Reviewer’s report

Title: Human papillomavirus infection among young women engaged in sex work in Phnom Penh, Cambodia: prevalence, genotypes and risk factors

Version: 1 Date: 22 March 2012

Reviewer: Brandon Brown

Reviewer’s report:

Major compulsory revisions

Methods
- specify if data was from a single visit
- what happened to participants who were found to be positive for HIV? Did they receive counseling, were they offered treatment, were they referred for treatment?
- explain why the ‘oral review of written informed consent’ was done, perhaps with low literacy rates? Were participants also given a chance to read the document?
- HPV quadrivalent vaccine is approved in the US for women 9-26 years of age. Were women 26-29 given vaccine in this study, and are the regulations different in Cambodia? Cervarix in the US is given to women 9-25 years.
- all women negative for HIV were given vaccine, but you also recruited HIV positive participants correct?
- under data collection, specify that questionnaires were administered in a private area if done so. Was this a paper questionnaire?
- was the technique used the ‘standard spatula/cytobrush technique’?
- please give more details on the HPV testing. What subtypes were detectable.
- if this is the first time HPV testing has been done at NIPH, how was quality control assessed
- under measures, how was HPV infection assessed (line blot, linear array, etc).
- were HPV results given back to participants?
- under analyses or measures, explain how you got from the data collection method to Stata
- Explain in methods section what is included in HR and LR HPV

Discussion:
- under limitations, if no quality control was done or no gold standard examined, the HPV results may need to be examined before additional testing is done

Minor essential revisions
Abstract
-specify the procedure used for HPV testing and how many types were detected, this will help inform the results section of the abstract for prevalence.
-in conclusions, rephrase first sentence to say this is the first Cambodian study on HPV.

Background:
-check sentence ‘….few treatment options exist mon[2]
-change the word ‘effective’ to ‘efficient’ and ‘reducing HPV infection’ to ‘reducing chronic HPV infection’
-grammar check sentence ‘factors detected so far include…’
-final paragraph, grammar check first sentence and specify risk factors for incident HPV.
-Change final sentence to ….‘we undertook a study to EXAMINE HPV genotypes..’

Methods:
-fix grammatical errors to include ‘s’ for plural items
-rephrase first sentence to ‘Cross sectional data were obtained….’
-mention the geographic data of those recruited, all from one city, etc.
-was HPV prevalence done before vaccination?
-under ethical review, change ‘Humans’ to ‘Human’
-change ‘and’ to ‘or’ in the section of classification ‘either 1)……OR 2)’
-define STI before using acronym

Results:
-15.8% had HIV of the 41.1% with HPV?
-recommend reporting HPV prevalence in HIV negatives and positives separately in addition to overall
-move sociodemographics above HPV DNA results

Discussion:
-useful to describe the assays used (types detected) in your study and perhaps a few of the ones mentioned
-specify cross protection from reference shown in Cervarix not Gardasil.
-mention that cervical HPV may not necessarily represent total HPV infection, which could also include oral, vaginal/vulvar, and anal HPV, plus serology
-discuss limitations if any of measuring consistent condom use via condom use with last paying partner
-a limitation might be that you don’t have any cervical screening data to pair with these HPV results, to see if the most prevalent types are associated with cancer precursors.
You may reference recent work from Brown et al on cervical HPV prevalence found in FSWs in Peru of 65.8% (Int J STD AIDS. 2011 Nov;22(11):655-8). The study has a similar sample size.

Conclusions:
-fix sentence ‘routine screening testing’

Tables:
-in table 1, missing information on condom use with last non-paying partner
-In table 2B, drop header ‘HIV and STI infections’ since STIs not reported

Figure
-only include genotypes with a prevalence

Discretionary revisions

Title
-much of your analysis focuses on the relationship between HPV and HIV. Consider somehow adding HIV to the title.

Abstract
-restate the sentence ‘All participants were also screened for HIV status’ to include type of HIV test.
-Not sure that looking at HPV in FSWs can inform urgent need for vaccine programs, if general population subtypes are unknown, but surely the high cancer rate in Cambodia from other studies speaks to this need

Background:
-you might want to specify between genital HPV types and other types that cause the outcome of interest in this paper
-change ‘this’ to ‘the’ country

Methods:
-move inclusion criteria sentence after convenience sample sentence

Results:
-it might be interesting to know what the previously diagnosed STIs were.

Discussion:
-regarding access perhaps mention cost of vaccine in Cambodia, and also that knowledge of HPV vaccines may be limited among FSWs in developing countries (Vaccine. 2010 Nov 16;28(49):7743-7). [Of women who heard about HPV, only 10% heard of a vaccine].
-check definition of OR and how this translates to odds when talking about a specific result
-in paragraph ‘this is the first study’ and after, be careful with distinguishing increased risk and association.
-maybe mention the estimated number of FSWs in Cambodia since this comes up in generalizability and also in conclusions

Tables:
-in table 1, the more drinking the more HPV?
-consider replacing ‘last paying partner’ with ‘last client’ in table 1

**Level of interest:** An article of outstanding merit and interest 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