SITUATION

In rural Zambia, only 56% of pregnant women give birth in health facilities.¹ Yet, complications from pregnancy and childbirth are the second leading cause of death among mothers and newborns around the world.²³ The Government of Zambia has piloted a number of interventions to improve its facility delivery rates. However, the relative impacts and cost-effectiveness of these interventions remain largely unknown.

DEMAND-DRIVEN EVALUATION TO INFORM POLICY

Mama kits — small packages of childcare materials, such as blankets or clothing — have been used by various implementers in Zambia to encourage facility delivery. Kits have varied in content and value, with some kits costing upwards of US$ 50. However, little is known about whether mama kits actually influence women to deliver in a health facility.

Zambia's Ministry of Health (MOH) and Ministry of Community Development, Mother and Child Health (MCDMCH) commissioned this evaluation to decide whether mama kits should be provided nationwide to raise facility delivery rates.

Question posed by policymakers: What impact does the provision of low-cost mama kits have on facility delivery rates?

EVALUATION DESIGN

A clustered randomized controlled trial was used to measure the impact of low-cost mama kits on facility delivery rates.

To support these findings, focus group discussions examined how the mama kits may or may not have encouraged facility delivery.

To further guide policy decisions, a cost-effectiveness model was used to estimate the cost per maternal and neonatal death averted.

KEY FINDING

Low-cost mama kits increased facility deliveries by 42%.

REFERENCES:
EVALUATION OVERVIEW

**Intervention:** Mama kits worth US$ 4 containing a cloth, diaper, and baby blanket were given to women who delivered at a health facility.a

**Intervention Period:** June — August 2013

**Setting and Evaluation Sample:** This evaluation was conducted in rural health facilities in Chadiza District (Eastern Province) and Serenje District (Central Province) among women with at least one antenatal care visit and an estimated date of delivery within the intervention period.

**Data Collection Methods:** Antenatal care registers were used to determine the women in the evaluation sample. Delivery registers were used to determine if a woman had delivered in the health facility during the intervention period.c

TAILORING EVALUATION DESIGN

The evaluation design was tailored to answer the policy question within the decision-makers’ constraints.

*The evaluation tested a low-cost, scalable mama kit version that leveraged existing human resources.* Interviews were conducted to determine which potential items for the mama kit were most desirable to women. This information enabled the mama kit contents to optimize desirability while maintaining low cost. Further, the intervention was designed to minimize additional human resources. As a result, the intervention would be easily replicable at-scale.

*The evaluation used existing administrative data systems to minimize time and cost.* Following a cohort of women over time would have been time-consuming and expensive. Instead, the evaluation used existing administrative data (with verifications) which simplified data collection and minimized costs.

**NOTES:**
- a. Mothers who came to the facility but either were transferred to another facility or delivered a stillbirth still received a mama kit.
- b. All 30 health centers (excluding hospitals) in the evaluation area that had a ratio of facility deliveries to antenatal care attendees of 66% or less were included in the evaluation.
- c. Delivery register data were matched to the antenatal care register data using the Safe Motherhood Number or name / village matching.
FINDINGS

Treatment facilities had a 42% higher health facility delivery rate. The percentage of women included in the sample who delivered at a health facility was 42% higher in the treatment facilities than in the control facilities, indicating that mama kits can be an effective strategy for increasing facility delivery rates.

The cost-effectiveness of the mama kit was comparable to other commonly scaled health interventions. Cost-effectiveness modeling indicated that a mama kits program at scale could avert over 300 neonatal and maternal deaths a year with an average cost per death averted of US$ 5,183 in rural areas.

**Percentage of women who delivered in a facility by study arm**

<table>
<thead>
<tr>
<th>Study Arm</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Facilities</td>
<td>20%</td>
</tr>
<tr>
<td>Treatment Facilities</td>
<td>32%</td>
</tr>
</tbody>
</table>

Bars represent 95% confidence intervals

Using multivariate logistic regression, p-value of adjusted odds ratio of delivering at a facility was < 0.01

**Cost per death averted by intervention**

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Cost (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mama kit</td>
<td>5,183</td>
</tr>
<tr>
<td>Long-lasting insecticidal bednet</td>
<td>3,400⁴</td>
</tr>
<tr>
<td>Medical male circumcision</td>
<td>5,198⁵</td>
</tr>
<tr>
<td>Antiretroviral treatment for HIV</td>
<td>5,604⁵</td>
</tr>
<tr>
<td>Improved coverage of basic maternal and child health interventions</td>
<td>3,337 – 6,129⁶</td>
</tr>
</tbody>
</table>

REFERENCES:
QUALITATIVE FINDINGS To contextualize the quantitative findings, the evaluation team conducted focus group discussions to explore barriers to delivering at a health facility in rural Zambia. These discussions highlighted that women face a complex array of barriers when deciding where to deliver. Mothers generally knew about the benefits of delivering in a health facility, indicating that delivering at home was not a consequence of ignorance or lack of knowledge.

Mama kits helped some women overcome the shame of not having materials to bring to the facility for the baby. Others appreciated the mama kits as gifts from the health facilities. However, mama kits alone do not address many significant barriers to delivering at a health facility, such as long distances, limited transport, and discomfort posed by male staff.

A mama kits program, therefore, would be most effective if it were included in a suite of interventions addressing a variety of barriers to delivering at a health facility.

“Even from the past, they used to tell us to deliver at the clinic, but we were scared of not having the things required for the baby, powder, soap, baby blanket. But now since we were being given a mama kit, we were free to come.” - New mother from Miswema

FROM EVIDENCE TO NATIONAL POLICY

In response to evaluation findings, Zambia’s health ministries released guidance to implementing partners to encourage the use of low-cost mama kits as part of comprehensive programming. Owing to this government guidance, low-cost mama kits were included in the European Union-funded Millennium Development Goals Initiative (MDGI).

THE 3DE APPROACH The Demand Driven Evaluations for Decisions (3DE) initiative used impact evaluations in a demand-driven manner to generate evidence for catalyzing at-scale implementation of cost-effective policies. This initiative was funded by the United Kingdom’s Department for International Development (DFiD).

Demand Driven Questions were sourced from the Government of Zambia to ensure that evaluations would directly inform a policy decision. The 3DE team selected questions based on social impact, priority level of key decision-makers, and potential for scale-up.

Rigorous and Tailored Rigorous impact evaluation methodologies were tailored to the policy context within time, budget, operational and decision-making constraints to generate actionable evidence that could inform a realistic scale-up scenario.

MORE INFORMATION
A full technical report is available at http://idinsight.org/impact/. Contact: Paul Wang, IDInsight (paul.wang@IDInsight.org)

IDInsight is a client-service organization devoted to generating rigorous evidence to inform managerial decisions in low-income countries.

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