Reviewer's report

Title: Prevalence of HIV among MSM in Europe: comparison of self-reported diagnoses from a large scale internet survey and existing national estimates

Version: 2 Date: 12 September 2012

Reviewer: Martin Donoghoe

Reviewer's report:

1. Is the question posed by the authors well defined?
The paper addresses an important and challenging issue of HIV infection in men who have sex with men. Self reported HIV is compared with national estimates across a variety of countries and methods.

The key question “how data on HIV prevalence can be compared between different countries and using different studies” (Background paragraph 4) is well posed but not convincingly answered (see 5 below).

The assertion that “self reported prevalence rates of HIV diagnosis in a large convenience sample of MSM correlate strongly with estimates derived from direct prevalence studies using different sampling methods” (Discussion paragraph 1) should be better defended (see 5 below) Major Compulsory Revision.

2. Are the methods appropriate and well described?
The authors state that “a detailed description of the survey method is published elsewhere” (Methods paragraph 1 line 1) but the reference provided (6) is incomplete Minor Essential Revision.

The methods section refers to 32 respondent countries (Methods paragraph 5) and then goes on to list those who did not respond. Clearly a list of countries that responded would be helpful Minor Essential Revision.

A little more detail on and a reference to the SIALON study (Methods paragraph 6) is needed Minor Essential Revision.

The authors might wish to better describe the methods and provide a full reference to a detailed description Minor Essential Revision.

3. Are the data sound?
The study has an impressive sample size (180 000) and good country coverage (38 countries), however the data are poorly described.

An additional table clearly describing the countries included in the study and in the study but excluded from the analysis would be helpful Minor Essential Revision.
Table 1 could better present the data by: moving the sources of the estimates to a footnote (or to the additional table suggested above) and moving the column on the HIV prevalence estimates to the right of the table to allow easier comparison with the EMIS data on diagnosed HIV among those tested Minor Essential Revision.

All three figures need a heading/title Minor Essential Revision.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?

5. Are the discussion and conclusions well balanced and adequately supported by the data?
   The key result that self reported HIV correlates with estimates based on other prevalence estimation methods (biological measurement and modelling based on surveillance data) is adequately supported by the data.

Reservation (see 6. below) regarding the great variability in the prevalence estimates (methods (including sampling frames and city based/national studies), time points etc) raise a question about the value of such comparisons. The authors should better defend these comparisons and in particular the value/robustness of the comparisons Major Compulsory Revision.

The comment that those with low risk are less likely to test (Background line 16) is challenged by other evidence that populations most at risk of HIV infection and transmission in eastern Europe have low access to (and low uptake of) HIV testing and counselling. Mass screening of low risk populations are common in Eastern Europe and there are great variation in testing rates (e.g. from 178 per 1 000 in Russia to just 5 per 1000 in Poland). The authors may wish to consider this evidence and place a caveat on the comment that those with low risk are less likely to test Minor Essential Revisions.

6. Are limitations of the work clearly stated?
   The limitations of self reports and internet surveys are recognised and clearly stated.

7. Do the authors clearly acknowledge any work upon which they are building both published and unpublished?
   The paper is rather poorly referenced (particularly in the Background section). The paper would benefit from reference to studies based on convenience samples (line 4); a UNAIDS or other reference to support the comment regarding the undiagnosed (line 16) and references to support the comment that those with low risk are less likely to test (see also 5 above regarding evidence that higher risk populations are less likely to test) Minor Essential Revisions.

Reference (10) is likely incorrect since the text refers to a WHO publication but the reference to a UNDP publication Minor Essential Revision.
8. Do the title and abstract accurately convey what has been found?
The comparisons are made and the limitations clearly stated, however the authors should better defend the value/robustness of the comparisons in the light of the methodological weaknesses Major Compulsory Revision.

9. Is the writing acceptable?
Yes

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