Introduction Inflammation(with or without infection) has a firm causal link and defined molecular pathophysiology for preterm birth (PTB) with histological chorioamnionitis (CA) being a sensitive and specific marker. The innate immune system uses Toll-like receptors (TLRs) to recognise different microorganisms. This study profiles TLR signalling in fetal membranes from PTBs with and without CA.

Methods Fetal membrane explants were collected from 3 groups of women; term spontaneous labour without CA (TSL^{-CA}) (n = 10), PTB < 34 weeks without CA (PTB^{-CA}) (n = 8), PTB < 34 weeks with CA (PTB^{+CA}) (n = 13). CA was determined by Redline criteria (maternal inflammatory response ≥ stage 2). Membranes were separated into amnion and chorion and RNA extracted. Profiling arrays were used to determine the expression profile of 84 genes associated with TLR signalling. Individual genes shown to be significantly up or down regulated (P < 0.1; fold change >2) were selected for validation by qPCR.

Results In the amnion 11 genes were differentially expressed (6 between PTB^{+CA} and TSL^{-CA} and 5 between PTB^{+CA} and PTB^{-CA}. In the chorion 16 genes were differentially expressed (6 between PTB^{+CA} and TSL^{-CA} and 10 between PTB^{+CA} and PTB^{-CA}). Validation confirmed increased expression of TLR1 in amnion (p = 0.03) and chorion (p = 0.001) and increased expression of TLR2 in amnion (p = 0.04) and chorion (p = 0.0005) in PTB^{+CA} compared with TSL^{-CA} (Figure 1).

Conclusion These data show a correlation between the presence of CA and up-regulation of TLR1 and TLR2, but not TLR6. These novel findings have implications for both the identity of the microorganisms and the mechanism(s) contributing to inflammation associated with PTB with CA.

PL.03 SELF-ADMINISTRATION OF MISOPROSTOL TO PREVENT BLEEDING AFTER HOMEBIRTHS IN UGANDA: A PILOT PLACEBO-CONTROLLED, RANDOMISED TRIAL

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Objective To pilot a study of self-administered misoprostol after home delivery for postpartum haemorrhage (PPH) prevention.

Design A pilot placebo-controlled, double-blind randomised trial

Participants Pregnant women at least 34 weeks of gestation living in Mbale district Uganda were recruited at four health facilities. High-risk women and women planning to deliver in facilities were included.

Intervention Pregnant women attending the clinics over a 2-month period were randomised to receive either misoprostol (600 μg) or identical placebo to be self-administered orally only if they did not reach a facility for delivery. Each woman was trained on medication use and the importance of PPH. After delivery, the women were visited at home and outcome and safety data collected.

Results 748 women were randomised to either 600 μg misoprostol (n = 374) or placebo (n = 374). 93% of women were followed up and 80% of drug packets (both used and unused) were retrieved. 56.7% of women took the study medication. Medication was taken before delivery in 2 women (both in the misoprostol group) and no harm was reported. The primary outcome (fall in Hb >20%) occurred in 7.3% of recruits. There were no significant differences between the groups in the rate of postnatal anaemia or self-reported blood loss. There was significantly more self-reported fever and shivering in the misoprostol group but acceptability of side effects was high.

Conclusion A randomised trial of self-administered misoprostol is feasible, and the pilot did not reveal major safety concerns with advanced distribution of misoprostol for self-administration.

PL.04 REDUCING CAESAREAN SECTION RATES THROUGH CHOICE AND COLLABORATION

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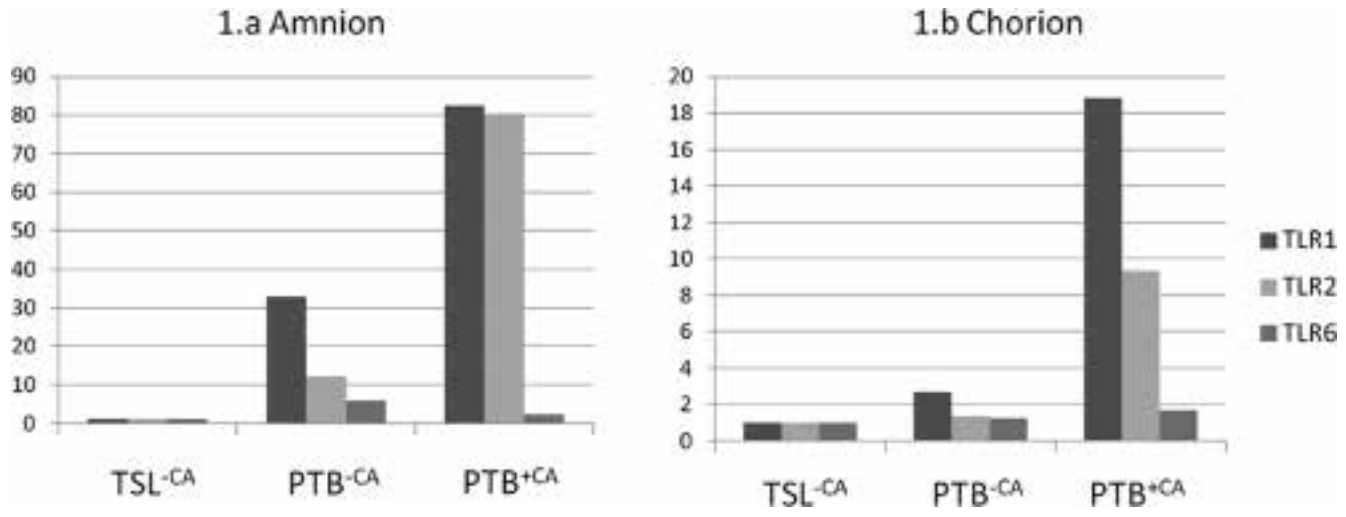
East Lancashire Maternity services underwent a major service reconfiguration in November 2010, moving from two Consultant led units to one consultant unit and 3 midwifery led birth centres. This service now has nearly 7000 births per year, nearly a third of which are born in the birth centres.

This transformational development was achieved through a shared ethos and philosophy about childbirth and through close collaboration between obstetricians, anaesthetists, midwives and neonatologists on clinical guidelines, operational policies and clinical care. The reconfiguration has also led to a doubling of consultant presence time on our labour ward.

Our Caesarean section rates pre and post reconfiguration:



Abstract PL.02 Figure 1 Chorioamnionitis: Changes in gene expression