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**Population level impact of vouchers on access in Uganda**

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Reproductive Health Vouchers Evaluation Team

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Population level impact of vouchers on access in Uganda

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

Dissemination of Impact Evaluation Findings Workshop
March 23, 2012
Kampala, Uganda
Background

- 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)

**Program Management**

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

**Facility**
- Clinical practice
- Administrative management

**Population Council**
Evaluating reproductive health voucher programs globally
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.
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>[arrow]</td>
<td>X</td>
</tr>
<tr>
<td>Control villages</td>
<td>O</td>
<td>[arrow]</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><strong>21.7</strong></td>
<td><strong>2,313</strong></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>Home</td>
<td>(N=175)</td>
<td>(N=434)</td>
<td>(N=708)</td>
<td>(N=1184)</td>
</tr>
<tr>
<td>Any facility</td>
<td>30%</td>
<td>17%</td>
<td>38%</td>
<td>31%</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.
### 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>Public facility</td>
<td>44%</td>
<td>30%</td>
<td>43%</td>
<td>41%</td>
</tr>
</tbody>
</table>

**Notes:**

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## Result 3: use of ANC & PNC

<table>
<thead>
<tr>
<th></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</td>
<td>55% (N=183)</td>
<td>70% (N=459)</td>
<td>49% (N=779)</td>
<td>56% (N=1281)</td>
</tr>
<tr>
<td>visits</td>
<td></td>
<td></td>
<td></td>
<td></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>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**  
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## Result 3: Paid for most recent birth

<table>
<thead>
<tr>
<th>Paid for last delivery</th>
<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></td>
<td>Before program</td>
<td>After program</td>
<td>Before program</td>
<td>After program</td>
</tr>
<tr>
<td>Private facility</td>
<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>56% (N=533)</td>
<td>39% (N=282)</td>
<td>52% (N=292)</td>
<td>32% (N=81)</td>
</tr>
</tbody>
</table>

**Notes:**

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<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.