

Kisenyi Health Centre IV

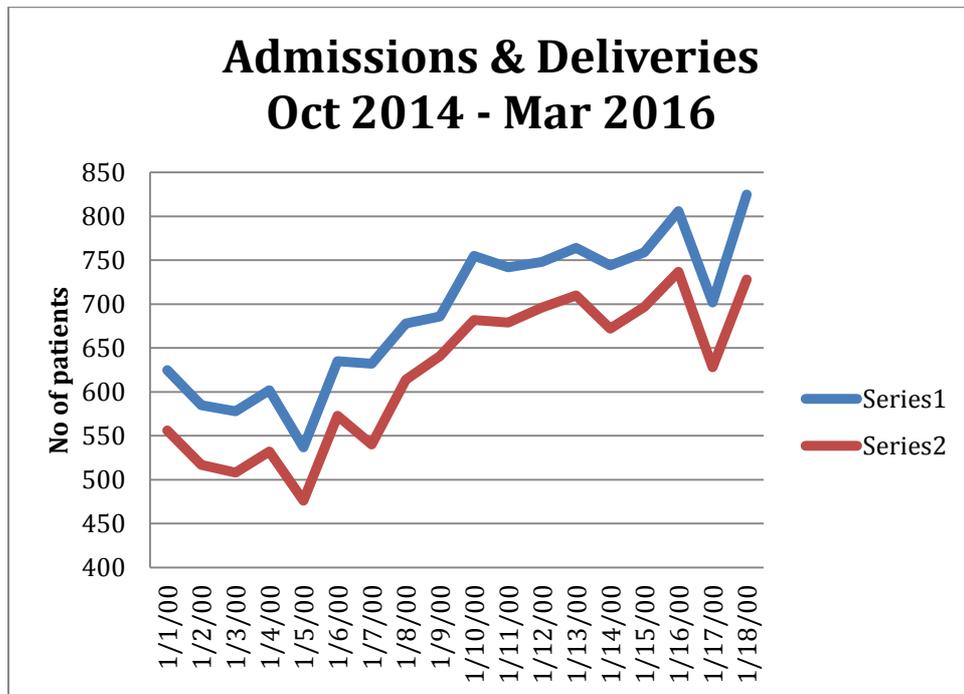
Summary of Progress

This report aims to provide a concise yet comprehensive overview of the work undertaken by the LMP at Kisenyi HCIV since 2014. Details of progress made within each department, issues hindering improvement and recommendations for the future are all addressed below.

Over the past two years the LMP, KCCA and Kisenyi HCIV has created a successful partnership that has led to a fully operational delivery suite, postnatal ward, neonatal unit and operating theatres.

Kisenyi HCIV has seen a steep upward trend in service users since opening. October 2014 saw 625 admissions to the maternity unit, increasing to 825 by March 2016, Figure one highlights the overall increase in patients being admitted to Kisenyi (blue line). Unfortunately staffing levels and resource availability has not been in keeping with the increasing workload.

Figure 1: Number of patient admissions & deliveries at Kisenyi Health Centre, October 2014 – March 2016

