



Poster Presentations

Global Health (PG)

PG.01

Can the presence of an additional senior doctor reduce caesarean section rates in a regional referral hospital in Western Uganda?**Nelson, J^{1,2}**¹Bradford Royal Infirmary, Bradford, West Yorkshire, UK; ²Fort Portal Regional Referral Hospital, Fort Portal, Uganda

Introduction The World Health Organization suggests that caesarean rates above 15% can result in wasted financial/human resources, with no improvements in maternal/neonatal outcomes. Senior doctor involvement in labour-ward care is the model used in resource-rich countries, but in this unit most care is by first-year doctors. This study looked at the caesarean rates in this unit and whether the presence of an additional senior doctor could reduce the high rate (32%).

Methods A retrospective analysis of the caesarean rate on the days a senior doctor was present was made compared with days he was not present from October 2014 to February 2015. The activity of the senior doctor comprised a ward round with juniors, aiding with clinical decisions, bedside teaching and being available for reviews of cases.

Results Ninety-two days were analysed including 1487 deliveries, with an overall caesarean rate of 29.1%. On the 42 days when the senior doctor was present the caesarean rate was 26.2% compared with 31.3% on the 50 days he was not present ($P < 0.05$).

However, there was not an overall reduction in caesarean rate when compared with historical data.

Conclusion It appeared that the presence of an additional senior doctor reduced the caesarean rate for comparable midweek days. It remains to be seen if this can have any long-term impact on high caesarean rates when this doctor leaves. Senior support/presence is likely to improve standards of care. However, in Uganda there are many barriers to this in terms of human resources, and morale, motivation and leadership of senior doctors.

PG.02

Improving management of pre-eclampsia in Mulago Hospital, Uganda**Bharmal, AV¹; Bell-Webb, C¹; MacDougall, J¹; Patient, C¹; Nakimuli, A²**¹University of Cambridge, Cambridge, UK; ²Mulago Hospital, Kampala, Uganda

Introduction Pre-eclampsia is more prevalent among people of African ancestry than other ethnicities. From 21 August 2014 a

five-bed specialist unit for pre-eclampsia has been in use in Mulago Hospital, Uganda, the national referral hospital for obstetrics and gynaecology.

We aim to evaluate maternal and fetal outcomes for women in the pre-eclampsia unit to develop protocols, regarding treatment, monitoring and delivery interval. The current protocol states that women with severe pre-eclampsia should deliver within 24 hours of admission to the unit.

Methods For all the women admitted to the pre-eclampsia unit from 6 to 19 June 2015, we assessed: treatment received; appropriate monitoring; delivery interval (time from admission to unit until delivery); and maternal and fetal outcomes.

Results Ten women were analysed in the study. The majority (nine women) received appropriate treatment (antihypertensives and magnesium sulphate). Blood pressure monitoring varied in frequency for each woman, and only four women had urine output measured. Only one woman met the 24-hour delivery interval criteria. Analysis of outcomes showed 0 maternal deaths; one fetal death; and three neonatal admissions to intensive care.

Conclusion Treatment is appropriately administered; however, monitoring is inconsistent. Monitoring could be improved by the introduction of an observation chart, and an increase in resourcing of the unit. Due to a limited sample size it was difficult to determine if a longer delivery interval affected fetal outcome.

PG.03

Assessment of the obstetric referral system in Uganda**Bharmal, AV¹; Bell-Webb, C¹; Ackers, L^{2,3}**¹University of Cambridge, Cambridge, UK; ²Knowledge for Change, Manchester, UK; ³University of Salford, Manchester, UK

Introduction Uganda has the structural capacity for a referral system, where women can be referred from a healthcare centre (HC) to a regional hospital. The system requires assessment of women at a HC, prompt transport and then appropriate management at the place of referral.

Our aim was to identify if women had appropriate referrals from an HC to a regional referral hospital and to compare weekday and weekend service provision.

Methods The study was conducted between 1 May 2015 and 30 June 2015. The number, reason and outcome for each referral were identified. Weekdays and weekends were compared; evaluating mode of delivery and number of referrals.

