Reviewer’s report

Title: Predictors and Delay in Detection of Failure and Switching of First Line Anti-retroviral Therapy in Ethiopian Children with HIV/AIDS

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Reviewer: Dalton Wamalwa

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Reviewer Comments

Title: Predictors and Delay in Detection of Failure and Switching of First Line Anti-retroviral Therapy in Ethiopian Children with HIV/AIDS.

Major Compulsory Revisions

a. IRIS is mentioned in the manuscript but not clearly defined. Give a clear definition of what constituted IRIS in this cohort.

b. Table 1 should include the following key parameters: anthropometric data (categories of weight- for- age, weight- for -height and height- for- age z scores) and CD4 count/ percentage including the proportion with severe immune deficiency categories.

c. Regimen change due to toxicity: Provide details on which drugs contributed to the most toxicity and the types of toxicities experienced.

d. In the discussion factor in the known limitations of self-reported adherence which tends to overestimate actual adherence as a possible explanation why adherence is found not to predict failure.

e. Include the lack of viral load data as a limitation into the discussion section.

Minor Revisions

In the background section specify whether the Ethiopian study that found clinical failure of 6.2% was an adult or pediatric study.

In the Methods Section: References should be inserted at the end of sentences and not in mid-sentence as is done in this section.

Rather than stating that children are followed at regularly-defined intervals provide the actual schedule e. g monthly for one year then 3-monthly thereafter.

Data Measures: (Under Growth failure): clarify whether this refers to weight for age below the 3rd percentile (important because other measures exists including weight for height and height for age).

Provide the median( or mean) CD4 count and percentage for the entire cohort. These are important measures that make it possible to describe the increase in CD4% over time.

Use of the term Incidence: Incidence of opportunistic infections: If the term
incidence is used it should describe events per person time e. g. 41 episodes per 100 person years etc. Otherwise leave out the word incidence and use simple proportions.

Minor typographic:
Clinical failure not clinical failures; Evidence not evidences. Change Isoniazide to isoniazid

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
'I declare that I have no competing interests'