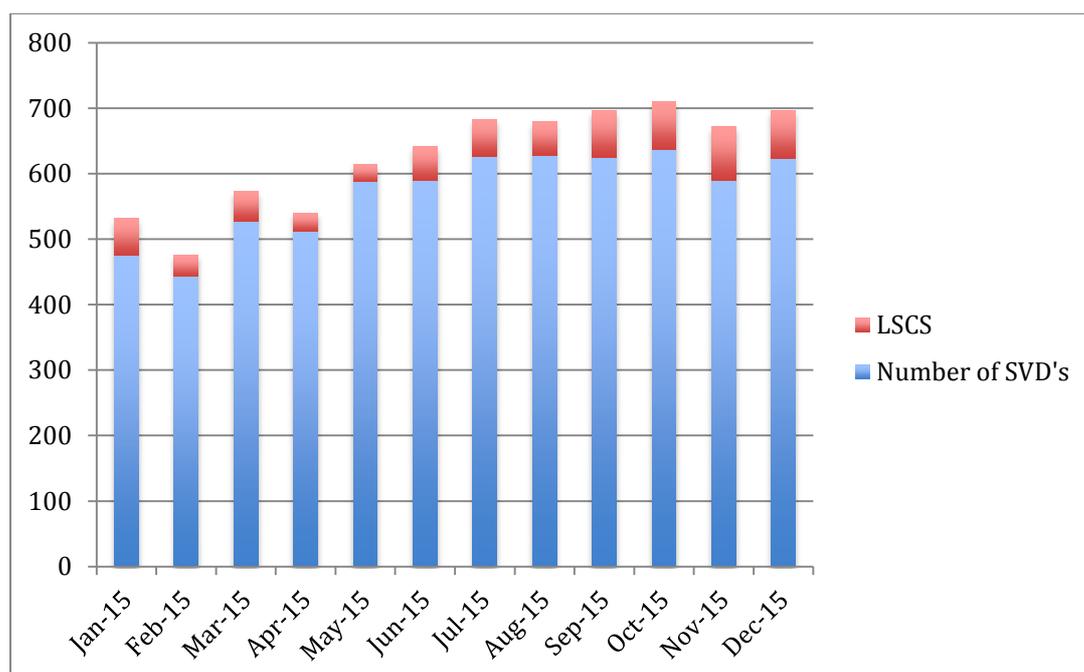


As expected, delivery numbers have also rocketed alongside admissions and as a result have helped us achieve one of the initial and continuing aims of LMP; to reduce referrals to Mulago National Referral Hospital (MNRH). Further details of this are outlined in the Knowledge and Policy Report 2014. The message is slowly filtering through and Kisenyi HCIV is beginning to receive a few referrals a month from Healthcentre III's instead of them referring cases directly to Mulago.

Figure 1 (red line) illustrates the steady increase in deliveries taking place at Kisenyi over the most recent 18 months. (Data prior to October 2014 was unavailable at time of collection). It parallels admission figures, which is to be expected. Every delivery that has taken place at Kisenyi represents a mother who has been able to deliver in a healthcare facility, being given specialist maternity & neonatal care whilst not further burdening MNRH.

In January 2014, Kisenyi conducted its first 15 vaginal deliveries and began with its surgical facilities in April 2014. The majority of deliveries are spontaneous vaginal deliveries (SVD) whilst the rest are usually lower segment caesarean sections (LSCS). Instrumental deliveries using forceps are not commonly carried out in Uganda and there is a limited use of Ventouse/ Kiwi due to availability of equipment.

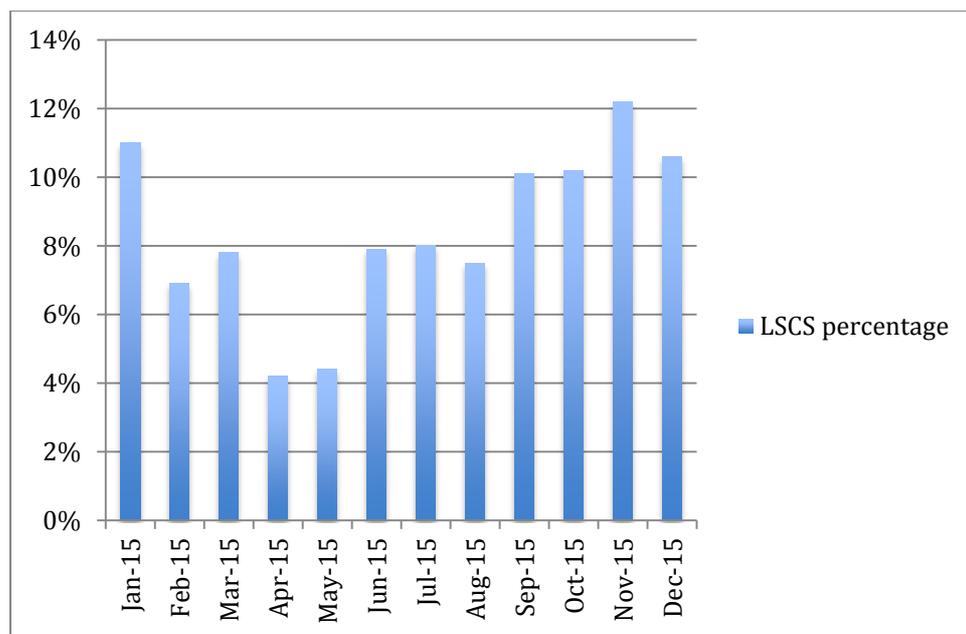
Figure 2: Year overview of the number of SVD and LSCS conducted.



You can appreciate from the graph the proportion of monthly deliveries carried out has increased overall, and in addition to this, so has the percentage, which were caesarean section.

Kisenyi HCIV's annual caesarean section rate for 2015 was 8.6%, demonstrating under use of the procedure, as is the case in many low resource countries. Over the past 30 years the International Healthcare Community has considered a caesarean section rate of between 10% and 15% to be ideal (WHO 2015). When medically justified, a caesarean section can effectively prevent maternal and perinatal mortality and morbidity (Betran et al 2014). The WHO (2015) statement on caesarean section rates recommend that every effort should be made to provide caesarean sections to women in need rather than determining to attain a specific rate.

Figure 3: LSCS rate at Kisenyi HCIV, 2015



April & May 2015 demonstrate extremely low LSCS rates; the reasons attributing to this will be discussed later in the report. Lower than ideal LSCS rates have continued into the first quarter of 2016.