Results Fifty-one women were referred, with a mean referral of 5.2 women per weekday and eight per day on a weekend. Thirty-

Asia. The sufferer is incontinent of urine and/or faeces and may have features of the obstetric fistula complex including stillbirth, social isolation, poverty and suicidal ideation.

Methods Women were invited to attend surgical camps at Kitovu, Uganda for assessment and treatment of vesicovaginal fistula. In all, 122 women completed questionnaires about the index birth that caused their fistula between March 2013 and 2015.

Results Fifty-eight of the 122 (48%) women were recruited to the camps via radio advertising. The average age was 30.5 years old with average symptom duration of 5.9 years. Thirty-three of the 98 (33%) married women were subsequently divorced by their spouses because of the fistula, despite divorce being hugely stigmatised in Uganda. Ninety-five of 117 (81%) suffered a stillbirth or an early neonatal death with 75/117 (64%) delivered by caesarean section, of which 11 were caesarean hysterectomies.

Conclusion Despite large international programmes for fistula prevention there remain significant challenges in managing obstructed labour in Sub-Saharan Africa. The majority (48%) of our patients were responding to radio-campaigns. We suggest that a similar model to the highly successful case-finding programmes for prevention-of-mother-to-child-transmission and HIV/tuberculosis could be used to improve identification of obstetric fistulas. An 81% incidence of stillbirth/neonatal death suggests an improvement from previously quoted figures of 95%. This may indicate improved access to caesarean section. However, this may co-exist with the higher incidence of iatrogenic fistula from inadequately trained staff.

PG.13

Supporting evidence-based midwifery practice through audit and feedback: an LAMRN project in Kenya, Uganda, Zambia and Zimbabwe Smyth, R¹; Mwebaza, E²; Omoni, G³; Maimbolwa, M⁴; Mudokwenyu-Rawdon, C⁵; Bedwell, C¹; Porteous, C¹; Lavender, T^{1,3}

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Introduction The LAMRN is a partnership between The University of Manchester and focal group leaders and their institutions from six countries: Kenya, Uganda, Malawi, Tanzania, Zambia and Zimbabwe. The LAMRN network is aimed at increasing the research capacity of midwives within the East, Central and Southern Africa region, so improving maternal and newborn health.

Aim: To strengthen capacity to conduct clinical audit among midwives in Kenya, Uganda, Zambia and Zimbabwe.

Objectives: To implement a series of workshops on principles of clinical audit, in order to: (i) improve midwives' understanding of the clinical audit process, (ii) strengthen midwives' ability to identify, and collect and analyse data on auditable problems, (iii) encourage midwives to act on audit findings, and (iv) help

midwives establish audit as a routine activity in their facilities. Also, to share lessons and audit tools within country and with Lugina Africa Midwives Research Network (LAMRN) midwives.

Methods Criterion-based audit comparing aspects of current practice with agreed evidence-based standards is used. The project trains teams of 12 midwives in each country, comprising four workshops. UK partners from The University of Manchester help facilitate workshops and mentor the country teams. Areas of clinical care with direct applicability to the midwives' own practice have been identified through consensus. Audit topics include; partograph initiation and completion, Identification and treatment of postpartum haemorrhage, early (within 6 hours of birth) postnatal care, health information given to women on postnatal discharge and stillbirth.

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PG.14

A comparison study examining maternal perception of outcomes of delivery and future pregnancies in Parirenyatwa Hospital, Zimbabwe and the Queen Alexandra Hospital, Portsmouth, England Chase, S¹; van Teijlingen, E²; Sawdy, R²; Guirgis, R³

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Introduction There are major political, cultural and economic differences between England, a more developed country, and Zimbabwe, a less developed country. The maternal mortality rate is significantly higher in Zimbabwe, and there are limited resources available. This may lead to differences in reporting of perceptions of care.

The study aim was to obtain evidence primarily assessing the perceptions of care during childbirth within two contrasting healthcare environments, in Zimbabwe and England.

Methods The study retrospectively looked at patients' perceptions on both their management and immediate maternal complications in delivery within two settings via a structured questionnaire.

