reporting of the quantitative findings. As such, we decided to split the study findings up into two separate (but complementary) manuscripts; however, we hope that interested readers will read both manuscripts to gain a full understanding of the problem of pretreatment loss to follow-up of tuberculosis patients in Chennai.

At this time, all qualitative interview transcripts have been formally analyzed using qualitative analytical software, and we are in the midst of completing a formal manuscript draft for submission to a peer-reviewed journal. As such, we cannot provide a formal citation for the qualitative manuscript at this time; however, we have clarified throughout the paper that the qualitative manuscript is “forthcoming” so that readers will know that it has not yet been published as of the date of publication of this quantitative manuscript.

5. As the main reasons for patients being lost seem to be related to health systems issues. It would be helpful to the reader to know what the findings were from the qualitative interviews. Or if the patient reports from the qualitative interviews also indicated health system issues.

We definitely appreciate the perspective of the reviewer, and we can say with confidence that health system barriers are a dominant theme emerging from the qualitative interviews with “lost” TB patients, which corroborates the quantitative findings. However, we do not feel that commenting further on these findings would be appropriate in this manuscript, as the qualitative findings are quite rich and require their own careful evaluation and discussion. As such, we plan on completing the qualitative manuscript in an expeditious manner so that it will be available soon for interested readers.

6. The conclusions the authors describe are appropriate for the results, but wonder if they might say more about what can be done to address these issues going forward.

In the conclusion, we have tried to provide very specific recommendations for reducing PTLFU as noted in the following excerpt:
“Improving the quality of patient contact information recorded at the time of sputum evaluation (potentially through regular audits of records with performance feedback) [30], proactive patient tracking by healthcare workers with a dedicated patient retention team, and rigorous implementation of a “registration at diagnosis” policy may help to reduce PTLFU and improve linkage to care. High-volume DMCs in cities should be priority sites for these health system-strengthening interventions, with a goal of improving coordination with the rural DOT centers where many out-of-city patients may start TB therapy.”

We modified the above excerpt now to include reference to performance feedback, which was found to be one component of a successful health strengthening intervention as per the following study, for which we have added a citation: Chaisson L, Katamba A, Haguma P, Ochom E, Ayakaka I, Mugabe F, Miller C, Vittinghoff E, Davis JL, Handley MA, Cattamanchi A. Theory-informed interventions to improve the quality of tuberculosis evaluation at Ugandan health centers: a quasi-experimental study. PLoS One 2015;10(7):e0132573.

In the above statement, we provide concrete recommendations based on our findings, including:

1. Use of performance feedback to improve the quality of patient phone and address information
2. Development of teams of health workers who could focus on tracking and retaining patients (i.e., “patient retention team”)
3. Implementation a “registration at diagnosis” policy to improve health system transparency
4. Focusing on high volume microscopy centers as key sites for rollout of these interventions in cities

We are happy to say that many of these recommendations are actually currently being implemented in Chennai, as a result of our study findings.

Nishant Verma (Reviewer 3): Thank you for your interesting paper. The authors have provided great insights in the barriers for providing appropriate treatment of TB in Developing countries with high disease burden.

We thank the reviewer for his careful review and encouraging feedback.