Reviewer’s report

Title: Association of HIV infection with distribution and viral load of HPV types in Kenya: a survey with 820 female sex workers

Version: 1 Date: 20 October 2009

Reviewer: Elya Moore

Reviewer’s report:

General: I commend the authors on a well-written, scientifically relevant manuscript. It was a pleasure to read.

1. Discretionary Revisions

- Abstract: The results section of the abstract needs some minor revisions. The first sentence should read “One third of women were infected..., and these women were more likely...”

- Background: Suggest a stronger rationale for the study in the final sentence of the background. Authors begin with “Additional information about the HPV types...” but do not specifically state the type of information that would be necessary to assist in planning for vaccine implementation and strategy. We are left to believe that the data the authors have collected will address this aim.

- General: Multivariable logistic regression (not multivariate)

- Data management and analysis: More description on backwards fitting model (and limitations thereof)

- Results: Add sentence on missing data (number surveyed, number with complete HIV data, number with complete HPV data, number with cytology data, number with complete data on all factors, etc...)

- Results: Spell out standard deviation the first time it is used

- Results (General): In the “Prevalence of HIV section”, when reporting a p value comparing two proportions, both proportions should be presented in the parentheses, not just one. For example, “Prevalence of HIV was lower in Muslim than other women (25.4% vs XX%, p < 0.001)”

- Results: “...786 had a Pap smear”. More information on Pap smears. Not clear what this variable means. A Pap smear in the previous year, in the lifetime, etc...

- Results: Paragraph that begins “Among the whole study population...” should be a separate section. Authors are no longer reporting data on Prevalence of HPV Infection, but rather Predictors of HPV Infection. For this same paragraph, please also describe the trend in HIV positive women (not only HIV negative women).

- Results: The few sentences just before the HPV Viral Load section (beginning with “Among women with HIV infection”) are repetitive. This portion could be moved up in the results section into the recommended section, Predictors of HPV
Infection, and combined with the detail that is already presented earlier. Note: the authors are discussing effect modification of age on HPV infection within strata of HIV status. This is different than the effect of HIV status on HPV infection.

2. Minor Essential Revisions

- Abstract: The sentence that begins with “Prevalence of all 15...” reports a ‘median age adjusted risk ratio’. There is no such mention of this risk ratio in the manuscript. Furthermore, the parenthesis for this sentence contains an ‘IQR RR’. Do the authors mean to suggest this is the interquartile range for the risk ratio? I suspect this is a typo. Please correct. If not a typo, than please clarify.

- Discussion: Please discuss the limitations of snowball sampling, and how missing data may have affected your results. This might also help explain why the authors results differ from what has been previously published.

3. Major Compulsory Revisions

- None

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**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.