Simple Interventions to Save Newborn Lives in Uganda

A case series
Comment from the Principal Investigator

Uganda, like many low income countries, is struggling to improve the survival of newborn babies - the major challenge being how to do so. Here, we bring you experiences from a demonstration project - the Uganda Newborn Study (UNEST) - in south eastern Uganda. The key message is that reducing newborn deaths in Uganda is possible and can be done through relatively simple interventions at community (through Village Health Teams) and health facility level.

Dr Peter Waiswa
Introduction

The Uganda Newborn Study (UNEST) is a four year (December 2007 to December 2011) project aimed at finding ways of improving newborn health and survival in Uganda through a community-based intervention linked to health facilities.

Carried out within the areas covered by the Iganga/Mayuge Demographic Surveillance Site, UNEST was a collaboration involving the Makerere University School of Public Health and Karolinska Institutet of Sweden with funding from the Bill and Melinda Gates Foundation through Save the Children, which also provided technical support to the research team.

Through formative research around evidence-based practices, and dialogue with policy and technical advisors, a home-based neonatal care package implemented by the responsible Village Health Team member, effectively a Community Health Worker (CHW) was constructed and implemented. The CHW was trained to identify pregnant and newly delivered mothers and make five home visits - two before and three just after birth. The CHW docket also included facilitating linkages to facility care and delivering targeted messages for home-care and skilled care-seeking.

The project equally strengthened facilities so they could provide improved health care to the mother and the newborn in both the intervention and comparison areas.

Through the years, a lot has been learned as demonstrated in the following experiences dubbed the UNEST case series.
Using locally owned resources like Community Health Workers (CHWs) can greatly boost the survival of newborns and improve their mothers’ quality of life, our UNEST experience has showed.

According to the UNEST protocol, CHWs visited mothers two times during pregnancy and three within the first 28 days after delivery educating them on many things raging from birth preparedness, importance of attending antenatal clinics and hospital/skilled delivery, to screening for and counseling on maternal and newborn danger signs leading to referral.

Ms Naome Naigaga of Kabila village in Iganga District is a beneficiary and says unlike in hospital settings, one on one interactions with CHWs provide an opportunity for mothers to freely ask fundamental questions and get answers to each of her queries. CHWs also counsel mothers on breast feeding, cord care, skin care. They also conduct visits to mothers with low birth weight babies to promote Kangaroo mother Care (KMC).

With five days of training coupled with supervision by health workers from nearby facilities and given a monthly transport refund of Shs 10,000 (about $4), the UNEST intervention is showing that CHWs can easily be used to improve maternal and child health. Other incentives such as umbrellas and rain boots have been instrumental in a country where voluntarism has waned.

Therefore, as Government prepares to operationalise the Village Health Team concept, which partly guided UNEST in effecting its CHW notion, the experience from Iganga and Mayuge is invaluable. This is of significance given that attaining Millennium Development Goals No. 4 (reducing child mortality) and No. 5 (improving maternal mortality) remains an uphill task for Uganda. The MDG monitor shows that Uganda is off track as far as achieving these two complementary goals is concerned. The mortality rate for under fives remains high at 137 per 1000 live births while newborn mortality is 29 for every 1000 live births.
Our experience during the duration of the project has showed that male community health workers (CHWs) are equally acceptable to expectant mothers.

The project recruited both male and female CHWs to educate expectant mothers during pregnancy and in the postnatal period. According to testimonies from women who were involved in the study, the male CHWs did not leave anything to assumption during the sesitisation sessions, something, which always made them dedicate lots of time explaining all the issues.

“Sometimes fellow women would assume that we knew everything and in the process didn’t explain certain things in detail. Now, this was not the case with male CHWs. They explained everything in detail from issues concerning the pregnancy to the expected baby,” said Jamawa, a mother of three.