Ethical approval was sought on both sites prospectively. While in Zimbabwe, all interviews and forms were completed with participants by Stephanie Chase. In England, the participants themselves completed the forms. The first arm of the study collected data from 200 completed questionnaires from women who had delivered in the main government referral hospital, Parirenyatwa Hospital, in Harare, Zimbabwe. The second arm collected 75 completed questionnaires from women who delivered at an NHS hospital, Queen Alexandra Hospital, Portsmouth, England.

Results There was a higher complication rate during childbirth in Zimbabwe of 59.7% versus that of England at 50.7%. However, overall 64.5% of participants in Zimbabwe gave complimentary

comments on the care they received from healthcare professionals versus 73.4% in England.

Conclusion The results highlighted that the standards of care, resources and care provided by healthcare professionals varied greatly between the two settings. Despite this there was an overall appreciation of care within both hospitals.

PG.15

Maternal and fetal outcomes of tuberculosis during pregnancy and the postpartum period: a systematic review and meta-analysis

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Introduction Our objective was to identify outcomes of pregnancies in women with maternal tuberculosis (TB).

Methods Systematic review and meta-analysis.

Data sources: Major electronic databases until October 2015.

Eligibility criteria: Studies that compared pregnant women with and without active TB for outcome data.

Data extraction and synthesis: Study selection, quality assessment and data extraction were carried out by two independent reviewers. Information on study design, setting, population characteristics, TB diagnosis and treatment as well as obstetric outcomes was obtained. Risk of bias was assessed using the Newcastle-Ottawa scale. Data were pooled and odds ratios using random effects modelling were calculated for maternal and perinatal outcomes.

Results Out of 7521 citations, 13 studies were included; (3384 pregnancies associated with active TB, 119 480 pregnant women without TB). Using the Newcastle-Ottawa scale, seven studies had a low risk or medium risk of bias and six had a high risk of bias. There was a significantly increased risk of poor fetal outcomes; with quadruple the odds of perinatal death and asphyxia and double the odds of preterm birth and low birth rate. Maternal outcomes were also significantly worse with double the odds of maternal morbidity, anaemia and caesarean delivery, compared with pregnant women without active TB. Women who were diagnosed and treated in first trimester had better outcomes than those diagnosed and treated in second and third trimester.

Conclusion TB in pregnancy results in poor maternal and fetal outcomes. A wider screening programme and case detection are needed to start early treatment and reduce poor outcomes.

PG.16

Intake of folate and genes polymorphisms associated with folate cycle disorder among healthy female students

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Introduction Our objective was to assess the consumption of folate and the frequency of the main gene polymorphisms MTHFR-677C>T, MTHFR-1298A>C, MTRR-66A>G associated with folate cycle disorder in female students.

Methods A cross-sectional study. The questionnaire survey about the adequacy of nutrition and reproductive plans and genetic examination were conducted among 100 healthy female students aged between 19 and 25 years. Genomic DNA was extracted from blood leucocytes with a simple salting-out method. Gene polymorphisms were detected by the technique of real-time polymerase chain reaction. We have analysed the frequencies and Hardy-Weinberg equilibria.

Results We found that all female students consumed poor folate foods. Nobody took folic acid supplements or folate-containing combined oral contraceptives. No students excluded the possibility of pregnancy and childbirth during the period of study at the academy. The frequency of MTHFR-677TT mutant genotype was 6%, MTHFR-1298CC was 9%, MTRR-66GG was 31%. Combined MTHFR-677TT//MTHFR-1298CC and MTHFR-677TT//MTRR-66GG mutant genotypes, which significantly increased risk of pregnancy loss and neural-tube defects, were found in 2% of cases.

Conclusion Healthy female students are characterised by inadequate intake of folate with food, increased prevalence of the mutant genotype of the MTRR-66GG, the average frequency of mutant genotypes of the MTHFR-677TT and MTHFR-1298CC, that increases risks of fetal malformations and pregnancy complications. These facts in addition to a high frequency of unplanned pregnancies, explains the necessity to include in reproductive educational programmes for students information about the need of systematic and adequate intake of folate.

PG.17

Risks associated with anaesthesia in women with pre-eclampsia in low- and middle-income countries. Systematic review and meta-analysis

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