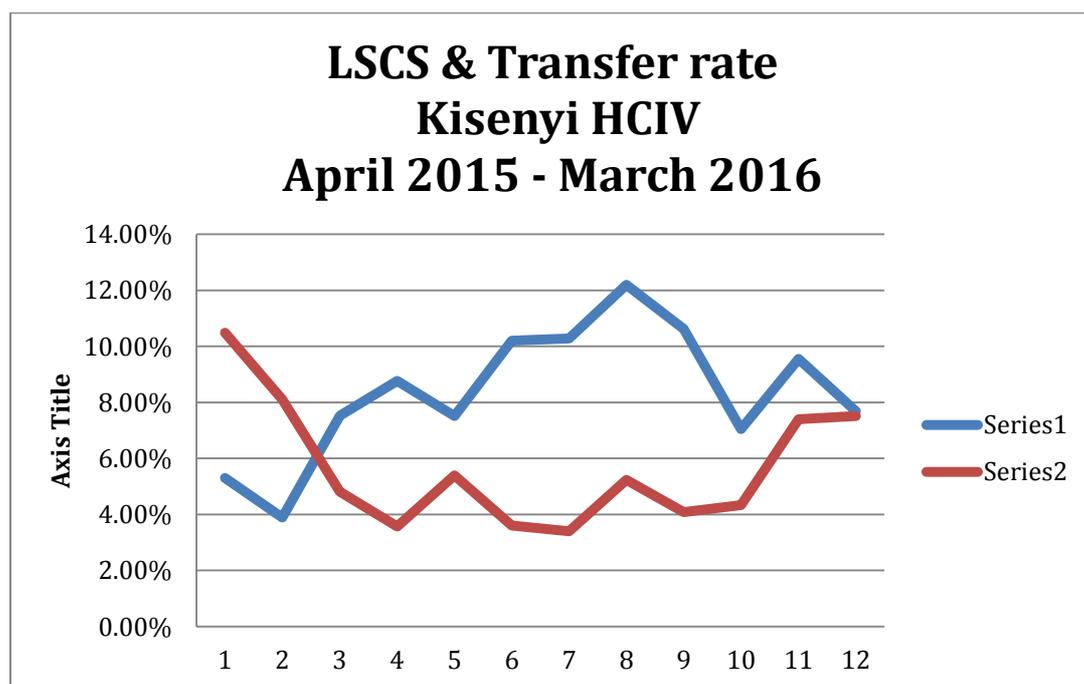
Kisenyi HCIV operating theatre has an increasingly diverse number of cases being carried out, widening the scope and provision of surgical procedures being offered to women. These include hysterectomies, myomectomies, sterilization, evacuation of retained products of conception, insertion/removal of Shirodkar suture's and exploratory laparotomies.

Transfers from Kisenyi HCIV to Mulago happen for various reasons, the most predominant being delay in first and second stage, fetal distress, pre eclampsia, previous LSCS and intrauterine death. Many of these transfers could be managed at Kisenyi HCIV if there was 24hour medical cover, consistent power and a reliable source of equipment and drugs.

The power has been discussed at several meetings with the LMP and KCCA and it has been decided a more robust transformer is to be purchased to deal with the demands of Kisenyi HCIV and the surrounding area. Although Mulago suffers from power supply issues, it is the intermittent power in the Kisenyi area that stops processes happening like sterilization of operating equipment thus hindering operations.

