Reviewer's report

Title: Epidemiology of infections by HIV, syphilis, gonorrhea and lymphogranuloma venereum in a large city: a population-based incidence study

Version: 4 Date: 18 April 2015

Reviewer: Robert Magnani

Reviewer's report:

Major Compulsory Revisions

(1) Overall, this is a well researched and written article. Most of the need revisions are minor in nature. One major issue that must be addressed is concerns the coverage of STI infections occurring during the study reference period. The assumption seems be that because notification is the law, all diagnosed HIV and STI cases will be reported. I don't know the context in Barcelona, there are a number of ways that STI cases go unreported in other settings. For example, what is the rate of self-treatment, especially among persons borne in other countries? Is it possible to "encourage" non-reporting by health practitioners via an additional "fee"? Are there doctors and labs that serve primarily non-Spanish clients and may be more susceptible to requests not to report. Again, I don't know the context in Barcelona, but something should be said about the assumed level of coverage. It may be that these are non-factors - if so, than it should be so stated.

(2) The non-response rate for the condom question is quite high. Was the reporting rate on this question related to other variables measured in the study? The non-response rate on the variable number of sexual partners was not reported. Please include this information, and then address the question posed above with regard to condoms.

Minor Essential Revisions

(3) Please include "Barcelona" in the article title and in the Background section of the Abstract.

(4) Please define acronyms the first time they are used in the manuscript (e.g., WSM, MSW).

(5) Who completed the questionnaire - the doctor or the client? If the former, please comment on the extent to which data collection via personal interview vs. via self-administered questionnaire may have influenced the results. Was self-administered data collection considered? Why not used?

Discretionary Revisions

Level of interest: An article whose findings are important to those with closely
related research interests

**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