Reviewer’s report

Title: Estimating levels of HIV testing coverage and use in Prevention of Mother-to-Child Transmission among Women of Reproductive age in Zambia

Version: 1 Date: 30 Apr 2018

Reviewer: Alison Wringe

Reviewer's report:

Abstract Methods

* Please include year of survey

* Typo: cross section study should presumably be cross-sectional study?

Abstract Results:

* Out of 15,388 women in the study, 12,413 reported ever tested for HIV. Please include the % in ()

* "….among adult women compared to the young women". It's not obvious how "adult women" and "young women" are defined. It would be better to say "testing coverage was higher among women aged A-B years compared to women aged C-D years"

* Social class of women was observed to be strongly associated with optimal uptake of HIV testing

[AOR 6.6, 95% CI 3.04-14.14; p<0.001]. It's not clear from this sentence which classes you were comparing, and which one had the higher odds. Better to rephrase as "women in X social class had 6.6 times the odds of having ever tested compared to women in Y social class (95%CI:)

If the abstract is too long after making these changes, you can always trim the introduction part of the abstract - the key thing is to present the Results with precision and accuracy…

Main paper

Results:
In Table 1, you report wealth quintiles which means divided into 5 categories, but there are only 3 categories. Shouldn't it therefore be tertiles (or whatever the correct term is)?

In the abstract Results, you referred to "Social Class" but there is no variable for social class in Table 1. Did you mean Wealth Tertile? Later on, you seem to refer to the same variable as "high, median and low economic status". It is important to be consistent. Perhaps you could consistently refer to it as Socio-economic status? In any case, it should have the same term in the abstract results and in Table 1 and in Results text.

The "Mode of HIV test" categories are confusing. What is "personal initiated"? At first, I thought you meant personnel-initiated as in provider-initiated? But perhaps you meant client-initiated? I am also not clear what you mean by "test was offered"? Could you describe this as provider-initiated? It's also not clear what "Test was required" means? Required by who?

Table 2 states proportion but percentages are reported.

Why does the following text come before the sub-heading "Testing coverage" - shouldn't it come afterwards since it is about testing coverage? Out of the total of 15,388 women in the study, 12,413 reported ever tested for HIV in the ZDHS. Of those who tested for HIV, 12,100/12,413 (98%) received their HIV test results. (See Table 2).

Not clear why the variables listed in Table 1 are not the same as those in Table 2?

Please shorten the title of Table 3.

Table 3 - why is mode of HIV test not included (it is included in Table 1)?

"Uptake of HIV testing was observed to be high among the older women compared to the young women" - which age groups are you comparing against which? Could you be more precise by stating the age groups in this sentence?

Furthermore, high economic status of women was found to be strongly associated with optimal uptake of HIV testing [AOR 6.6, 95% CI 3.04-14.14; p<0.001]. Please indicate in this sentence which category you are comparing against.

Discussion

"We observed an overall increase in reported uptake of HIV testing among child bearing women" - an increase of from what to what?
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