Reviewer's report

Title: HIV-1 Drug Resistance-associated Mutations among HIV-1 infected Drug-naive Antenatal Clinic Attendees in Rural Kenya

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Reviewer: Nicaise Ndemi

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MS ID : 8754993679996349
Title : HIV-1 Drug Resistance-associated Mutations among HIV-1 infected Drug-naive Antenatal Clinic Attendees in Rural Kenya
Authors: Michael Kiptoo, Zipporah Nganga, Raphael W Lihana, Joyceline Kinyua, Nancy Lagat, Fredrick Okoth and Elijah M Songok

Reviewer # : The manuscript by Kiptoo et al describes resistance to antiretroviral therapy and molecular characterization of HIV-1 among drug naïve antenatal clinic attendees in rural Kenya.

Major Compulsory Revisions

Abstract
Page 2 – Conclusion, 1st paragraph: “The prevalence of drug resistance among drug-naïve pregnant women in rural Kenya in 2006 was below the World Health Organization (WHO) threshold.” This is incorrect, as this does follow the WHO participant mandatory eligibility criteria (Bennett et al. Antiretroviral Therapy 13 Supplement 2: 25-36).

Material and Methods section:
Page 4 - It will be helpful to the reader if the authors provide the epidemiologic characteristics of studied population (see reference Bennett 2008, age group < 25 years of age are more likely to be recently infected).

Page 4, Specimens: The use of single-dose nevirapine for PMTCT in the country is not mentioned in the introduction, did the ART history (pre-exposure to ART for primigravidae or multigravidae and etc…) screen for this? Either way, it should be noted. If screened for and individuals included in the sample received sdNVP, it should be included in Table 1 as this would certainly affect the prevalence of primary NNRTI resistance mutations.

Page 5, Drug resistance analysis: Description of the interpretation of drug-resistance mutations should be added. The use of Calibrated Population Resistance (CPR) tool is specifically designed to evaluate sequences from treatment-naïve subjects for assessment of the prevalence of transmitted drug resistant HIV. It uses a list of mutations (the SDRM list) to categorize viruses as having or lacking evidence of ARV drug selection pressure.
Page 6, Results section: authors are reporting point prevalence without confidence Interval. This is misleading.

**Level of interest:** An article of limited interest

**Quality of written English:** Not suitable for publication unless extensively edited

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

No conflict of interest