Reviewer’s report

Title: Maintaining Quality of Health Services After Abolition Of User Fees: A Uganda Case Study

Version: 2 Date: 18 October 2007

Reviewer: David Bishai

Reviewer’s report:

General
The authors have raised an important question on the impact of user fees on drug availability. The use of both qualitative and quantitative methods is commendable. Unfortunately the analytical approach relies on stratification and cuts a small data set into smaller subsets—further lowering statistical power. In these small sub-samples the null hypothesis is infrequently rejected, but the reason could very well be type two error. A more conservative approach is warranted as a complementary measure to try to preserve power by pooling the various subsamples together.

The qualitative analysis needs to be better tuned to the primary question of the paper—the impact of user fees on clinic performance. Minimize the unwarranted quantitation of FGD results.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

An approach to improve power would pool all the data and model the effects of public/private; referral lower; chlorquine/cotrimoxazole and pre/post March 2001 as effects on the intercept.

To implement this:
First log transform the dependent variable of drug availability to normalize its skewness Then regress

LogDrugAvailability = C+B1D1+B2D2+B3D3+B4D4+E

D1 is a dummy for referral size
D2 is a dummy for public
D3 is = if the drug in question is chlorquine and zero otherwise.
This increases power by pooling both drugs
D4 is the March 2001 dummy

Since each site in the data set is observed for both drugs one could use xtreg commands in STATA to implement fixed effects and random effects models. This
would be done as
\[
\texttt{xtreg y D1 D2 D3 D4, i(site-id) re}
\]
for random effects or
\[
\texttt{xtreg y D1 D2 D3 D4, i(site-id) fe}
\]
for fixed effects.

This approach conserves power at the expense of assuming that the effects of site, level and drug type are additive and not interactive – in a sample this small power gains are worth aggressive assumptions as long as they are flagged.

Pg 12. The sampling plan for the 285 and 136 persons was never discussed. How representative are they by region? How were they recruited? Did they give consent? Was there IRB clearance?

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
Pg 2, 3. Unwarranted capitalization of “Government”

Pg 3. Defending this analysis as a “natural experiment” requires simultaneous observation of several units where a portion receive and a portion do not receive a certain treatment. Critical point is that the “treatment” allocation can be considered random with respect to the outcome of interest.

Pg 4. Explain the source of information on the poverty index. What was the range across Uganda?

Pg 5. Need to discuss how the sampling plan led to correlation between being a referral facility and being public. This will help motivate the stratified analysis in Table 2 and Figure 1a. Make clear the definition of referral in terms of HC level.

Pg 5. Keeping study team assignments fixed to their site leads to a weakness that site effects are correlated with team effects- flag this.

Pg 7. Insisting on conducting only stratified analysis limits power due to low sample size in each stratum. Table 2 should reveal the sample sizes to allow readers to appreciate the low power of the statistical tests.

Pg 8. Statement that says “Average annual stock out days …..” Is this a quote? If so, it needs to be attributed to the generic type of KI that made it as long as their anonymity can be guarded.

Note that FGD’s are undertaken to elicit qualitative statements. The quantitative analysis for FGD statements at top of Pg 8 is unwarranted and potentially misleading because the sampling strategy for FGD’s was not meant to be representative. That 60% of a purposively selected small sample of RI’s said anything is a statistic that could come out quite differently with a slight twist in sampling. Confine analysis of FGD statements to exegesis.
Pg. 9-11. Further work is required to focus the qualitative analysis closer to the central questions of the paper which is the connection between how health care is financed and the technical quality. Right now statements generic opinions that there are 1) inadequate drugs; 2) inefficient bureaucracy; 3) absent funds 4) rudeness. The qualitative analysis does little to connect these statements with how health care is financed.

Discretionary Revisions (which the author can choose to ignore)

Pg 5. Keeping study team assignments fixed to their site leads to a weakness that site effects are correlated with team effects- flag this.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

'I declare that I have no competing interests'