QUALITY IMPROVEMENT APPROACHES FOR NEWBORN CARE SERVICES IN UGANDA

Background

An estimated 45,000 newborns die each year in Uganda; the country has the fifth highest number of newborn deaths in sub-Saharan Africa. In rural areas, where government health services reach only 50% of the population, engaging community health workers to extend service delivery is critical for maternal and newborn health. However, the quality and effectiveness of community services have not been assured or assessed. Services for resuscitating babies who are not breathing properly at birth, managing sick newborns, and preterm/low birth weight babies are inadequate in the majority of the facilities that are closest to the communities, and within communities themselves.

In November 2009, the USAID Health Care Improvement Project (HCI) began work with the Ministry of Health of Uganda to improve the quality of essential newborn care (ENC) in two districts. The project began as a facility-level collaborative improvement project in Luwero and Masaka districts, in the Central Region, which face especially high newborn mortality rates. Development of a community-level collaborative improvement intervention began in June 2011 in conjunction with Village Health Teams (VHTs), comprised of community volunteers.

A situational analysis conducted in August 2011 of VHTs revealed inadequate support for maternal, newborn and child health interventions at the community level. Specifically, VHTs had not been trained in ENC, and they had no job aids to facilitate their work. Some villages were difficult to access, data collection was poor, and there was no quality improvement strategy for the VHTs.

Objectives

The aim of the improvement program in Luwero and Masaka, which addressed actions at the district, facility and community levels, was to contribute to the reduction of neonatal mortality by increasing the number of babies receiving essential newborn care. The ENC components addressed by the project were:

- Initiation of breastfeeding (BF) within one hour of birth
- Counseling for mothers about newborn danger signs
- Examination of babies by a community health worker 2-3 days and 4-7 days after birth
- Increased capacity of health workers to manage neonatal asphyxia immediately after birth
- Improved hand hygiene of community health workers
- Provide referrals to facilities for newborns with danger signs.
Interventions

HCI supported the government system to improve newborn care by institutionalizing essential newborn care, including the Helping Babies Breathe (HBB) newborn resuscitation program, training teams of providers in clinical aspects of care as well as in quality improvement (QI), and supporting maternity QI teams to learn from each other and use knowledge management approaches to spread learning between teams. The project also developed and tested innovative and inexpensive ENC training models and equipment that could be produced locally in Uganda, including an anatomical childbirth model made of cloth.

The collaborative improvement work involved facility-based QI teams in 34 health centers and Village Health Teams from 24 villages. Learning sessions held in March 2011, January 2012, and July 2012 provided facility teams and community teams the opportunity to learn from each other how to overcome local barriers to provide evidence-based ENC. This peer-to-peer learning enhanced the rapid spread of solutions and also motivated teams to improve their work.

HCI also trained 20 Ministry of Health (MOH) staff from the district level to serve as coaches to support the 34 facility-level QI teams to identify problems, set improvement goals, analyze their health care delivery system, and design and implement changes to the system to meet the needs of patients. These coaches replicated the training in essential newborn care and QI to other facility-based health care workers and are expected to sustain support for these interventions after the improvement project ends.

Facility-level health workers were also trained as community coaches and made monthly visits to the village teams to help them improve maternal and newborn health within their community.

Results

Figure 1 shows results for the 34 facilities participating in this improvement program in terms of percentage of newborns delivered in the facility who received the three components of ENC (thermal protection, cord care, and eye care), percentage of newborns put to the breast within one hour of birth, and percentage of newborns who were examined by a skilled provider 4-7 days after birth.
Changes made by these sites to improve the provision of ENC have included:

- Rationing of Tetracycline eye ointment to enable more babies to benefit from available tubes
- Using sterile surgical blades when sterile cord scissors are unavailable
- Educating mothers and caretakers during antenatal care on birth preparedness and benefits of early breastfeeding
- Increasing the number of staff who counsel mothers on breastfeeding during the early postpartum period

Figures 2 and 3 show results from the community level, where efforts to engage VHTs in following up with newborns in the home 2-3 and 4-7 days after birth have led to a sharp increase in early monitoring of newborns at the community level. Figure 3 shows the results achieved in terms of increasing mothers’ awareness of danger signs and increasing the proportion of newborns who get early follow-up care.

Conclusion

The efforts by health workers and Village Health Teams in Luwero and Masaka districts of Uganda show that combining clinical training, quality improvement, and peer-to-peer learning has been successful in rapidly improving care at both the facility and community levels.

The results of the work in the two districts and the innovative interventions that led to these gains in newborn care were presented to decision-makers from the Ministry of Health in October 2012. The meeting included planning for spread of the interventions to other districts in Uganda, particularly those included in the “Saving Mothers Giving Life” Initiative.
District coach assessing resuscitation skills of health worker. *Photo by Connie Namajji, URC.*

This short film highlights how quality improvement methodology has positively impacted essential newborn care in Luwero and Masaka districts. It features health workers and community members sharing their accounts of how improvement methods have empowered them to better support mothers and newborns in their communities. View the video at: [https://vimeo.com/63860143](https://vimeo.com/63860143).

**Figure 3. Maternal and newborn health care provision at the community level in Masaka (16 villages) and Luwero (8 villages)**