



Maternal Health Care in Rural Uganda

Leveraging Traditional and Modern Knowledge Systems

Uganda is one of the least urbanized countries in Africa, where over 80 percent of the population of about 20 million people live in rural areas. Uganda's economy depends mainly on agriculture and women contribute 60–80 percent of the labour. Women's health, therefore, has vital social and economic implications for national development. However, among Ugandan women of reproductive age, maternal health issues are a major problem as demonstrated by the following indicators: a high maternal mortality rate estimated at 506/100,000; an equally high fertility rate of about 6.9; only about 38 percent births are attended to by trained health workers, the rest (62 percent) are attended by Traditional Birth Attendants¹ (TBAs) and relatives.² To address these problems, the Ugandan Ministry of Health (MoH) identified several strategies and activities. Some of these activities included expanding the referral system and improving the TBA network as well as training TBAs. The Rural Extended Services and Care for Ultimate Emergency Relief (RESCUER) project was started as one of these initiatives.

Project description

The RESCUER project was launched in March 1996, on a pilot basis, in Iganga³ District Eastern Uganda. It is basically a referral project, designed to

address the high maternal mortality problem. The project was initiated by the MoH, UNFPA and the Uganda Population Secretariat. A multi-sectoral Iganga district task force implements the project, while UNFPA and the MoH do the overall monitoring.

RESCUER has three components: communication, transport and quality health services delivery.

Communication

The type of information communications technology (ICT) selected was dictated by a number of factors, some of which include: unavailability of electric power supply in most rural areas, lack of wired telephones, the need for the ICT to be accessed twenty four hours a day, flexibility, the need to reuse the system in other parts of the country and the economic sustainability of the system when donor

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support ended. For these reasons, the VHF radio was the type of ICT selected to be used in the project. This included fixed base stations at the health units, mobile walkie-talkies with the TBAs, and vehicle radios in the referral hospital ambulance and the District Medical Officer's vehicle. The VHF radio communication is solar-powered, avoiding the common electric power shortage or surge problems.

The RESCUER project was designed to link the traditional rural community health providers with the formal health delivery system in a cost-effective way, such that when an obstetric emergency occurs in a village, a TBA uses a walkie-talkie to call for assistance from the nearest health unit. A message on what to do is immediately relayed over the radio system. If the TBA cannot manage the case, transport is dispatched from the health unit with a midwife to collect the patient. If a case cannot be managed at the health centre level, the hospital is called and an ambulance is sent to transport the patient to the referral hospital.

Transport

Tricycles were provided to each of the participating primary-level referral health units which were generally sub-county health centres. An old ambulance at the main referral hospital was repaired and equipped with radio communication. TBAs were given bicycles to assist them with transport to the health units to charge the walkie-talkie battery and to collect monthly statistics.

Quality health services delivery

This included capacity building (e.g., training of TBAs, midwives, technicians), recruitment of at least two midwives and a clinical officer in all the participating health units, renovation of the maternity wards (including provision of delivery beds, oxygen, and I.V. fluid stands) and regular provision of maternal emergency kits and other supplies.

Implementation

A district task force comprising of the Director of District Health Services (DDHS – formerly known as the District medical Officer), and officials from other sectors in the district was set up to oversee the planning, development and implementation of the project. It is answerable to the highest tier of district leadership, namely, the LC5 chairperson. The task force is chaired by the DDHS, and comprises representatives from the sectors relevant to health in the district.

Results and impact

In July 1999, the author carried out a study to investigate the effect of the communication system on maternal health care, and its contribution to the referral project. She identified factors affecting the project, as well as the costs and sustainability of the project. Data were collected from both secondary and primary sources. Secondary sources included progress reports and other project documents. Primary data were collected qualitatively, through interviews and based on incidents narrated by health workers and TBAs. The study sample focused on Iganga district where the project had been running since March 1996.

The increased number of deliveries under trained personnel and increased referrals to health units led to a reduction of about 50 percent in the maternal mortality rate (MMR) in three years as indicated below:

“A survey carried out recently in three districts of Arua, Iganga and Tororo, which all had got their TBAs trained, showed that Iganga's MMR had reduced from 500/100,000 in 1996 to 271/100,000; whereas rates for Tororo and Arua had reduced, but both were above 350/100,000. This indicated that communication and transport facilities in Iganga contributed to a reduction in MMR. Before the project, there were problems of lack of communication facilities and transport, which made referrals slow and sometimes led to the death of the mother or baby or both” (Administrator).

