Reviewer’s report

Title: Implications of the HIV testing protocol for refusal bias in seroprevalence surveys

Version: 2 Date: 19 November 2008

Reviewer: Michael Sweat

Reviewer’s report:

The revision of the draft is significantly improved. The paper continues to be of likely interest, largely in the contribution the analysis makes to better understanding potential bias of sampling strategies with HIV seroprevalence surveys. The paper would be enhanced if there were a better description / justification for the assumption that ICD codes correlate with HIV infection status in an unbiased manner. Additionally, the discussion would be enhanced if the limits of generalizing these results beyond hospital-based settings were made more strongly.

- Major Compulsory Revisions

(1) The methodology used in the study is strongly predicated on having valid estimates of HIV prevalence estimates across ICD codes. The paper would be much improved with a more detailed justification for how this was derived.

(2) The discussion and conclusions section would be enhanced by not generalizing the results to non-hospital settings. It is very likely that hospital patients would be much more likely to already know their HIV infection status than in population-based surveys, and already knowing your infection status is likely associated with consent to be tested. Thus, the results of this study would very likely be quite different if conducted in a population setting.

- Minor Essential Revisions

(1) In the last sentence of the abstract the direction of effects is unclear for the variables listed. For example, rather than “gender”, it should state “female gender”.

(2) Page 5 first full sentence – it should be clarified if ref 33 is referring to a system where clients use the voucher to retrieve existing results, or to be retested.

(3) Page 11 – “Most of these effects remain stable after the introduction of more controls”. The phrase “more controls” is unclear.

(4) First sentence of conclusions is missing the word “of”.

- Discretionary Revisions
(1) In the background section, “…are positively associated with HIV status”. Suggest that this read “HIV infection”. The reader cannot currently tell whether the association is with HIV infection or non-infection.

(2) I interpret many of the findings in the analysis as related to clients deciding to forego an HIV test due to the fact that they already know their HIV infection status. This is especially so given that they are being sampled in a hospital. This possible interpretation is not explored much in the paper. For example, people who know that they are HIV-infected may be willing to provide a blood sample for the study, but do not see the need to be counseled and receive a test result that they already know to be positive.

(3) Page 12 – It is suggested that the rationale for why a comparison between the Heckman probit model and the standard probit model is important to conduct.

(4) Last paragraph of discussion section: “First, we identified a marginally significant downward bias in HIV prevalence estimates under the assumptions of a protocol whereby test results are not returned to respondents”. This is an important finding, and this sentence is too wordy. Suggest a more direct statement, such as, “First, when results are not returned to clients HIV prevalence is lower”.

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