Reviewer's report

Title: Time to viral load suppression and its associated factors in cohort of patients taking antiretroviral treatment in East Shewa Zone, Oromiya, Ethiopia, 2018

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Reviewer: DORCAS OBIRI-YEBOAH

Reviewer's report:

In the era of the "90 90 90" targets, such studies are very relevant for every country. The findings can inform program managers on what needs to be done to achieve these targets and this study focuses on the 3rd 90. Below are specific comments:

1. Abstract lines 50-54: kindly correct to read '…and the maximum time required to reach the level was FOUND AMONG THE age group between 50-59 years….'. This makes the statement clearer than what you have currently

2. The study population aspect of the methods is not well phrased. The meaning is not clear so kindly rephrase

3. Please read through the whole manuscript to correct some grammatical errors e.g. under the methods Sample size determination and sampling correct to read 'Two hundred forty three study participants with base line viral load MEASUREMENTS were included in the study'. 'All patients in THE cohort with baseline Plasma viral load WERE included in the study'. There are a number of sentences which require such editing.

4. Under data collection tools & procedures, correct to read "the study used secondary data from a long running community-recruited prospective cohort of patients LIVING WITH HIV".

5. Avoid repeating the exclusion criteria of age less than 18 years old, with current or previous ART, as well as patients on ATT for more than 2 weeks before inclusion were excluded. The same is stated in just the paragraph above it on the eligibility.

6. The whole paragraph under the laboratory analysis should be moved from the results part and taken to 'methods'.

7. Page 5 lines 17-25, make these corrections: Most of the study participants (41%) WERE married but widowed PARTICIPANTS REPRESENTED only 10 % of the PARTICIPANTS.

8. Page 5 lines 23-28, I don't get what you mean with this "With regard to baseline viral load in which the measurement was taken when the study participants enrolled in to the study". Rephrase
9. Again, the whole text of the results need to be edited thoroughly. There are a number of sentences starting lower case and a number of unclear phrases.

10. You use BCD4 and BPVL without clearly defining them on first use. Please correct that.

11. I feel you have too long text description of the Study participant Characteristics. It is just repeating basically the table so please state only very key findings.

12. For age, why did you chose to give all mean, median and mode? There is statistically rule for what to present so I am not use what informed your decision.

13. The discussion on viral suppression is very unclear in many parts of the manuscript because of the manner it is being stated. Usually when you state viral suppression rate, the definition of it must be very clear to the reader much earlier in the manuscript. Then also any studies being discussed would usually have stated what time point, viral suppression was assessed, was it after 6 mths on ART or 12 mths? Or if it was a prospective cohort, it will state the time point at which any suppression value is being related to but the discussion in this manuscript is not making these clear in a number of places. And it is made worse by grammatical and typographical errors. E.g. quoting directly from discussions lines 44-49, you have the sentence "As of 2015, 72% of study participants achieved viral suppression. But in a study conducted in Brazil, the percentage of HIV patients achieving viral suppression were 62%". So the 72% and 62%, how long have the participants been on ART? Any information on that? Then "But" should be 'but' and remove "the" where 2 of them appear.

14. Page 7 lines 57-60, rephrase this statement "Significant sex difference was achieved in plasma viral load suppression among different sex category".

15. Page 8 lines 49-53 you state "At least one instance of viral rebound was occurred in 16.5% of cohort of HIV patients in the study period". Remove 'was'

16. The link between tuberculosis and response to therapy is a key issue in ART but not much was said in this manuscript though you screened for TB.

17. In the conclusion, you have "Additional factors believed to be influencing survival curve were also studied, but not significant relation was found with the response variable", change 'not' to 'no'.

18. Table 1: some words need to start with upper case so edit the table.

19. Figure 1 is a bit blurred, can you improve it?

20. I don't see any table or presentation of results from the multivariable analysis that was supposedly done. So where is it?
21. What is "outdoor" and "indoor" occupation as stated on table 1? And why that categorization?

22. The study has far more limitations to be stated than you have mentioned.

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.

Unable to assess

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?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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