Reviewer’s report

Title: Magnitude and causes of first-line antiretroviral therapy regimen changes among HIV patients in Ethiopia: a systematic review and meta-analysis

Version: 1 Date: 29 Jul 2019

Reviewer: David Mabirizi

Reviewer's report:

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1. "ART regimen change is a major challenge for the sustainability of human immunodeficiency virus (HIV) treatment program. This is found to be a major concern among HIV/AIDS patients in a resource limited setting,...."  
Comment - we need a reference for this concern

2. Objectives - The aim of this review is to generate the best available evidence regarding the magnitude of first line antiretroviral therapy regimen change and the causes for regimen change among HIV patients in Ethiopia  
Comment - there is a need to change this to "among HIV patients on ART" in Ethiopia because there is no regimen change among all HIV but for those that are on treatment

3. The estimated national pooled magnitude of regimen change was 37% (95% CI: 34%, 44%)....and The major causes identified were toxicity, 58% (95% CI: 46%, 69%); TB co-morbidity, 12% (95% CI: 8%, 16%); treatment failure, 7% (95% CI: 5%, 9%); and pregnancy, 5% (95% CI: 4%, 7%). 
Comment - these estimated figures should have a range in bracket because there are 13-22 papers presenting varying switching rates we need to know the minimum and the maximum and then the estimated rate.

4. One-third of HIV patients in Ethiopia changed their first line regimen.

Comments - the question is over what time? A year of starting ART, 2 years, 3 years?

5. David W Mabirizi, M.D., M.P.H., M.B.A., M.Phil (Reviewer 2):

Comments - correct name David Mabirizi, M.D., M.P.H., M.B.A., M.Phil
6. "The result of this meta-analysis was lower to a study conducted in Europe and North America which reported 40.3% of patients modified first line ART."

7. Comments - we need to discuss the difference in the rate of switching in studies quoted in Europe, South Africa and Switzerland compared to the rate found in Ethiopia and the possible factors that associated with this difference eon rates

8. Comments - Minimize repetitions in the paper

9. This review revealed that one third of HIV patients in Ethiopia changed their first-line regimen which was found to be high.

10. Comments - The patients do not change their regimen, the regimen is changed by the clinician. Please correct sentence

**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.

Yes

**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

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Needs some language corrections before being published
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