Six health units and one referral hospital participated in the project. Of these, four health units and the referral hospital were studied and their midwives interviewed. In addition, ten TBAs, three project administrators and four women beneficiaries were interviewed.

To the TBAs, the walkie-talkie technology was a great source of empowerment as it improved their image and credibility, thus increasing compliance with referral advice, and also augmented their income by increasing the number of women they attended to. Those who are not able to write further pointed out that :

“Since I can't write, it was difficult for me to refer women; I had to go with them to the health unit and explain... but now, the walkie-talkie saved me all that trouble, because I just call the midwife and explain the condition of the person I am referring... I don't have to go escorting every person I refer” (TBA7).

The communication technology brought the rural midwives closer to each other, thereby reducing isolation and facilitating consultation. Panic situations and the uncertain management of complications were reduced considerably.

In the referral hospital, communication was reported to have made the work of midwives easier as they were able to know in advance what to expect and prepare for emergencies. Women beneficiaries reported that this communication link gave them hope in critical situations.

Lessons learned

The study highlighted a number of lessons.

Complementarity

- A critical mass of complementary activities is needed to achieve maximum impact. For example, the study found that although the communication component made a very significant contribution to the success of the RESCUER project, it could not stand on its own. For the project to achieve its objectives of improved referrals leading to increased deliveries by trained personnel, the other two components (transportation and quality of services delivery) had to play their complementary role. When transport broke down, however, it was reported that the presence of a midwife and the communication system played a big role in saving lives: the TBAs called to consult health units, these also called to consult colleagues and seniors. However, where the emergency necessitated a referral, the need for transport became very crucial.

Technology

- The impact of ICTs is enhanced if the technology is appropriate to the local conditions. As indicated, the ICT choice was made after careful considerations of the local problems in rural Uganda.
- The use of solar power by the radio communication system could also benefit rural health units, which have no electricity. In particular, the study recommended that the solar power should be extended to provide light in the maternity wards / labour suites in the first-level referral units.
- The simple design of the radio communication system facilitated its use according to all the people interviewed.

- The public audibility of the radio communication system renders it difficult to abuse or misuse. Interviewees reported that calls made are usually brief and to the point, and that the nature of this ICT protects it from theft.
- A multi-tiered ICT approach can help bring the benefits of advanced technology to the rural population in Sub-Saharan Africa. Such an approach will cater to the different capabilities in African situations. For example, telemedicine and other advanced technology facilities (e.g., the Internet) can be adopted at the district hospital, while simple technologies like radio can serve lower levels (rural health units, TBAs, etc.). The consultations made by lower units to the district hospital would ensure that the rural population benefits indirectly from the technology.

Institutional capacity

- The project built on existing infrastructure and local capacity, including traditional knowledge systems. The TBAs' knowledge of local culture, values and their ability to connect traditional and modern practices was critical to the project. Indeed the project started at the grassroots with the traditional knowledge held by the TBAs, and improved it by conducting refresher courses and equipping TBAs, as well as professional health workers, with simple ICT, transport and regular supplies.
- Leveraging traditional and modern knowledge systems can increase impact. For example, the RESCUER project brought together traditional and modern health practitioners and inculcated mutual understanding and trust that has enhanced maternal health care.

1 A Traditional Birth Attendant (TBA) is a person from the community with no formal training, but who has knowledge of indigenous practices which has been acquired through apprenticeship and being part of a local community's culture and value system. She/he attends to women in childbirth, advises on and treats matters of family health usually using herbs and / or other traditional medicines and practices. (Adapted from: National Traditional Birth Attendants' curriculum for Uganda. MoH / Maternal and Child Health and Family Planning division. Kampala.)

2 Source: UNDP (1998). Uganda Human Development report.

3 Iganga district had a population of 706,476 of whom 52 percent were females. This was before Mayuge was split from Iganga in 2000. Source: Iganga District Planning department.

