Reviewer's report

Title: Heterosexual Anal Intercourse and HIV Infection Risks in the Context of Alcohol Serving Venues, Cape Town, South Africa

Version: 1 Date: 14 June 2011

Reviewer: Susan Sherman

Reviewer's report:

The current study examines the prevalence of unprotected anal intercourse among a convenience sample of patrons of bars in a peri-urban township of Cape Town, South Africa. The study is of interest, but there were several limitations, specifically, related to analyses, that minimized enthusiasm for the manuscript. Detailed comments follow.

Overall, the authors’ presentation of the study’s main finding as tentative. As is stated in the abstract and main paper conclusion, “Anal intercourse may play a significant role in HIV infections among a small minority of South Africans who patronize alcohol serving establishments.” The tentative nature of the sentence undermines the manuscript’s main purpose and contribution.

Abstract Introduction – add “heterosexual” to describe “anal intercourse.”

Introduction – more information should be provided about the bar context of sexual risk, given that there is extensive literature. By placing this article into that body of literature, the focus on context will be strengthened – which is an important strength of the study that is not focused upon enough in the introduction and discussion. The related hypothesis, that a relatively low frequency among a minority of participants will report anal intercourse.... Undermines the importance of the paper.

One of the study hypotheses mentions a “syndemic like pattern” (pg. 5) – but the results and discussion do not really discuss the syndemics of unsafe sex in the context of patrons of bars. This should be emphasized.

Methods, research setting and procedures – You provide a definition of neighborhoods in which one shebeen is located – why the focus on neighborhoods?

(pg. 6) You note that surveys were collected inside and outside of shebeens – did you examine if there were any demographic or key behavioral differences by these two data collection?

(pg. 7) Given that the analyses compare men and women, this should be noted. I am curious why you chose to do mathematical modeling in the paper – it is important but doesn’t seem to fit into the study’s overall aims.

Results- I suggest moving the description of the 72 men who had sex with men to
the methods’ rather than results section.

Given the paper’s focus on the prevalence of anal sex as well as unprotected anal sex, I suggest reporting the rates of anal sex (15% for men and 11% for women) in the abstract. Did you measure anal sex over any other time period besides 1 month?

I understand the importance of minimizing recall bias and all time periods for sexual behaviors have their pluses/minus, but it seems that this short period might minimize the prevalence and is likely shorter than many of the cited prevalence estimates for high-risk populations. I suggest providing p-values and %s throughout the results section so that the reader does not have to flip back to the tables to find out the degree of differences between the various behaviors.

Given your focus on alcohol and syndemics, why weren’t alcohol-related variables included in the multivariate models? I assume that although “sex with a partner met in a shebeen” was significant for both men and women in univariate analyses, they were not in the multivariate analyses. But could other variables have been explored?

Given that the univariate analyses were stratified by gender, why didn’t you examine two multivariate models by gender?

Discussion- As noted above, the tentative nature of the main study hypothesis undercuts the manuscript’s significance.

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

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests