Author's response to reviews

Title: Syphilis among people with HIV infection in southern Ethiopia: sero-prevalence and risk factors

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Author's response to reviews:

We would like to thank the Editor for the valuable comments and inputs that improves our manuscript. We have included all of his suggestions and given a point-by-point response here below.

Point by point response

Comment: What are the local recommendations for ART initiation? (when ART should be initiated - at what CD4 count level?)

Response: The CD4 count level considered for initiating ART was: below 200 cell count during the year 2005 to 2008; below 350 cells during 2009 to 2013; and below 500 cells during 2014 till now. Thus, our study participants initiated ART at different CD4 count level.

Comment: Lines 53?55: ?Transmission of syphilis is mainly through unprotected sex, blood transfusion, needle sharing as well as through vertical transmission from infected mother to the child [2, 3].? References [2,3] provided relate to the mother to child transmission. Please provide a reference for blood transfusion as a significant transmission mode for syphilis. Please provide a reference for needle sharing as a significant transmission mode for syphilis.

Response: Your comment is well taken and we have now modified the specified section.

Comment: Lines 86?93: the text needs careful English language editing (incl professional scientific writing revision) ? what is ? magnitude of syphilis? ? ?the rate of HIV transmission? is probably incorrect use of terms

Response: Comments are well taken and we have now edited the manuscript to our best.

Comment: Lines 110 ? 112: What was the estimated sample size needed (for estimating the prevalence of 9.8% with the 2% precision)?
Response: We have now specified the calculated sample size, considering the given assumptions.

Comment: Lines 133 ?134: ?Multivariate logistic regression analysis was performed taking variables found to be significantly ..? Please specify what type on analysis was used? Statistically speaking, multivariate analysis refers to statistical models that have 2 or more dependent or outcome variables (Van Belle G 2004), and multivariable analysis refers to statistical models in which there are multiple independent or response variables (Katz MH 2003). Lines 133 ? 135: please specify what variables were included into multivariable logistic regression analysis? Currently authors present multivariable logistic regression analysis results in two tables (1 and 3). Were socio-demography characteristics associated with syphilis sero-positivity taken into account in the analysis presented in Table 3? Were risk behavioural etc characteristics (Table 3) taken into account in the adjusted analysis provided in Table 1?

Response: Comment well accepted and we have now modified it

Comment: Lines 251 ? 254: the statement - ?The observed higher rate of RPR false positive result is probably ART users with lower immunity more likely experience contributing conditions such as autoimmune diseases and other infectious agents? ? is unclear and confusing. Needs revision, careful referencing or should be omitted. [why individuals on ART would have lower immunity? Why lower immunity would lead to false positive RPR? What autoimmune diseases? Why ART users would have more (than ART naive) ?infectious agents??

Response: We have now omitted that paragraph