Reviewer's report

Title: Distributions and trends in sexual behaviors and HIV incidence among men who have sex with men in China

Version: 2 Date: 16 May 2012

Reviewer: Huachun Zou

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Minor Essential Revisions

The author can be trusted to make these. For example, missing labels on figures, the wrong use of a term, spelling mistakes.

This is a very well written paper. The important finding that regular partnerships are the main contributor of new HIV cases among Chinese MSM will potentially assist public health intervention strategies among this population in China to adjust towards the prevention of HIV transmission through regular partners. I would suggest accept it after the following changes:

I do not feel adequately qualified to assess the mathematics part of the paper, but I have a few reviews with regard to other aspects:

1. The authors provided annual and trend of HIV incidence among Chinese MSM, however, they should provide the raw data for HIV incidence as well.
2. Just as the authors pointed out, data for the distribution of the number of sexual acts are limited. There were only one available dataset for the distribution of commercial acts and two for overall sex acts, whereas data for regular and casual sex acts were absent. It might not be appropriate to use the one or two studies to represent that of the whole country.
3. Please provide reference for the claim that “MSM participants were selected mostly from MSM venues in these studies, where this MSM subgroup is more likely to participate in higher-risk sexual behaviors.” in Discussion section, page 10.
4. A few grammatical mistakes that need revision:
   • In Method section, page 5, “However, we only included studies with at least 2 datum points on the distribution of number of partners or acts.” What is “datum”?
   • In Results section, page 8, it should be “optimizations” rather than “optimization s”. There should be no space.
   • In figure caption page, “Figure 1. The distribution the number of ~~~” should be revised to “Figure 1. The distribution of the number of~~~”
   • In Figure 1 (d), on the horizontal bar, the figures might be wrong. How come
1.55 comes before 1.52 on the bar? Please check.

- In References section, the title of the 9th reference should be “Per-contact probability of HIV transmission in Sydney in the era of HAART”, rather than “Per-contact probability of HIV transmission in Per-contact probability of HIV transmission in”.

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.