

Saving Mothers and Children in Nigeria

by Quentin Wodon

This brief is part of a series of seven briefs/case studies on increasing the impact of Rotary. If Rotary is to have a larger impact globally, it must rely on partnerships, innovation, and evaluation. Partnerships help to implement larger projects and benefit from the expertise of organizations that are among the best in their field. Without innovation, the contribution of Rotary is a drop in the development assistance bucket. But if Rotary innovates, successful pilots can be scaled up by other organizations with deeper pockets, achieving larger impact. Finally, evaluation is needed to demonstrate the impact of pilot projects. To encourage clubs and districts to think bigger and more strategically, the series to which this brief belongs showcases projects in the areas of focus of the Rotary Foundation that have relied on partnerships, innovation, and evaluation. This brief tells the story of a project saving mothers and children in Nigeria.

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Maternal Mortality in Nigeria

Too many women die when giving birth in Nigeria. According to the 2013 Demographic and Health Survey (DHS)¹, maternal deaths (deaths related to pregnancy and childbearing) accounted for a third of all deaths among women age 15-49. For the seven-year period preceding the survey, the maternal mortality rate was 1.05 deaths per 1,000 woman-years of exposure. Another often used statistic is the maternal mortality ratio, at 576 deaths per 100,000 live births for the seven years preceding the survey. These statistics are high, and in the past five years the maternal mortality ratio did not decrease substantially in comparison to the measure obtained with the 2008 DHS, suggesting lack of progress.

Over their lifetime, one in every 30 women in Nigeria are likely to die due to pregnancy and childbearing. Citing a study

by the UN Economic Commission for Africa, the report for the latest Nigeria DHS points out that Nigeria alone accounts for one in seven (14 percent) of all maternal deaths observed in the world today.



Nigerian doctor provides maternal care.
Photo: RFPD.

Many factors may lead to maternal mortality, but a key risk factor is that of obstetric fistula (a hole in the birth canal). The World Health Organization estimates that each year between 50,000 and 100,000 women suffer from obstetric fistula which by obstructing labor can lead to maternal

¹ National Population Commission of the Federal Republic of Nigeria and ICF International, 2014, *Nigeria Demographic and Health Survey 2013*, Abuja, Nigeria and Rockville, Maryland, USA.

death. The World Health Organization estimates that two million young women live with untreated obstetric fistula in Asia and sub-Saharan Africa today².

Multiple factors lead to higher risks of obstetric fistula, but those risks can be reduced by delaying the age of first pregnancy which implicitly requires in the cultural context of Nigeria delaying the age of first marriage, especially in the northern states; stopping harmful traditional practices including female genital mutilation; and providing timely access to obstetric care.

This case study is about the role that better obstetric care in hospitals as well as awareness and advocacy campaigns in surrounding communities can play in reducing maternal and fetal mortality and morbidity. The focus is especially on how quality assurance mechanisms implemented in hospitals can improve the quality of obstetric care.

Improving Obstetrics Services³

Quality assurance mechanisms can help improve obstetric services and can thereby contribute to reducing maternal and fetal mortality. This was the premise of a series of Rotary projects aiming to reduce maternal (and fetal) mortality in Nigeria led by the Rotarian Action Group for Population Growth and Sustainable Development (RFPD) between 2005 and 2010.

With support from RFPD and some 200 Rotary, Rotaract and Inner Wheel Clubs, Rotary implemented a project to improve quality assurance mechanisms in ten hospitals in Kano and Kaduna States in Northern Nigeria. The project aimed to improve maternal health through the

prevention and treatment of obstetric fistula. Apart from funding from Rotary club and the Rotary Foundation, funding and support were also provided by the German Ministry for Economic Cooperation and Development (BMZ), the Aventis Foundation and the International Association for Maternal and Neonatal Health (IAMANEH). The project was implemented by Nigerian Rotarians.



Nigerian mother with her child.
Photo: RFPD.

Conceptually, reducing maternal and fetal morbidity and mortality can be achieved through and an improvement in the quality of the infrastructure and other inputs used to provide treatment (availability of medicine, better hospital facilities, etc.) as well as improvements in the process of providing treatment (more experienced health personnel). The project team worked on both fronts.

² WHO factsheet on obstetric fistula at http://www.who.int/features/factfiles/obstetric_fistula/en/.

³ Section based on materials provided by Robert Zinser, as well as the brochure *Save the mothers—and the children! A comprehensive approach including quality assurance to improve maternal and newborn health* by the Rotarian Action Group for Population and Development (RFPD).

In terms of improvements in infrastructure, a number of investments were made, including two specialized fistula wards (one for each of the two Nigerian states) with rehabilitation facilities. Medical equipment was provided to the ten hospitals and some of the hospitals were equipped with better water supply and solar energy. Hospitals also received intrauterine devices for women requesting them for family planning as well as drugs preventing mother-to-child transmission of HIV.