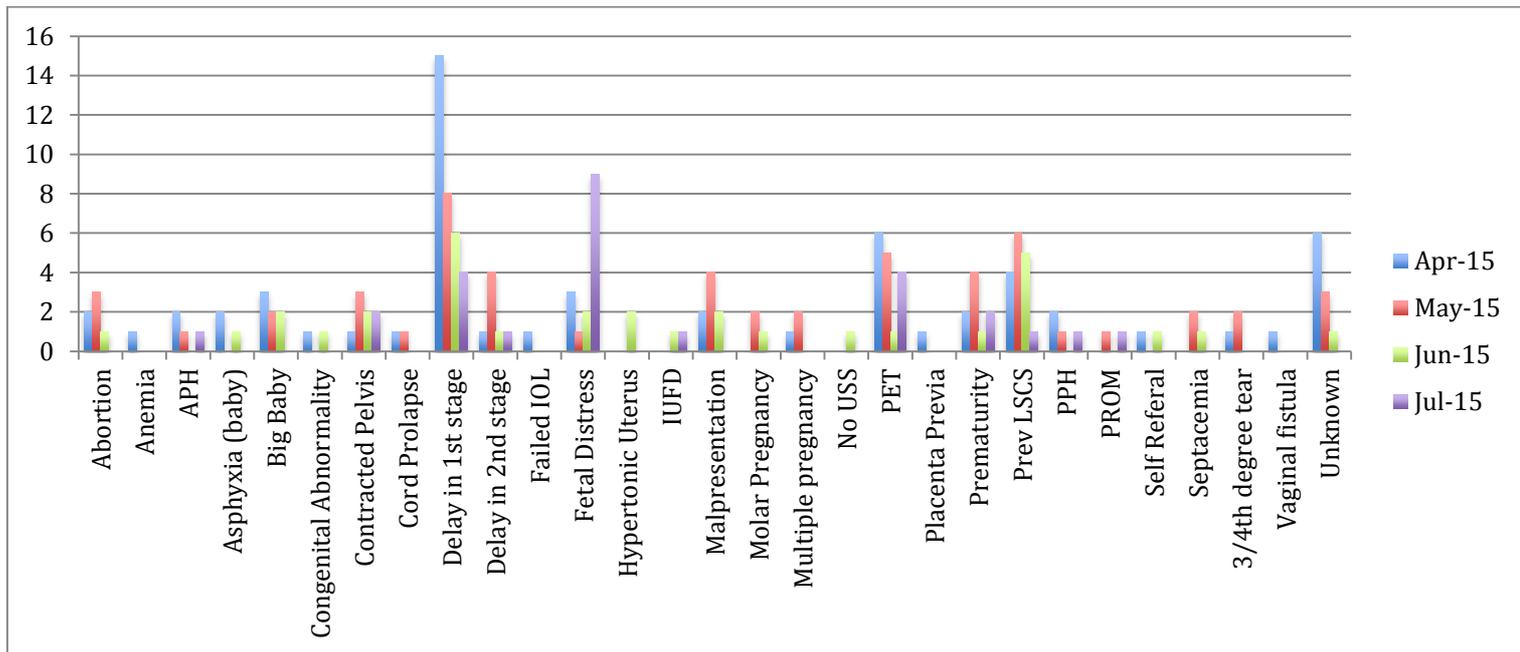
The graph below demonstrates the effect of intermittent power and poor stock control/ordering has on transfer rates. During the months of April and May 2015 & February and March 2016 there was a limited supply of oxytocin, fluids and equipment like catheters, giving sets, syringes and sutures. Power was almost non-existent and midwives were delivering babies by candlelight overnight. As these problems improved so did the transfer rate.

Figure 4: Transfer rate compared to the LSCS rate, April 2015 – March 2016



The rise in LSCS (blue line) being performed at Kisenyi, has caused the referral rate to decrease (red line), and the inverse is also witnessed in August 2015. The trend appears to change in early 2016, with referral rates creeping up once again, despite caesarean rates remaining at average levels. There is no obvious explanation as to why this has occurred, perhaps the large influx of admissions, has slightly skewed percentages in comparison to other months.

Figure 5: Displays reasons for transfer from Kisenyi HCIV to Mulago



Referrals to MNRH are inevitable and with the aim of reducing avoidable referrals, we must accept that there will be a number of referrals made per month and many of these are appropriate. Throughout 2015, the average number of referrals made was 37, despite the constant increase in monthly admissions to the department. 2016 figures have crept up to an average of 50 referrals per month for the first quarter. Without the analysed data, ‘reason for referral’ it is hard to determine if referrals are appropriate or inappropriate. It could also represent the on going increase in admissions reaching an all time high and may be an indication that services are reaching maximum capacity.

There were no reported maternal deaths at Kisenyi HCIV during the year of 2015. In the first 3 months of 2016, 2 maternal deaths occurred at Kisenyi HCIV. Unfortunately there is no formal reporting

system in place to inform staff of such incidences or reflect and improve upon their clinical practice. These figures are falsely reassuring staff of the level of care being provided to mothers.

The experience of some LMP volunteers is the transfer of extremely sick mothers to MNRH when it is too late to do anything to save them. Many of these women either pass away enroute to MNRH in the back of an ambulance or shortly after their arrival at Mulago. Communication links appear poor between Kisenyi and MNRH and often these cases are never fed back to Kisenyi staff and these patients are not included in Kisenyi's maternal death figures.

Staff at MNRH have understandably made complaints regarding such inappropriate transfers that have happened since Kisenyi HCIV was fully operational, but there has been little follow up from the management team to resolve these issues.

Since Kisenyi maternity department was functionalised in 2014 it would appear on paper that it is performing well as a health centre IV. SVD & LSCS rates have risen, maternal death rates low and transfer rates have decreased overall, allowing many disadvantaged and impoverished women to be delivered in the safety of a healthcare facility. As with any healthcare system there is always room for improvement and reports from LMP volunteers strongly suggest that standards in the quality of care given to the women and babies needs to be raised urgently.

The inconsistencies in the operational running of the maternity unit hinder the service moving forward.

Management & Leadership at Kisenyi is far from exemplary, this spans from KCCA representative through to clinical directors and heads of department at a local level. 'Leading by example' mentality is non-existent and without this solid foundation it is an extremely hard task to direct, motivate and encourage staff. An overwhelming lack of accountability, in every aspect of management and professional conduct impacts negatively on the daily workings of Kisenyi maternity department. This extends further to the repercussions (or lack of), when staff are late or absent at work, bribing patients or stealing stock.

