**Reviewer's report**

**Title:** Estimating the regional distribution of men who have sex with men (MSM) based on Internet surveys and calculation of MSM population-specific incidence of sexually transmitted infections

**Version:** 1 **Date:** 12 October 2008

**Reviewer:** Sarah Dougan

**Reviewer's report:**

The article addresses an important topic for public health among men who have sex with men (MSM) as there is a growing need to assess regional trends and patterns in STIs among MSM and this cannot be achieved without a suitable MSM denominator. However, while I think that work such as this would provide a valuable contribution to the field, I found the paper difficult to follow and difficult to understand some of the arguments within it.

**Major Compulsory Revisions**

1. **Length of manuscript**

   I thought that the manuscript was too long, and as there was so much information about different surveys etc. included within it, I found it difficult to follow and to assess what had been done. I wondered whether it would be better to split the paper into two: one on estimating the MSM denominator and the other on estimating regional-specific incidence of STIs using the regional denominators. Either way, I think it needs to be shortened and some of the arguments and the specific research question tightened up. Once this had been done, I would find it easier to assess it.

2. **Definition of "MSM"**

   My understanding of the "MSM" population is that these are men whose sexual behaviour is to have sex with other men, and that this is different to sexual identity/desire. In the methods, it wasn't clear what definition of MSM was being used and that this may have changed depending on the data source. Presumably this did vary by survey/study and this would result in differences in estimates of MSM population and also the validity of applying these to HIV/STI estimates. Work looking at the differences between sexual behaviours, sexual desire and/or sexual identity shows that there can be quite large differences (see for example, Australian Sexual Health Survey / Natsal from UK). I think the (likely) definitions of MSM/gay men need to be more clearly articulated and there should be discussion about this in introduction/discussion.

3. **Estimates of the proportion of MSM in the adult male population in Germany**

   Given that the 3.3% came from a sample of 3,600 adults, I think that all of the estimates of the MSM population should have 95% confidence intervals to show
uncertainty around this estimate.

4. Tables 2 & 3 were difficult to read in the format they were in the pdf.

**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.