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Population level impact of vouchers on access in Uganda

Benjamin Bellows  
*Population Council*

Francis Obare  
*Population Council*

Reproductive Health Vouchers Evaluation Team

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Population level impact of vouchers on access in Uganda

Ben Bellows, PhD
Francis Obare, PhD
On behalf of the RH Vouchers evaluation team

Dissemination of Impact Evaluation Findings Workshop
March 23, 2012
Kampala, Uganda
Use of vouchers are part of interventions aimed at influencing demand for health services

- conditional cash transfers, social health insurance
- approaches referred to as output-based aid (OBA)

Combined with output-based approach and contracting with providers, its ultimate aims are to:

- stimulate demand by increasing purchasing power for service utilization among the poor
- Trigger competition leading to improved service quality
- Increase access to services for individuals who would not have used the service in the absence of the subsidy
Voucher Program Design & Functions

Government stewardship & funding

Voucher management agency (purchaser)
- Voucher marketing & distribution
- Contracting
- Claims processing & vetting
- Internal monitoring & evaluation – (validation, costs, utilization, quality)

Client
- Voucher acquisition (targeting)
- Care seeking and treatment adherence

Facility
- Clinical practice
- Administrative management

Program Management
Number of active voucher programs year on year since 1964

Type of services provided in 40 voucher programs
Two voucher systematic reviews

• Robust evidence that vouchers increase utilization (13 studies)
• Weak evidence that vouchers can affect health status (6 studies); however, small changes in the evidence could change conclusion
• Modest evidence that vouchers effectively target specific populations for health goods/services (4 studies)
• Modest evidence that vouchers improve the quality (3 studies)
• Insufficient evidence to determine efficiency of vouchers (1 study)
Overview of Uganda RH vouchers program

- Implemented on behalf of MOH by Marie Stopes Uganda since 2006.

- Phase I: 2006-2008 (KfW STI evaluation)
  - Mbarara, Ibanda, Isingiro, Kiruhura
  - 17 private facilities saw STI clients

- Phase II: 2008-2011 (GPOBA impact evaluation)
  - 85+ private facilities across western 20+ districts
  - Safe motherhood package (ANC, delivery, PNC), STI treatment
  - GPOBA paid 98% of voucher service delivery cost

- Phase III: 2012-2015
  - Family planning services & safe delivery
  - FP: 900 facilities to receive outreach teams; 500 private facilities to be contracted in a voucher franchise
Voucher Distribution and Eligibility

- Vouchers distributed by Marie Stopes as the Voucher Management Agency (VMA)
- Poverty grading tool used to identify clients (FP & SMH)
  - items on household assets, amenities, expenditure, income, health services
- Safe motherhood includes
  - ANC up to 4 visits
  - delivery and complications
  - PNC up to 6 weeks
SMH impact evaluation objectives

1. To assess the effect of the program on improving access to, quality of, and reducing inequities in the use of reproductive health services; and

2. To evaluate the impact of the program on improving reproductive health behaviors and outcomes at the population level.
OBA impact evaluation survey areas

Highlighted clusters will either receive voucher distributors or remain as centres in first year of ODA.
Results chain for SMH voucher

**Inputs**
- Budget for voucher service delivery & demand generation activities

**Activities**
- Contract +90 private facilities & engage community-based distributors

**Outputs**
- Sell more than 100,000 safe motherhood vouchers

**Outcomes**
- Clients use voucher to be seen for ANC, delivery and PNC services

**Final outcomes**
- Use of facility for deliveries increases; inequities decrease; access improves
## Impact evaluation design

<table>
<thead>
<tr>
<th>SMH Vouchers</th>
<th>2008</th>
<th>OBA voucher program</th>
<th>2010/11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voucher exposed villages</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control villages</td>
<td>O</td>
<td></td>
<td>O</td>
</tr>
</tbody>
</table>

Household surveys:
- Baseline (2008): 2,266 women and 177 men in 97 villages
- Endline (2010): 2,313 women and 582 men in 133 villages
Analysis

- *Post hoc* treatment assignment
  - Analysis 1
    - Treatment: voucher clients
    - Controls: non-voucher clients
  - Analysis 2
    - Treatment: Villages with voucher clients
    - Controls: Villages no voucher clients

- Difference-in-difference multivariate modeling for tests of association
### Results 1: Use of voucher by poor*

Percentage of women who participated in the 2010-2011 survey that had ever used the *HealthyBaby* voucher by household wealth index

<table>
<thead>
<tr>
<th>Household wealth index</th>
<th>Percent</th>
<th>Number of women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poorest quintile</td>
<td>29.3</td>
<td>482</td>
</tr>
<tr>
<td>Poorer quintile</td>
<td>26.9</td>
<td>442</td>
</tr>
<tr>
<td>Middle quintile</td>
<td>16.5</td>
<td>449</td>
</tr>
<tr>
<td>Richer quintile</td>
<td>19.4</td>
<td>465</td>
</tr>
<tr>
<td>Richest quintile</td>
<td>16.2</td>
<td>475</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>21.7</td>
<td>2,313</td>
</tr>
</tbody>
</table>
## Results 1: Use of any facility for delivery