Teaching & Training at Kisenyi is also extremely poor. In a unit where there is a high turnover of staff (staff rotation) and emergencies are commonplace, training is essential. Keeping up to

date with current evidence, discussing difficult cases and annual assessments or refresher courses of key skills (I.e. obstetric emergencies / neonatal resuscitation) do not occur.

Quality Improvement & Clinical Governance are two concepts often neglected in Kisenyi. Performance data is not made privy to staff, maternal/ neonatal mortality & morbidity is not routinely discussed; audits and reports are not routinely presented. This is further complicated by the lack of accurate documentation across the department making collation of accurate data very difficult.

Resources are limited as with many government facilities in Uganda. Improvisation often takes place or patients are told to buy the necessary items from an outside supplier, usually a pharmacy. Throughout LMPs time at Kisenyi there have been several periods, some short, others prolonged, where basic medical supplies including lifesaving medication has not been available to patients. As mentioned above, consistent power supply is an on going issue, impacting upon theatre, the laboratory and storage of blood products for transfusion.

The culmination of the above is a department delivering mothers with suboptimal efficiency. Delays in patient reviews and decision making lead to a poor and low level standard of care for many women which may have permanent implications for themselves or their baby.

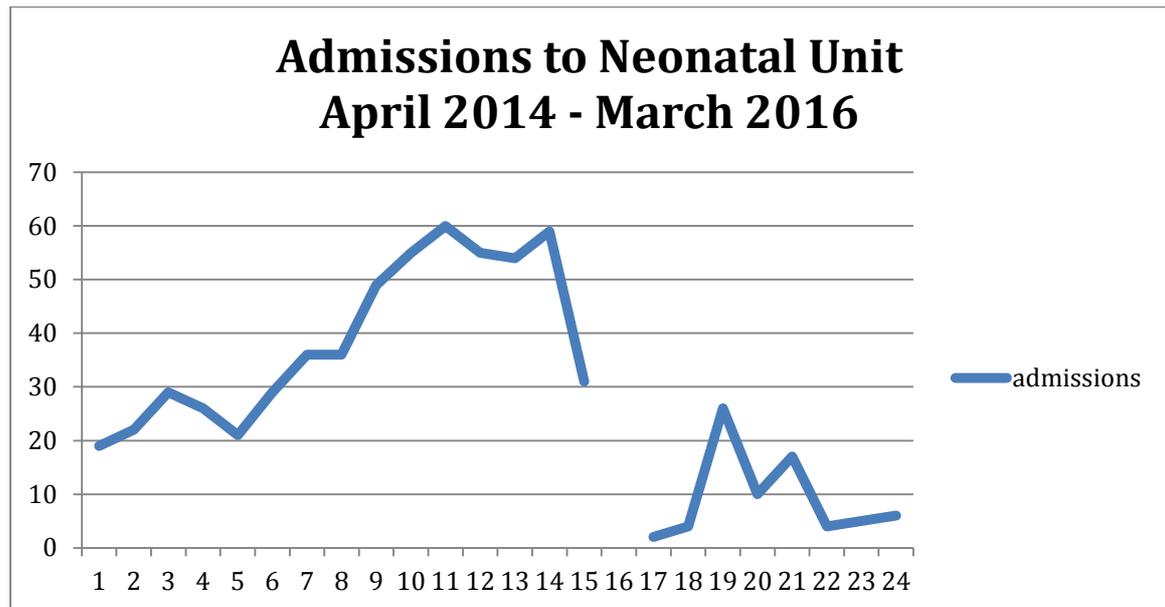
Neonatal Unit

The neonatal unit possess a government logbook, which should record all admissions to the unit alongside referrals and deaths. Unfortunately this is difficult to assess due the limited information documented in the logbook. This leads you to question the accuracy of the information that has been recorded. Unfortunately no data was noted for July 2015 and extremely minimal/incomplete data recorded from August 2015 through to March 2016. With the ever increasing number of admissions and deliveries within the unit we would expect neonatal admissions to mirror this however our figures are contrary to this, as can be seen demonstrated in figure 6.

Unfortunately for the majority of 2015 there has been no LMP volunteer with Neonatal experience to work in the department. The protocols and guidance produced by former volunteers has proved invaluable, drug dosages and care/referral pathways are all clearly presented to help staff. The neonatal unit is staffed alongside the

postnatal ward and when staff call in sick or are absent the postnatal ward takes priority. There is one medical doctor who takes responsibility for the unit, although not a specialist, he performs three ward rounds a week. On all other occasions, midwives and nurses staff the neonatal unit.

