

# Key findings from Columbia University's evaluation of Saving Mothers, Giving Life In Uganda

## Policy problem, program and evaluation aims

Maternal mortality is a complex challenge in Uganda where the maternal mortality ratio is 310 per 100,000 live births. Most maternal deaths are caused by postpartum hemorrhage and hypertensive disorders of pregnancy—both treatable. Saving Mothers, Giving Life (SMGL) is a public-private partnership aimed at reducing maternal mortality by 50% and showing that investments in demand creation and health facility improvements can improve maternal survival. The program was implemented in four districts in Uganda and Zambia in 2012. This external evaluation of SMGL was conducted between November 2012 and August 2013 to assess the reach, extent, fidelity, and dynamic effects of SMGL in order to identify best practices and remaining barriers to reducing maternal mortality in Uganda and Zambia, and to inform future efforts of SMGL. We also examined the functioning of the SMGL partnership and engagement of various stakeholders.

## Study design

The research team collected qualitative data in the four SMGL districts (Kabarole, Kamwenge, Kibaale, and Kyenjojo) and quantitative data in SMGL districts and in two comparison districts (Kiryardongo and Masindi) in order to assess:

- **"Dose delivered"**: the extent of SMGL implementation
- **Fidelity**: whether the intervention work improved quality
- **Reach**: how intervention was received
- **Dynamic effects**: what were the broader effects of SMGL, on the health system and communities

### Our data was collected using:

- 81 in-depth interviews with central and district MoH officials, CDC and USAID officials, and SMGL implementing partners
- 17 in-depth interviews with SMGL global partners
- 41 in-depth interviews with health facility managers
- 1,241 exit surveys with women following discharge after facility delivery
- 710 satisfaction surveys with health providers and 328 obstetric knowledge assessments with MCH providers
- 40 focus group discussions with women with recent home and facility deliveries, community health workers, and local leaders

## Research team

The US-based research team was led by Drs. Margaret E. Kruk and Sandro Galea at Columbia University's Mailman School of Public Health. The team also included co-investigators Drs. Miriam Rabkin (Columbia University) and Karen Grépin (New York University) and eight additional researchers. The Uganda-based research team was led by Dr. Lynn Atuyambe with co-investigators Mr. Simon Kibira and Dr. Stella Neema from Makerere University's School of Public Health. All human subjects research activities received clearance from

Focus group discussion, Kabarole



"SMGL gave the entire health system increased credibility. Everyone that worked in it wanted to be attached to it because the facility looked good, they were able to do their jobs and there was a guaranteed service. It gave the average woman confidence to go to a facility."

— IMPLEMENTING PARTNER

Columbia University and the Higher Degrees Research and Ethics Committee at the Makerere University College of Health Sciences, School of Public Health as well as the Uganda National Council of Science and Technology in Uganda.

## Findings

**Dose delivered:** SMGL implemented many activities in year 1, including the following:

- 4,076 individuals trained as village health team (VHT) members
- 15,655 Mama Kits (i.e., packages consisting of gauze, cotton wool, disposable gloves, etc.) distributed to women at facility delivery
- 11 facilities upgraded to CEmONC capacity (operating theaters built)
- 36 facilities upgraded to BEmONC capacity
- 77,530 vouchers (referral, private service, transport, healthy baby) distributed to women
- 316 health workers trained in EmONC
- 300 health workers trained in data collection and HIS
- 147 new providers (doctors, nurses, midwives) hired

**Reach:** In intervention districts, nearly 90% of women who delivered at facilities had heard of SMGL, mostly from radio broadcasts and health providers. Almost 70% of women in SMGL districts used at least one intervention, with 25% reporting the use of transport vouchers (Figure 1). Providers in SMGL districts were twice as likely to have received obstetric training during the past year compared to those in non-SMGL districts, as illustrated in Figure 2.

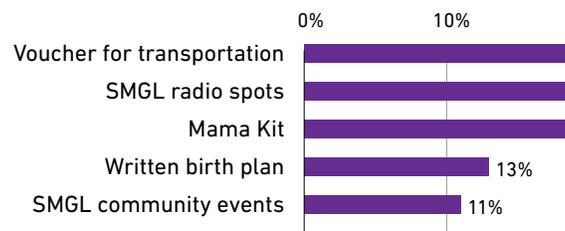


FIGURE 1: Women's use of SMGL interventions

## Fidelity

QUALITY METRIC	ADJUSTED DIFFERENCES BETWEEN SMGL AND COMPARISON DISTRICTS
<b>Provider knowledge</b>	Providers in SMGL districts scored 7.8% higher than providers in comparison districts on a test of obstetric knowledge; SMGL-trained providers scored 10.7% higher.
<b>Provider confidence</b>	Providers in SMGL districts considered themselves “very confident” in 38% more clinical skills than providers in comparison districts.
<b>Receipt of services</b>	Women in SMGL districts were 4.1 and 4.7 times more likely to receive a C-section and family planning products and services, respectively, than those in comparison districts.
<b>Providers’ rating of quality</b>	Providers in SMGL districts were more likely than those in comparison districts to rate delivery care (3.8 times more likely), emergency obstetric care (4 times), and newborn care (1.8 times) as “excellent.”
<b>Women’s rating of quality</b>	Women in SMGL districts were nearly three times more likely to rate overall quality of delivery care as “very good” or “excellent” than those in non-SMGL districts. They were twice as likely to rate knowledge and competence of providers, availability of medical equipment, and privacy as “very good” or “excellent.” They were also 2.5 and 3.4 times more likely to rate communication skills of providers and cleanliness of facilities as “very good” or “excellent,” respectively.
<b>Women’s satisfaction with care</b>	No difference

