Reviewer’s report

Title: Are family planning vouchers effective in increasing use, improving equity and reaching the underserved? An evaluation of a voucher program in Pakistan

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Reviewer: Ilene S Speizer

Reviewer's report:

This is an interesting manuscript that seeks to examine the effect of a voucher program on family planning use in Punjab province of Pakistan. Considering novel demand-side programming strategies is important for reaching women (and men) most in need of services, particularly in a context like Pakistan where there is low use and high demand for family planning. Overall, this paper has promise, however, there are a number of ways that it could be strengthened and I propose some of these below.

Major issues:

1) Sample selection and weighting - The details that are provided on sampling are not complete. In particular, there are no details about the baseline sampling strategy and how the large sample for the control and smaller sample for the intervention at baseline were determined. More importantly, given the way the sampling was described at endline, it is not clear how/if weights in the intervention group are adjusted for the fact that voucher clients could be sampled through the household sampling as well as through the client list approach - this suggests that there were overlapping sampling frames that makes weighting more complicated.

2) There is little information on the intervention and whether all, most, or some of the persons who were given vouchers adopted a method; did the voucher list of clients represent "adopters of FP" or simply women given a voucher? What percent of women who received a voucher adopted a method?

3) Related to the above, assuming the percentage that adopted is high, it seems that sub-analyses should be performed for greater transparency of the effect of the program on the population. In particular, if most voucher clients adopted a method, clearly the intervention sample's use is biased at endline since there was over-sampling of users. If the evaluation is meant to show effects on the general population, it seems that perhaps the comparisons should be made between the control group (I would have called it a comparison group since this is a quasi-experimental design) and the intervention group without vouchers - one column with the full intervention group and one with the sub-sample that removes the voucher sample.
4) At times, pulling out the voucher clients from the general population in the intervention area can provide additional information. In particular, for the discontinuation and switching table. I wondered if the voucher clients had less discontinuation and better switching than the general population in the intervention area and the control area.

5) In Table 6 - Multilevel logistic regression:
   a. What is the sample being used in this analysis (baseline/endline or just endline)?
   b. Were there any other control variables (e.g., age)? If not, it would be good to consider what might be important, such as age.
   c. Since this section is called "targeting voucher clients", it seemed that perhaps the variables for intervention/control could be - intervention area/general; intervention area/voucher; control. However, this is only applicable if this is endline only data (see point (a).

6) Does the survey include any questions asked to ALL participants (i.e., intervention and control area women) on whether they received a voucher for family planning services? If so, this might be an interesting control variable and a way to validate that there were no similar voucher schemes in the control area. In addition, in the general population group in the intervention area, it would give an idea of coverage of the voucher program at the population level.

Minor comments:

1) In the description of the equity analysis, there is mention of regressing seven outcomes against an individual's relative rank. Please provide more details on what outcomes are being used.

2) In the discussion of ever use and contraceptive method awareness, there is a statement… "In the intervention areas…” The statement that is listed in the text is true for the control areas as well.

3) In the equity analysis, clarify in the text that the two time periods have been combined, assuming I understood this correctly. Likewise, on the concentration curve graphs, the graph presents "voucher client" and "general population." What is unclear from this graph is which sample and time period is being used. Does general population include both intervention and control areas (i.e., non-voucher clients)? Is this averaging baseline and endline, as done in Table 6? Or is "voucher clients" actually the full intervention group?
4) In table 1, define "Kacha"; also, no p-values are shown between the two areas but my eyeball review suggests that the intervention area is "better off" than the control area.

5) Introduction: the mention of private sector share of family planning services increase does not give a time period. In addition, in the next paragraph, there needs to be a better transition between the sentence that starts with "Recently …" and the next sentence on vouchers.

6) The paper needs a careful read for grammar and type-o's!

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
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