Figure 6: Total number of babies admitted to the neonatal unit (as per HMIS government logbook)



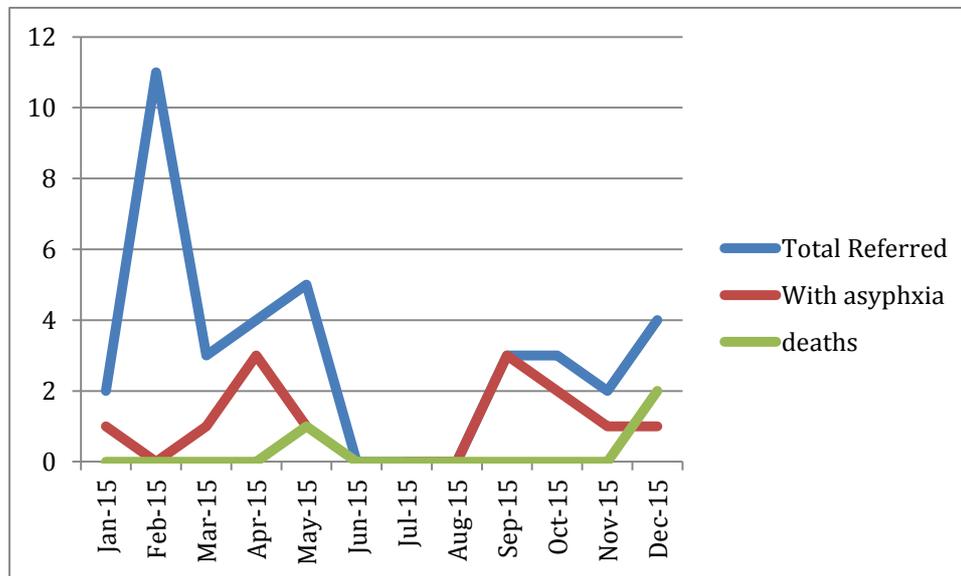
It would perhaps be better to regard how well Kisenyi HCIV is performing on the outcome of the babies at birth.

Asyphxia is a serious problem and is unfortunately seen frequently at Kisenyi as a direct result of many of the problems and delays mentioned regarding Labour Ward. These infants get transferred to a unit, which superficially, looks well stocked with several incubators and cots. However without skilled and knowledgeable staff, consistent electricity and adequate drug supplies, these few beds are redundant. Staff shortages and cross covering between neonatal and postnatal wards results in low level care for all patients involved.

Figure 7 points to rates of asphyxia and death amongst the neonatal population at Kisenyi. Continuing from the previous note about poor documentation it is likely that all of these rates are inaccurate and in fact significantly higher. First hand feedback from LMP volunteers would support this claim.

Figure 7: Total number of babies referred to Mulago neonatal intensive care, those that were transferred with asphyxia and those that sadly died in the neonatal unit at Kisenyi HCIV.

Note: No data available for Jul/Aug



The workforce on the neonatal unit needs to be made a priority by KCCA and Kisenyi HCIV. It is difficult to see how Kisenyi HCIV can move forward in terms of delivering women safely and caring for more at risk women if the neonatal unit is unequipped in terms of staffing and resources to deal with at risk babies.

Impact of LMP volunteers

In 2015 Kisenyi HCIV had Doctors and Midwife volunteers from the UK. The varying experience and skillsets of the volunteers were put to use to try solve/improve different problems that volunteers encountered.

These are just some of the changes/improvements the volunteers made during 2015.

- Fund raising improved patient dignity. The funds raised allowed curtains to be installed in the delivery suite and first stage room to allow private examination areas, a very simple but crucial intervention.



Figure 8: newly installed curtains on labour ward

- A pilot project making locally produced hand sanitizer by the lab team at Kisenyi HCIV was well received by staff. However funding for the chemicals required has ceased. The LMP team along with the local producers arranged a meeting with KCCA so that this could be incorporated in the financial budget of 2015/16 however the meeting was cancelled by the KCCA several times and therefore no extra money in the budget provided.
- Post partum haemorrhage accounts to 25% of maternal deaths in Sub Saharan Africa (2014) and this is a commonly seen problem at Kisenyi HCIV, being able to transfuse blood is a potentially lifesaving procedure. Working with local lab technicians the LMP taught midwives and doctors the procedure for obtaining blood from the national blood bank for cross match and how to safely give a blood transfusion. This has continued successfully, most often for elective cases if large volumes of blood loss are anticipated, preparations are made

to seek blood from the national blood bank. This has undoubtedly helped reduce the transfer rate to Mulago.