In the case of Haawa, although it was somewhat hard in the beginning for her to freely open up to a male CHW regarding some issues that she referred to as ‘women’s affairs,’ the professional conduct that the male CHW who served her village of Kabila exhibited overtime gave her the confidence. She explained: “He was so professional in that you would not hear your personal problems being discussed in the community. This means whatever a client discussed with him remained between the two.”

However, UNEST’s mode of selection which ensured that only reputable people in society were chosen for CHWs was instrumental. For instance in Nakavule A Village, Mr. Nathan Kabale, a community medicine distributor was chosen. And Nathan says having been already known and acceptable to his community it was easy for him to implement UNEST work of reaching out to the mothers.

Therefore as Government prepares to expand the Village Health Team (VHT) concept across the country, the UNEST experience could offer some lessons in terms of the constitution of members of the VHT.
Born through a caesarian section in the seventh month of their mother’s pregnancy in September 2010, Tenwa and Waiswa weighed only 1.3 and 1.7 kilogrammes respectively. Yet, normal birth weight should at least be over 2.5 kilogrammes.

Under the circumstances, the twins’ survival was in danger, a situation that made their parents Paulo and Namugaya miserable. Already, in marriage for ten years without children having had three miscarriages and four still births previously, the couple was yet again on the verge of losing out.

However, thanks to the Kangaroo Mother Care (KMC) technique now in use to boost the survival of preterms, Tenwa and Waiswa are alive today. Now being administered at Iganga District Hospital, KMC is a method of care for preterm infants. The method involves infants being cared for in a special way, usually by the mother, with skin-to-skin contact. The technique fosters the preterm baby’s health and well being by promoting effective thermal control, breastfeeding, infection prevention and bonding.

Introduced at Iganga Hospital under the auspices of UNEST, KMC has further demystified the belief that preterm and low birth weight babies can only be saved in big hospitals like Mulago, the national referral hospital. Because KMC is initiated in the hospital and continued at home, UNEST oriented health workers from both the maternity and pediatric wards at the hospital where a room was also set aside for KMC.

Two midwives from the hospital underwent a practical orientation at Mulago national referral hospital special care unit for one month each. Similarly, a neonatal nurse from Mulago hospital visited Iganga maternity ward for one month to support the local staff in care of the sick and the low birth weight newborn babies.

Upon discharge of mothers of preterm or low birth weight babies, UNEST trained Community Health Workers would conduct two subsequent visits to these families and assess progress but also to further promote KMC. To this, what has happened in the Iganga-Mayuge intervention area can be replicated in other parts of Uganda.
Knowing who is pregnant or newly born is key to targeting interventions such as:

1. Antenatal care, Prevention of Mother to Child Transmission, birth preparedness and newborn care practices.
2. Epidemiology of maternal and newborn, for example maternal and newborn death.
3. Evaluating impact of interventions

However, this is a major challenge in Uganda and low income countries. But now there are interesting findings coming from the project.

Prior to the start of the project implementation, Community Health Workers were trained and availed registers. This community engagement has won the CHWs trust from the women. CHWs do a) register all women of child bearing age; b) register pregnant women (when they visit homes) and because of the trust mothers now report to CHWs when they are pregnant. CHWs report to health units and to the district on a monthly basis on the number of pregnant women and newborn babies, place of delivery and any maternal or newborn death.

The UNEST experience has demonstrated that community based registration of pregnancies and births is possible and is a powerful tool for improving interventions.

Community health workers can effectively register pregnancies and birth at community level
For 19 year old Mutesi, giving birth to preterm babies was not new but in the case of her third child who was born in August 2010 at home, the situation was different. The teenage mother, a resident of Bulowoza village in Iganga, was thrown into panic when her third born developed breathing problems at birth (birth asphyxia).

However, double luck was on her side. A neighbour rushed them on his motorcycle to Iganga Hospital where she was lucky to find health workers who had been trained in resuscitation skills. These are essential in saving the lives of babies with breathing problems at birth. Resuscitation is the preservation or restoration of life by the establishment and maintenance of airway, breathing and circulation.

