THE RUPUBLIC OF UGANDA

MAKERERE UNIVERSITY

TESTING A COMMUNITY-BASED ULTRASOUND SCAN SYSTEM DURING EARLY AND LATE ANTENATAL CARE TO FACILITATE GESTATION AGE DATING, REFERRAL AND PRETERM CARE IN LOW RESOURCE DISTRICTS IN EASTERN UGANDA

Study Summary

Ultrasound scan (USS) services are vital in detecting pregnancy related complications during early stages of pregnancy. However these services do not reach majority of women in rural areas. The services are lacking in the closest health facilities closest to them. Women depend on the routine ANC and do not get a chance to detect early pregnancy complications. The study tested a pilot project to extend USS to lower level health facilities (HCIV and III) in Luuka District to facilitate Early identification of obstetric complications to improve pregnancy management, facilitating delivery plan and prompt referral. USS was done by Trained Midwives supervised by a senior Obstetrician. This resulted into better pregnancy outcome. Results showed a total of 314 mothers scanned and 32.2% were detected with complications and received care. There is need to roll out USS in all Health Centre IVs and train Midwives to manage the service.

Call for Action

- Institutionalize USS at lower level health facilities.
- Train Senior Midwives in Ultrasound scan
- The cost of scanning should be subsidized or services made free
- Do task shifting to include midwives conducting ultrasound scan.
- Strengthen referral health systems to facilitate high level access to obstetric services in

Policy Issue

The limited availability and use of routine obstetric Ultrasound scan during pregnancy at some lower level health facilities due to policy issues, coupled with late ANC seeking behaviors in resource-limited settings contributes to 336 mothers dying as a result of pregnancy complications. Health Centre III and IVs that are closest to people do conduct ANC but mothers are not scanned due to lack of equipment, personnel and electricity to run the service. Uganda adopted the WHO antenatal care guidelines which recommends one early ultrasound scan (USS) before 24 weeks of gestation to improve early detection of fetal anomalies. The new guidelines also recommend a comprehensive health system support for a minimum standard of US services, appropriate referral, and management of complications identified by US. However institutionalizing these recommendations in Uganda especially at lower level health facilities that are characterized by shortage of human resources, electricity and supply stock outs has not been studied much to give Policy makers a clear direction on how to roll out the service in all lower level facilities.

Context

In Uganda, ultrasound is mainly done at hospital level where there are human resources for this skills. However, various studies have proved that trained Midwives at senior cadre levels if well trained can do Ultrasound. The scanning services were conducted in Kiyunga HCIV in Luuka town council with an estimated population of 39,206 people and Bukoova HC III in Bukooma sub-county with an estimated 20,545 people. Kiyunga HCIV serves at the level of Health Sub-district, offering preventive outpatient, maternity (antenatal, delivery, postnatal, newborn care), care for small and sick newborns, emergency surgery, laboratory as well as caesarean section services. Bukoova HC III offers preventive, maternity and laboratory services.

A census of all pregnant women between 20-28weeks' gestation from the two sub-counties was conducted. This was done with the help of trained community health workers (CHWs) per village. Trained female midwives screened mothers using fixed but portable ultrasound scan machines. Results were written on the triage checklist in carbon copy, explained and given to the mother. The senior obstetric doctor and resident Medical officer at the facility supervised and engaged in explanation of the complications to the mother whenever they were found. Mothers were followed up after delivery to understand birth outcomes, user perceptions and acceptability of US services.

Results

The study trained 55 Village health team members to identify, register and refer pregnant women for scanning. To institutionalize USS service, the District leadership was informed and involved in installing, supervision and following up ultrasound scan activities. Two rooms at each of the Health facilities were refurbished with running power cable, furniture, scanning beds and other accessories. A data collection system was put in place to collect vitals from the mothers before and after scan.

A total of 314 mothers were scanned of which 4.8% were less than 18 years. About 50% of the mothers scanned in phase one had given birth once while 45 out of 314(14.3%) had given birth more than four times in the past. Out of the 314 mothers scanned 229 (73%) were less than 28 weeks with an average GA of 23weeks and 5days while 85/314 were above 28 weeks with an average of 32 weeks. 101 (32.2%) mother had complications

detected and out of the 21 mothers who returned for the second scan, only one had an abnormality detected. The commonest complication detected was malpresentation. Multiple gestation accounted for 3% of the complications and All the mothers with detected complications needed further obstetric are and referral for severe cases. 7% of these were referred to the hospital for further management. The follow-up showed 170 mothers 156 (91.8%) delivered by SVD while 14 (8.2%) by CS. Of the 170 deliveries followed up, 5.9% of the babies were LBW and started on KMC. Most women (92%) accept ultrasound scan is important and every woman should have chance to have one.10.8% of the mothers expressed concerns about the safety of the scan. They think it deforms babies in the womb, 79.3% of mothers think costs, lack of scanning facilities, transport costs are still hindering early scanning.

Lessons learnt

It is feasible to implement the WHO recommendation of universal ultrasound scan for mothers around 24 weeks as we observed that majority of mothers scanned at first phase were less than 28 weeks.

Antenatal complications are common especially in second trimester and can be detected by ultrasound scan.

Midwives if well trained can implement antenatal ultrasound scan to accurately date the pregnancy as evidenced by the fact that more than half of the mothers had gestation age by scan within two weeks compared to the GA by LNMP.

VHTs are crucial in mobilizing and referring mothers to health facilities to attend early ultrasound scan.

Early Ultrasound scan can is feasible and can detect fetal anomalies

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