Reviewer's report

Title: Racial/Ethnic and Sexual Behavior Disparities in Rates of Sexually Transmitted Infections, San Francisco, 1999-2008

Version: 1 Date: 26 March 2010

Reviewer: Lori Newman

Reviewer's report:

Overall:
This is a valuable topic since understanding disparities between MSM and non-MSM of different races is of great relevance to STI control efforts, and the methodology presented in this manuscript could be used by other health departments to do a similar activity. However, the authors need to clarify some of their methods and conclusions (see comments below).

Introduction, para 1, line 8:
1. If there are already "several studies showing increased incidence of STI among African-American MSM in relation to HIV risk" and "overall lower rates of STI's among API's have been reported", then how does this article add to the literature? I'd spend more time in the introduction making it very clear why what you are doing is different (e.g., none of the other studies done in a way that allow comparisons between MSM and non-MSM for all major racial/ethnic groups).

Methods, para 1:
2. Need to make it clear in methods, not just discussion section, as to how far back your database goes when looking to assign sexual orientation.

3. Need to give an estimate of what proportion of men you think you might not know their sexual orientation on. For example, you could mention completeness of reporting of gender of sex partner in provider report, and show how many more patients sexual identity or rectal infection were the identifiers of a patient being an MSM. I'm not sure the best way to do this, but you need to show some indication of how good the quality of your MSM vs. non-MSM assignation is since this is the most critical aspect of the analysis.

Methods, para 2:
4. In order to make it easier to understand your methods, you need to more clearly state when you are talking about MSM subpopulations, or racial/ethnic subpopulations. For example in line 3, do you mean "Overall MSM population size was estimated...."? And, "Sizes of subpopulations of MSM by race/ethnicity were projected using the total MSM(?) population size estimate multiplied by the proportion of MSM contributed by each race/ethnic group as identified in NHBS MSM1"? This isn't exactly the correct wording, but the point is that currently the methods section here is really hard to work through....
5. If you really want to make this paper be helpful for another health department, consider presenting an example of how you get to a specific size estimate of a race/ethnic subpopulation of MSM……..

6. It is a bit of a problem that you have 2000 US census data, and 2004 NHBS data, and then use these fixed points for estimating rates as recently as 2008. There is probably nothing to be done about the NHBS if it was not repeated. However, can't you improve on the 2000 census data? Can't you use bridging estimates of the census data to at least have the population size more accurate over the time period? What is SF’s standard source for population size estimates? There is a better source of population data than just the year 2000 census data.

7. In addition to improving the total population size estimate input data, is there nothing you can reference to reassure the reader that you are not aware of any major demographic shifts during this time period?

Results:

8. Para 1, line 3-7: These estimated numbers of MSM and non-MSM by racial/ethnic subgroup are for "any given year", right? Clarify time period here, in first Chlamydia para, and first gonorrhea para as well.

Discussion:

9. You present provider-type data in the results, but don't address in the discussion section. Either discuss more in discussion or delete from results.

10. Para 1, last sentence: Unclear, AA MSM had comparable rated of CT and GC to what?

11. Para 2, 3rd sentence: unclear how the first clause in this sentence differs from the second clause

12. Para 4, 3rd sentence "the higher rate of STIs among AA non-MSM in SF is not well understood"……what do you mean by this? It's widely accepted that gonorrhea terrible problem for AA men and is disproportionate to other races. Why is that surprising when subset to just non-MSM, which is probably what most AA men would claim to be? Also, hasn't there been some targeted screening going on for this high risk population? Isn't it possible that many AA men are not disclosing MSM behavior? I'd discuss this point a little more.....this sentence doesn't sit well as written.

13. I think you should spend a bit more time explaining how useful it would be to look at symptom status to help clarify the role of screening in artificially creating disparities. Can you do this with your data? Symptomatic men with gonorrhea, for example, are likely to seek care even in the absence of a screening program.

14. Last para, 4th sentence: Need to explain more clearly what you mean by "NHBS was limited in its under-representation of MSM of color"……that has potential HUGE implications for this analysis and needs further explanation.

15. Last para, 6th sentence: Unclear what you mean in this sentence…..do you mean that MSM seek care at STD clinics more than non-MSM, and because
STD clinics do a better job of reporting, they are disproportionately better reported than non std clinic patients? I'm lost by what this point is as currently stated.....

Conclusion:

16. 4th sentence: "….was an unexpected finding and is not well understood" is not a great conclusion. You only use rate ratios for this analysis, so in a population like AA men where rates are extremely high in both MSM and non-MSM, there is a low RR. The point for AA men is that rates are slightly higher for MSM, but terribly high in both populations!!!!! (And, we've known about high rates in AA men forever.) There's an interesting article that discusses the merits of using relative versus absolute measures of disparities, and it doesn't really change the outcome, but it may be worth discussing your selection of methods and the implications of using the selected methods in a situation such as this. Reference: Hoover K, Bohm M, Keppel K. Sex Transm Dis. Measuring disparities in the incidence of sexually transmitted diseases. 2008 Dec;35(12 Suppl):S40-4. This article may also be of interest on this topic because it also addresses briefly MSM and racial ethnic disparities: Newman L, Berman, S. Epidemiology of STD Disparities in African American Communities. Sexually Transmitted Diseases: 2008 - Volume 35 - Issue 12 - pp S4-S12.

17. Last sentence: not a really strong ending conclusion. Your point should be that for most races, being an MSM is a bad thing from a GC/CT standpoint. AA men, regardless of MSM status, have really high STD rates. The 2008 STD journal special issue on STD disparities I mentioned before discusses all sorts of contributing factors, so I'd reframe your take home messages so that they're a bit stronger.

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'