To improve the capacity of hospital personnel, seven doctors were trained as fistula surgeons and 15 ward nurses were trained in fistula care. Many more doctors, nurses and midwives, and other health personnel such as traditional birth attendants were also trained on how to improve obstetric services. Hospital teams were trained in emergency obstetric care including (among others) in the use of magnesium sulfate to manage eclampsia and the use of an anti-shock garment to treat postpartum hemorrhage.

Apart from providing support to the hospitals participating in the project, support was also given to communities in the hospital's catchment areas. Mosquito nets were provided to reduce the risk of contracting malaria. Awareness and advocacy campaigns were held using radio, television, print media, and even drama (public plays on the streets) to inform the population about obstetric fistula, its causes and how to prevent it, and its impact on maternal and fetal mortality.

These awareness campaigns enlisted the support of traditional and religious leaders who have substantial influence on behaviors in the community.

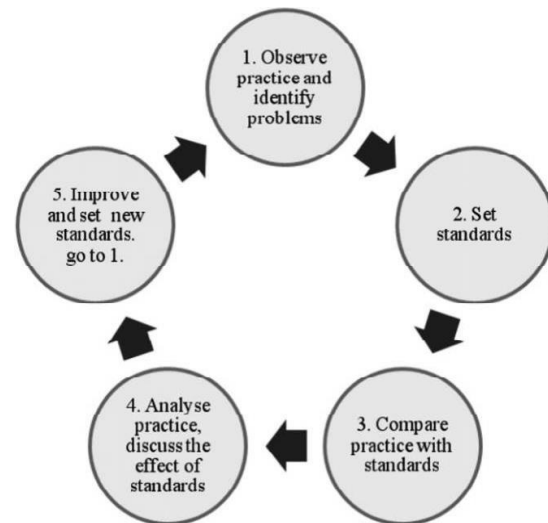
Perhaps the most important innovation was the development of a quality assurance mechanism that involved setting standards and systematically collecting data on the quality of the care being provided and the outcomes in terms of maternal and fetal mortality and morbidity.

This was done through a "quality circle" process (see Figure 1) to monitor, review, and improve performance over time.

Data were collected in participating hospitals, analyzed statistically, discussed by the teams, and used to assess improvements and take corrective measures as needed.

An evaluation⁴ based on the data collected by the hospitals as part of the quality assurance mechanism before, during and after the intervention suggests that the project achieved a 60 percent reduction in maternal mortality in participating hospitals and 15 percent reduction of newborn mortality.

Figure 1: Quality circle for continuous improvement within the system of quality assurance



Source: Galadanci et al. (2011).

⁴ Galadanci, H., et al, 2011, Obstetric quality assurance to reduce maternal and fetal mortality in Kano and Kaduna State hospitals in Nigeria, *International Journal of Gynecology and Obstetrics* 114: 23–8.

Summary Results of the Pilot Project

1. Awareness raised at the grassroots level through radio serials and community dialogues.
2. Establishment of quality assurance in ten hospitals, achieving a 60 percent reduction of maternal mortality and a 15 percent reduction in fetal mortality in the hospitals.
3. Establishment of two specialized fistula wards with rehabilitation facilities and provision of needed hospital equipment.
4. 50 doctors, 400 nurses and 400 health workers and traditional birth attendants trained.
5. 1,500 fistula patients treated and rehabilitated; many benefited from vocational training and micro credits satellite programs to help build up their own small businesses.
6. Hospitals lacking water and solar energy provided with these facilities.
7. 24,000 mosquito nets distributed to hospitals and nearby communities.
8. Midwives and traditional birth attendants equipped with clean birth kits and anti-shock garments.
9. Hospitals provided with drugs to prevent transmission of HIV from the mother to her child.

Source: RFPD brochure (*Save the mothers—and the children! A comprehensive approach including quality assurance to improve maternal and newborn health*).

Conclusion

RFPD's obstetric fistula project combines all three ingredients of a winning combination for impact: partnerships, innovation, and evaluation.

The team established multiple partnerships for both funding (the investment for the pilot project in the ten hospitals amounted to one million Euros)

and implementation (securing buy-in from the hospitals, the state authorities, the communities, and even traditional and religious leaders).

The project included innovative components in the Nigerian context, especially the quality assurance mechanism and data collection process to improve the quality of obstetric care.

The project was evaluated using data from the quality assurance mechanism and the evaluation was published in an academic journal. The evaluation suggested that the project helped generate a reduction in the maternal mortality rate in participating hospitals of 60 percent.

Given its success in reducing maternal and fetal morbidity and improving overall health in communities surrounding participating hospitals, the project has been considered a success by stakeholders as well as by the Kano and Kaduna state governments. This led to a subsequent project to continue to build capacity in the original 10 participating hospitals, and extend the model to 15 more hospitals (five rural hospitals in FCT Abuja, five hospitals in Ondo State, and five more in Enugu State). Additional scaling up is being considered by the RFPD team.



Nigerian mother with her child.
Photo: RFPD.