Author’s response to reviews

Title: Human immunodeficiency virus-associated tuberculosis care in Botswana: evidence from a real-world setting

Authors:

Ley Muyaya (leymuyaya@gmail.com)
Esperance Musanda (esperancemanwana@yahoo.com)
Jacques Tamuzi (drjacques.tamuzi@gmail.com)

Version: 3 Date: 07 Aug 2019

Author’s response to reviews:

Reviewer reports:

Rachel Kubiak, MPH (Reviewer 1):

Comment:
The authors have made substantial improvements to this manuscript and it is near ready for publication following a few clarifications.

Response:
Thank you very much for the positive feedback and input, we are also grateful for your comments and suggestions which also led to the improvements of this manuscript.

Comment:

Line 170: Please make clear somewhere in the statistical methods section that you use forward stepwise regression to determine your final model.

Response:
Thank you very much for the comment; we have made it clear under the statistical methods (line 168 – 169)
Comment:
Line 186: What proportion were female?

Response:
Thank you very much, the proportion of female was 43%, we have included this in the results section (line 187)

Comment:
Line 216: It looks to me like mortality was quite consistent over the first 5 months and does not necessarily drop off after only 3 months. Is there a reason 3 months was chosen?

Response:
Thank you much for the observation, we have acknowledged that mortality was quite consistent up to 5 months in general for both groups; our comments were based on the assessment of the survival curve together with the table of survival probability over the follow up times, which showed that more deaths occurred in the first 2 months especially for the group of HIV-associated TB patients not ART during TB treatment.

However, to address the reviewer concern, since these comments provide a general overview of mortality in both groups, we have reworked the sentence as follows:

“The survival curves illustrates that most patients died in the first five months; there were few deaths after five months “(Line 217 – 219)

Comment:
Line 217-8: Either stating what proportion died in each group or performing significance testing and giving a p-value would be helpful for the 2 month difference. It's unclear how the 2 month marker was chosen since the authors state most deaths happened within 3 months.

Response:
Thank you very much for the observation, we should mention that we have first made comments following the assessment of mortality in general for both groups as illustrated by the curves of both groups, then followed by comments on only the second group of HIV- associated TB patients who were not commenced on ART during TB treatment.
Furthermore, the interpretation of this figure was to help us in understanding of mortality and survival trend of HIV-associated TB patients on ART and not on ART during TB treatment in this setting. The two months marker was chosen for the group of HIV-associated TB patient not ART during TB treatment since it is has been shown that mortality is high in this category of patients in the first two months of treatment and also the Botswana guideline recommended ART initiation during the first two months TB treatment. Moreover, the assessment of the survival curve and the table of survival probability have shown that 67% of HIV-associated TB patients not on ART deaths (Cumulative) occurred during the first two months of TB treatment. This could be seen by the survival curve significant steps up to two months, which was significantly different from the survival curve of HIV-associated TB patients who were ART experienced during TB treatment for the same period.

Moreover, since we have used The Kaplan-Meier method to compare time to death at each point of follow up time for the group of patients on ART and the group of patients not on ART during TB treatment and the log Rank test (Test of equality of survival distributions for the different levels of ART) to compare the survival time between groups, which was statistical significant with a strong P value (< 0.001), we could not compare the two proportion of mortality at two months with another statistical method since two more statistical method with significance were performed in addition to cox proportional regression which showed a statistical significant difference in mortality of two groups.

Comment:

Line 245-6: Citation needed for seriously ill definition.

Response:

Thank you, we have included the reference.