While midwives acquire resuscitation skills during training in school, sometimes they lose these skills. So when UNEST partnered with Iganga Hospital, training health workers in resuscitation skills was one of the intervention areas. During the project period, through continuing medical education, UNEST imparted knowledge and skills at both theoretical and practical levels. One day of a five week course was dedicated to resuscitation training (done on the job).

This therefore enhanced their work and helped many preterm babies such as Mutesi’s son live. On arrival at the hospital, the baby was immediately resuscitated with an ambubag and put on oxygen. And when the baby regained his normal breath, he was moved to the Kangaroo Mother Care room because he was still under weight and small.

KMC involves infants being carried in a special way, usually by the mother, with skin-to-skin contact. The technique fosters the preterm baby’s health and well being by promoting effective thermal control, breastfeeding, infection prevention and bonding.

Fourteen days later, the baby was discharged and had since started sucking his mother’s breast. KMC worked for Mutesi’s baby, it can work for another mother in a far flung resource limited rural setting.
Training, supporting and supervising health workers in essential maternal and newborn care, and availing the critical equipment and supplies can help boost the wellbeing and survival of neonates, as our experience has showed.

Midwife Maurine Babine says the UNEST training was indeed invaluable: “For instance I never knew that we had to treat sick newborns with ampicillin and gentamycin for the first week. I learnt this from the training. Also before going for that training, I didn’t know anything about Kangaroo Mother Care (KMC) but since the training, we have helped very many babies survive.”

Babine’s training was prompted by a UNEST pre intervention assessment of all health units (both public and private) within and around the Iganga/ Mayuge Demographic Surveillance Site during formative research to find out their capacity in providing maternal and newborn care services. Among the findings were that only two out of the twenty facilities had staff who had undertaken training in newborn care; few were offering services known to be essential to newborn survival, like emergency obstetric care, immediate newborn care (resuscitation, warm provision care for small or low birth weight babies) and post natal care.

It is against this backdrop that Babine and 96 other qualified health workers (nurses, midwives and clinical officers) were trained in maternal/newborn care and audit. However, realizing the effect of health worker absenteeism in lower health units, and the fact that most of the work is done by untrained nursing assistants, 31 of them were trained using the same course. Though, in order to suit their level, it was delivered in a way that is mainly skills based and less theory.

Operating in limited resource settings UNEST found it ethically binding to help the District Health Team with the procurement and equipping of health facilities with basic medical supplies like resuscitation equipment, delivery beds, Blood Pressure machines, sterilizers, mother and baby weighing scales and medicines like Gentamycin and Ampicillin in all health units within the study area (both control and intervention) was done as a catalytic input. But it was agreed that future supplies were to be purchased through standard district procurement systems. The requisite drugs are now being ordered from the National Medical Stores by the beneficiary local governments to sustain supply.

To this, what has happened in the Iganga-Mayuge intervention area, can be replicated in other parts of Uganda.
Further Reading

Papers
2. Peter Waiswa Karin Kallander, Stefan Peterson, Goran Tomson, George W. Pariyo. Using the three delays model to understand why newborn babies die in eastern Uganda. Tropical Medicine & International Health Vol15; 8, August 2010, 964-972

Academic Book
1. Understanding Newborn Care in Uganda - Towards Future Interventions http://www.amazon.co.uk/gp/product/images/3838319591/ref=dp_image_0?i=e=UTF8&n=266239&s=books
This Case Series was compiled by Kakaire Ayub Kirunda and the UNEST Field Team.

CONTACT:
Dr Peter Waiswa, Tel: +256414530291, Mob: +256772405357
Email: pwaiswa@musph.ac.ug
pwaiswa2001@yahoo.com, www.igangamayuge-hdss.mak.ac.ug
peterwaiswa@ki.se

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