Reviewer's report

Title: Sexual behaviors and recent HIV testing among high-risk men who have sex with men: A cross-sectional study in Cambodia

Version: 2  Date: 21 April 2015

Reviewer: Robert Magnani

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I'm sorry to say that I believe that this study is seriously flawed and cannot be fixed. The main problem concerns the sampling. On page 6, the authors state:

"In brief, data were collected from 394 MSM randomly selected from venues and hotspots identified by community-based workers in Battembang and Siem Reap province. A two-stage cluster sampling method was used to select the study sample with communes in each province as the smallest unit for the sampling. We included only communes with at least 20 MSM; other conditions such as convenience and accessibility were also considered to justify whether to include or exclude a venue or hotspot. We then used the probability proportional-to-size sampling to select the required number of MSM from each commune."

This sampling scheme contains elements of probability sampling (e.g., two-stage cluster sampling, probability proportional to size selection), and is commendable for this. However, it also contains elements of convenience sampling, which renders the results uninterpretable. Why limit to communes with at least 20 MSM? Also, "other conditions such as convenience and accessibility were also considered to justify whether to exclude a venue or hotspot." This precludes the sample from being anything more than a convenience sample.

The authors also sampled only from venues and hotspots. However, in settings where stigma and discrimination are high, many MSM remain "hidden" and do not go to such hotspots (in such settings many recruit sex partners over the internet). So the sample is in effect a convenience sample of an unspecified portion of the MSM population with regard to size and characteristics.

The analyses are based upon cross sectional data, from which causal inferences can be made on a speculative basis only. To their credit, the authors consistently talk about "associations" rather than causal influences, but nevertheless there are many studies of this type around and few can actually tease out causal influences.

In my view, another small-scale, cross-sectional study does not contribute much to our current level of understanding of MSM and HIV, especially given that the study is based upon what is in essence a convenience sample.
Level of interest: An article of limited interest

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