Reviewer’s report

Title: A comparison of linkage to HIV care after provider-initiated HIV testing and counselling (PITC) versus voluntary HIV counselling and testing (VCT) for patients with sexually transmitted infections in Cape Town, South Africa.

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Reviewer: Bruce Larson

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Reviewer Comments

A comparison of linkage to HIV care after provider-initiated HIV testing and counselling (PITC) versus voluntary HIV counselling and testing (VCT) for patients with sexually transmitted infections in Cape Town, South Africa.

General: This is a nicely presented paper on an important topic. I have some general comments and suggestions for the authors to consider. I only have three somewhat major comments:

1. I would have preferred the analysis to have the same possible follow up time for each patient (e.g. 1 year after HIV testing for a CD4 test result; and 1 year after a CD4 result for a viral load test, or two years for each, etc.).

2. In South Africa, a CD4 test result show up in the NHLS database whether the patient actually received the result or not. Thus, your definition of ‘linkage to care’ remains a bit vague. At least in some locations where I’ve worked, once a person tests positive for HIV, the majority then provide a blood sample of CD4 testing at the same visit. So, in this case a CD4 result will exist, whether or not the patient ever returns to collect the result.

3. The majority of patients with a CD4 result are not ART eligible. It is not clear why they were excluded from the analysis. You could have looked at if they had another CD4 test result with a certain follow up period (say 8 months if guidelines were every 6 months).

Other comments, suggestions, questions:

Abstract

1. Methods not clear. No methods described, and no primary outcomes described.

2. “linked to CD4 testing” not clear. Does that mean provided blood sample or known returned and received results?

3. In the conclusion, the shorten time for VL testing for ART-eligible patients is only if they were first successfully linked to care and initiated treatment?
Background

P 4, paragraph 2, sentence 2: Why would testing situation alter access to treatment? Regardless of how they test, they have the same access to treatment it would seem.

P 4, para 1, sentence 3: You could add the two references in this sentence. You do it later, but it seems they could belong here.

P 5. Figure 1 is pretty generic and not needed.

P 6. So the focus is linkage from HIV testing to CD4 testing (staging) and then staging to initiation (proxy by viral load test) for those ART-eligible. What about patients staged who were not ART eligible?

P 6. I would check on the clinical guidelines. I doubt CD4 testing without any clinical exam is consistent with guidelines.

P 7. Using CD4 lab results as a proxy for linkage to care is problematic because you do not know if a patient ever returned to receive their results. In the STI clinic, once a person was diagnosed with HIV, was a blood sample taken for CD4 testing at that time or did they have to come back for another visit? Even if the patient does not return for their CD4 result, the result will exist in the NHLS database.

P 8. In the non-PITC sites, could a person receiving STI services receive an HIV test as part of the same interaction with a health worker, or where they referred to another person in the PHC for HIV testing?

P 8 and Table 2: It seems that the motivation for coming (seeking STI care) is the same for both groups? If so, this is not clear.

P9, study population: check out the spelling of hypothesised…

P 9, data collection: It is not clear why you did not have the same follow up period for each person after HIV testing for CD4 testing. Having follow up between 6-12 months just confuses the issue. If you had study constraints, I’d say it up front otherwise this seems unnecessary.

P 10, last paragraph: One year later than when? December 2007? Yes, it looks like later you say through December 2008.

P 10, last paragraph: Again the difference length of follow up for patients makes the analysis more murky than needed.

P 11, first full paragraph: I am not sure 10% is a “small proportion”. Also, I also suspect they HIV tested in the past in a location where a blood sample was obtained from the patient, the CD4 test was performed, but the patient never returned to collect results.
P 11, data analysis: It is not clear why you excluded patients with a CD4 result who were not YET eligible for ART. You mentioned guidelines where that they should return in 6 months for a next pre-ART care visit. A CD4 test should be done at that visit, so you’d look at their second CD4 test result (again, you’ll not know if the patient ever received the result).

P 12, first sentence: Throwing variables on the right hand side of a logistic regression does not necessarily adjust for ‘confounding’. The “full” model was presumably only run for the first outcome (linkage after HIV testing). You’d not have CD4 > 200 in the ART initiation analysis I’d suspect.

P 12: Under participants, I was surprised that the % HIV testing in the PITC arm was only about 14 percent points higher than in the VCT arm. While statistically significant, I’m not sure the difference is that exciting anyway. I know this result is not part of the current paper, but still perhaps worth a note.

Table 3. I’m not sure Table 3 is that interesting. There are a lot of numbers, but the study is not powered at a site level anyway.

Table 4. The numbers used in each analysis should be reported to help the reader.

While not that important, you could report relative risks rather than odds-ratios, but the main point is clear anyway.

P 13, paragraph 3: The point of the first sentence is not clear. Of the 622 HIV+ individuals with CD4 tests (you don’t know if they received their test result), you report that 12.3% had a viral load test.

I want to know first the number ART eligible. From your table, a minor share of the 622 individuals was ART eligible. The majority of individuals were not eligible, as is to be expected. They are an important group to keep “in care”, but you excluded them from further analysis.

P 13. The sample sizes for the ART eligible patients are very low. I do not think Table 5 adds anything useful to the analysis and could be deleted. The discussion around Table 5 can also be deleted.

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.