- LMP concentrated on working along side midwives in the second stage room, enhancing midwives delivery skills. Encouraging midwives to work with the women to achieve timely delivery of uncompromised babies to reduce unnecessary transfers to Mulago for delay in first stage/poor neonatal outcomes. Many women are still being left unsupported if the delivery appears difficult and therefore these women end up with a long labours and poor outcomes. Other elements concentrated on were reducing the episiotomy and perineal trauma rate, preparing for emergency situations, neonatal resuscitation, respect and dignity to the women.
- It was obvious to one member of the LMP team that the power supply has a major impact on the quality of women's care. This drove them to investigate solar power and the cost of insulation. Quotes were sort from various solar companies in Kampala. These were given to the KCCA but at present this has not been taken any further probably due to the sizable start up costs and the decision that a more robust transformer be purchased for the Kisenyi area as mentioned before.

2016 and the future

Litigation rates involving obstetric cases are the highest of any specialty and good documentation is the only defence a healthcare provider has, should a case go to court. Any competent clinician should know and practice good medical documentation not only to protect them but also to ensure good care for their patient. Unfortunately, Kisenyi HCIV documentation standards are far from an acceptable level.

An audit performed by LMP back in August 2015 looked at observations taken during a patient's admission alongside many factors that make a comprehensive intrapartum care record. This confirmed what was already suspected that documentation was inadequate. This instigated the research and development of paperwork to help improve documentation and patient safety/outcome.

Since then, monthly snapshot audits have revealed that the standard of documentation at Kisenyi HCIV needs to change urgently. One month revealed only 8% of notes have admission observations (BP, pulse rate, temperature) documented. A staggering 89% of notes have not been signed by the healthcare professional documenting. Many significant details from the delivery were not documented in a majority of cases including estimated blood loss, perineal trauma and neonatal resuscitation.

The primary purpose of risk assessment in obstetrics is the prevention and consequent reduction of maternal and perinatal morbidity and mortality through early identification and intervention. This is of upmost importance at Kisenyi HCIV where 24 hour medical cover is not available and resources are scarce. The national quality improvement framework and strategic plan (Ministry of Health, 2010-2015) recommends evidence based interventions such as use of partogram, highlighting good record keeping, improving referral systems, maternal death reviews and audits as part of the improvement of quality insurance. It is observable that without improvement of documentation, patient care, accurate maternal death reviews, audits and improvement of patient referrals cannot be achieved.

An LMP volunteer, in collaboration with one of the Kisenyi HCIV doctors worked towards implementing a pilot of the admission booklet produced in late 2015 in an attempt to improve clinical documentation. The booklet was user friendly, standardised in content, limiting the need for recall and minimal writing whilst capturing all the information required for the comprehensive nursing/medical assessment. In addition it would save time, unify the admission/delivery notes and allow for auditing to be carried out with ease. Paramount to all of this could have been improvement in the care and safety to women delivering at Kisenyi HCIV and those that are transferred when the occasion arises. Unfortunately despite positive feedback from many staff members, the department did not feel they could commit to printing the necessary number of booklets. It was eventually made apparent that the printing facility often complains about the lack of toner so will only give limited copies of paperwork.

The LMP volunteer, alongside the local doctor introduced a weekly Continuing Medical Education (CME) meeting. The first meeting of its kind saw 20 members of staff attend and further meetings received positive feedback.



Figure 9: LMP volunteer teaching at CME meeting

The aim of CME sessions were to discuss difficult clinical cases within the multidisciplinary team highlighting elements of good practice and giving future recommendations/lessons learned in a non threatening environment. It was a good opportunity to address other issues (unnecessary transfers, documentation, timekeeping etc.) and aided team development and bonding. Unfortunately the teaching was only carried out by the LMP volunteer, begging the question, is the CME sustainable? Hopefully it has shown staff that it is of value and it is an arena that they can use to discuss poor outcomes in the future.

With a frequent and high volume of students rotating through the department, it was noted that on occasions, sometimes due to staff shortages they could be on labour ward for prolonged periods alone. There were numerous incidents noted by LMP volunteers where they felt students were perhaps 'out of their depth' or were unaware of their limitations. Unfortunately due to the nature of obstetrics these situations can lead to grave outcomes for mothers and permanent disability for neonates. An LMP Volunteer formulated a student reference guide that is situated on Labour ward, outlining expectations of students, what they can and cannot do and some brief guidelines. This is an attempt to standardise the information they are given and prevent them from finding themselves in situations they do not have experience to handle.