<table>
<thead>
<tr>
<th>Place of delivery</th>
<th>Voucher clients (%)</th>
<th>Non-voucher clients (%)</th>
<th>Percentage points&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Odds ratios&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before program</td>
<td>After program</td>
<td>Before program</td>
<td>After program</td>
</tr>
<tr>
<td></td>
<td>(N=175)</td>
<td>(N=434)</td>
<td>(N=708)</td>
<td>(N=1184)</td>
</tr>
<tr>
<td>Home</td>
<td>30%</td>
<td>17%</td>
<td>38%</td>
<td>31%</td>
</tr>
<tr>
<td>Any facility</td>
<td>70%</td>
<td>82%</td>
<td>61%</td>
<td>69%</td>
</tr>
</tbody>
</table>

<sup>a</sup>Based on differences in changes in proportions using health services: negative sign means the change was greater in the comparison group; <sup>b</sup>Based on multilevel logit models with interaction terms--95% confidence intervals in square brackets; *p<0.05; **p<0.01.
## Results 2: Use of private facilities for delivery

<table>
<thead>
<tr>
<th>Place of delivery</th>
<th>Voucher clients (%)</th>
<th>Non-voucher clients (%)</th>
<th>Percentage points&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Odds ratios&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before program</td>
<td>After program</td>
<td>Before program</td>
<td>After program</td>
</tr>
<tr>
<td>Private facility</td>
<td>(N=175)</td>
<td>(N=434)</td>
<td>(N=708)</td>
<td>(N=1184)</td>
</tr>
<tr>
<td></td>
<td>26%</td>
<td>52%</td>
<td>18%</td>
<td>28%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public facility</td>
<td>44%</td>
<td>30%</td>
<td>43%</td>
<td>41%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Based on differences in changes in proportions using health services: negative sign means the change was greater in the comparison group; <sup>b</sup>Based on multilevel logit models with interaction terms; 95% confidence intervals in square brackets; *p<0.05; **p<0.01.
## Result 3: use of ANC & PNC

<table>
<thead>
<tr>
<th>Place of delivery</th>
<th>Voucher clients (%)</th>
<th>Non-voucher clients (%)</th>
<th>Percentage points&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Odds ratios&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before program</td>
<td>After program</td>
<td>Before program</td>
<td>After program</td>
</tr>
<tr>
<td>Place of delivery</td>
<td>(N=175)</td>
<td>(N=434)</td>
<td>(N=708)</td>
<td>(N=1184)</td>
</tr>
<tr>
<td>Four or more antenatal care visits</td>
<td>55% (N=183)</td>
<td>70% (N=459)</td>
<td>49% (N=779)</td>
<td>56% (N=1281)</td>
</tr>
<tr>
<td>Postnatal care services</td>
<td>60% (N=183)</td>
<td>67% (N=459)</td>
<td>45% (N=779)</td>
<td>53% (N=1281)</td>
</tr>
</tbody>
</table>

**Notes:**  
<sup>a</sup>Based on differences in changes in proportions using health services: negative sign means the change was greater in the comparison group;  
<sup>b</sup>Based on multilevel logit models with interaction terms--95% confidence intervals in square brackets;  
* p<0.05; ** p<0.01.
## Result 3: Paid for most recent birth

<table>
<thead>
<tr>
<th>Voucher client present in village by 2010</th>
<th>No voucher clients present in village by 2010</th>
<th>Percentage points&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Odds ratios&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before program</td>
<td>After program</td>
<td>Before program</td>
<td>After program</td>
</tr>
<tr>
<td>Paid for last delivery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private facility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>98% (N=206)</td>
<td>54% (N=133)</td>
<td>97% (N=112)</td>
<td>86% (N=21)</td>
</tr>
<tr>
<td>Public/private facility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>56% (N=533)</td>
<td>39% (N=282)</td>
<td>52% (N=292)</td>
<td>32% (N=81)</td>
</tr>
</tbody>
</table>

**Notes:**

<sup>a</sup>Based on differences in changes in proportions using health services: negative sign means the change was greater in the comparison group; <sup>b</sup>Based on multilevel logit models with interaction terms--95% confidence intervals in square brackets; *p<0.05; **p<0.01.
Conclusions

• Based on household wealth index, a significantly higher proportion of women from the two poorest quintiles had used the vouchers compared to those from middle, richer and richest quintiles.

• The program significantly contributed to increased deliveries in private facilities which were accompanied by significant reductions in public facility as well as in home-based births.

• The program further significantly contributed to reductions in the likelihood of paying out-of-pocket for deliveries in private health facilities among communities exposed to it.