### Dynamic effects:

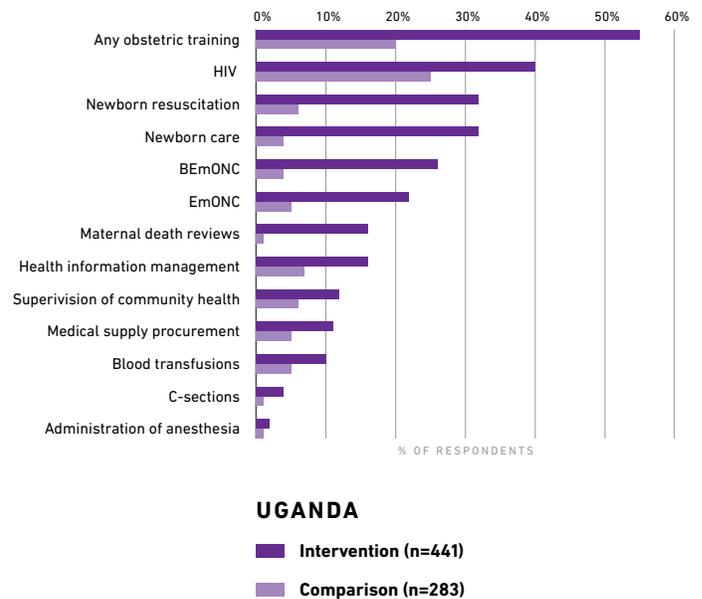
- SMGL raised awareness of maternal mortality within and beyond focus districts.
- SMGL had mostly positive “spillover” effects on the broader health system (e.g., service delivery, medicine procurement, information systems).
- Women in the community were enthusiastic about SMGL—specifically the vouchers and Mama Kits.
- Most women who delivered at home said they did so due to the sudden onset of labor, lack of transportation, and concerns about disrespectful treatment.
- Women reported social pressure to deliver in facilities; some who delivered at home felt stigmatized.

## Recommendations

**1. Commit to five years – with a clear transition plan:** SMGL partners should make minimum commitments of five years to enable appropriate planning, engagement of local ministries, sequencing of interventions, and planning for sustainability. In addition, the role of national governments and district authorities should be clearly outlined. From the outset, this should include government investments in core areas such as infrastructure and human resources, as well as a transition plan detailing how countries will assume responsibility for the program moving forward.

**2. Think in terms of health system packages and not isolated interventions:** Investments in surgically-equipped facilities, medicine supply chains, health workers, and clinical skill acquisition are mutually-reinforcing and essential for creating a culture of competence necessary for high quality care. Packages of health system investments—with funding shared between development partners and host governments—are also more likely to have beneficial “spillover” effects into non-maternal health services.

**3. Training is not enough – consider other cost-effective models for improving care quality:** Trainings were the most rapidly and extensively implemented activities of SMGL. Yet, our analysis showed a relatively modest 10% difference in knowledge between providers in SMGL and non-SMGL districts, most of whom did not



**FIGURE 2:** Provider training received in SMGL and comparison districts

receive in-service training. In addition to short trainings, partners should explore and test innovative approaches to improving quality of care that have shown promise in similar settings such as performance-based financing, quality competitions, and public sharing of quality metrics.

**4. Focus on “last mile” women:** Even with expansion of obstetric facilities and transport solutions, many women in rural areas will live too far to reach facilities for delivery. SMGL should continue testing innovations to provide good care for these women, including maternity waiting homes and telemedicine for providers in first-level facilities. Some women are dissuaded from coming to facilities for fear of disrespectful treatment. Efforts to promote dignified maternal care must go hand in hand with technical quality improvements. Careful attention must be paid to the unintended consequences of efforts to promote facility delivery, such as penalties for home delivery.

**5. Clarify the SMGL governance structure – globally and in host countries:** At the global level, the SMGL Leadership Council should define a governance structure with clear roles and responsibilities for funding and implementation. This will enhance the effectiveness of the partnership and clarify its value added to individual members. Within countries, national governments should take on a central role in oversight of SMGL and, over time, increase investments in core SMGL functions, particularly those related to strengthening health systems.

**6. Test future intervention packages using rigorous evaluation methods:** SMGL has produced important insights, including that existing development assistance platforms, such as PEPFAR and MCH assistance, can be used to rapidly scale new programs. However, there remain mission critical knowledge gaps. One of these is the content of the minimum essential SMGL package required to improve maternal survival. Defining such a package is required to scale up the program in the context of limited resources. Going forward, combinations of promising interventions (active ingredients) customized to country needs should be tested in head-to-head comparisons. Prospective, randomized or quasi-random evaluations, which can be done alongside program implementation, will provide the most credible answers on what constitutes the essential package.