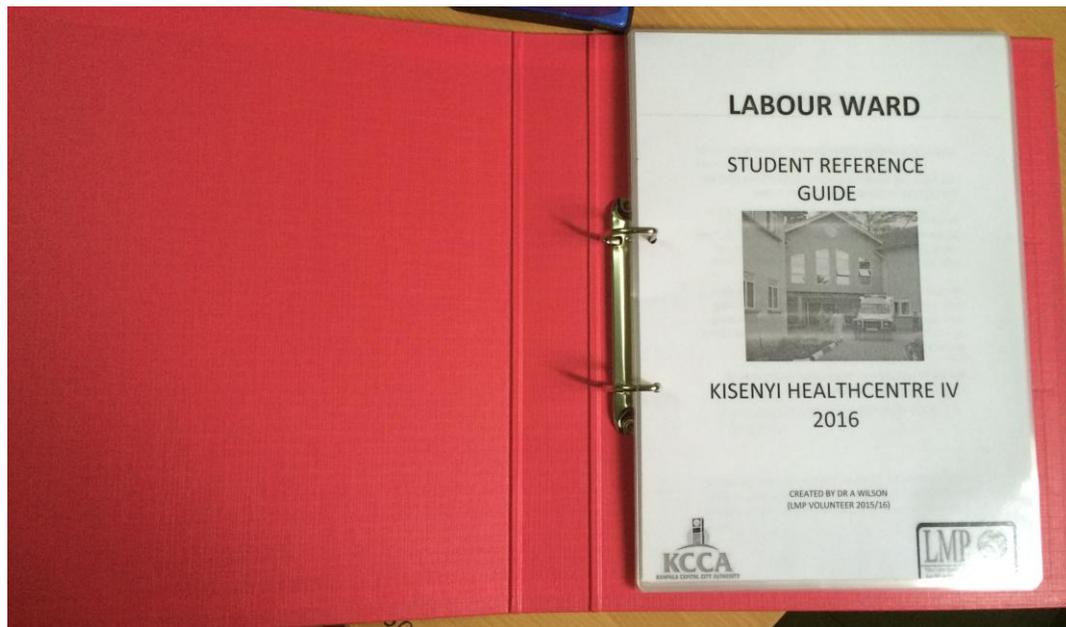


Figure 10: Laminated student reference guide

Recommendations

All of the above incorporates an overview of the inherent problems noted by several LMP volunteers during their time at Kisenyi HCIV. This report has highlighted some of the small steps taken by the LMP to try and resolve some of the issues.

Human Resources are continuing to impact negatively on the efficient and effective running of the maternity department. High rates of absenteeism, lack of accountability from senior members of staff and poor time keeping need to be addressed as a matter of urgency if sustainable change is to be seen at Kisenyi.

The relationship between Kisenyi as a HCIV and Mulago Hospital should be reviewed, in light of Kisenyi being functional for 2 years. Recurrent problems with transfers needs to be addressed and communication between both sites improved. There is a need for concise transfer guidance for Kisenyi staff including how they can optimise patients clinically prior to transfer. There was brief discussion about referrals being accepted by staff at Mulago by telephone so they are aware of incoming cases, this idea has yet to be taken any further. Problems at Kisenyi are most often mirrored at Mulago, sometimes the magnitude even greater, these should be identified and resolutions considered. For some patients, transfer to Mulago is not always the best solution.

The lack of specialist and severe staff shortages on the postnatal/neonatal has the potential to pose more harm than good to high-risk babies. This should be discussed and resolved as a matter of urgency, ideally seeing a daily ward round and proper staffing on the neonatal unit.

Continued Medical Education and/or weekly teaching or case based discussion should continue amongst staff. Sessions could be lead by doctors, midwives or students to encourage an environment where staff learn from one another. Monthly clinical governance figures should be collated and presented to all staff, reminding them of how well they have done or where there is a need to improve.

With service provision already expanding exponentially, the KCCA need to predict and plan to allocate resources of staff and equipment to cope with the increase in demand. Without this happening, the level of care given will continue to deteriorate.

Conclusion

Since LMPs involvement with Kisenyi HCIV, the provision of maternal and neonatal health services has gone from strength to strength. In 2015, 7512 women had an alternative to delivering in the village or attending the already inundated Mulago National Referral Hospital. They had access to qualified midwives and obstetricians if required.

This continues to be the case for many more in 2016 and beyond. What needs to be ensured is that as the number of cases continues to grow that the standard of care given to these women and babies is also on the rise.

Regarding the future involvement of the LMP, a long term volunteer maybe of benefit, only if the KCCA and management of Kisenyi are on board, wanting to see improvement and willing to make changes, big and small, to facilitate this.

References

Ye J, Betran AP, Vela MG, Souza JP, Zhang J. Searching for the Optimal Rate of Medically Necessary Cesarean Delivery. Birth. 2014;41(3):237-43.

Knowledge & Place police Report – Improving Referral 2014
Prepared by Professor Louise Ackers

Ministry of Health – Health Sector Quality Improvement Framework and Strategic Plan 2010/11 – 2014/15
<http://health.go.ug/docs/HSQIFS.pdf> accessed 3/2/2016

World Health Organisation 2015 “WHO Statement on Caesarean Section Rates”
http://apps.who.int/iris/bitstream/10665/161442/1/WHO_RHR_15.02_eng.pdf accessed 3/2/2016

World Health Organisation 2014
<http://www.who.int/mediacentre/news/releases/2014/maternal-mortality/en/> accessed 3/2/2016