was to determine the immediate and long-term impact of introduction of low-cost guidelines on neonatal mortality in a low-income setting.

Methods Neonatal mortality was audited for three months prior to the intervention. The intervention consisted of guidelines developed using a literature review and experience from local doctors, nurses and a visiting paediatrician. The guidelines focused on four areas: (i) ensuring all babies requiring oxygen, antibiotics or fluids were cared for on the neonatal unit, (ii) separating infants with infections from premature infants, improving hand washing techniques and teaching parents to perform observations thus reducing cross contamination, (iii) using antibiotic regimens based on microbiology data and lower thresholds to start antibiotic treatment, (iv) acutely unwell infants were not enterally fed and nasogastric tubes were for premature or neurologically compromised infants. The guidelines were disseminated at a ward meeting at the end of the audit and implemented with ongoing ward based teaching. Mortality was re-audited for the three-month period immediately post implementation. The audit was repeated at the same period of the year three years and six years post intervention.

Results Pre-intervention there were 79 neonatal deaths in the three months with 137 admissions to the neonatal unit (0.58 deaths per admission). Forty-nine neonatal deaths occurred in the three months post intervention with 187 admissions to the neonatal unit (0.26 deaths per admission) ($p<0.001$). Three years post intervention there were 60 neonatal deaths and 233 admissions to the neonatal unit (0.26 deaths per admission, $p<0.001$). Six years post intervention, there were 53 neonatal deaths and 315 admissions to the neonatal unit (0.17 deaths per admission, $p<0.001$).

Conclusion These data demonstrate it was possible to produce a sustained reduction in hospital neonatal mortality in Western Uganda.

G277(P) THE IMPACT OF POINT-OF-CARE-TESTING FOR BIOMARKERS IN REDUCING ANTIBIOTIC PRESCRIPTIONS IN CHILDREN GLOBALLY: A SYSTEMATIC REVIEW

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Background Antibiotic resistance is a global threat that is both harmful to patients and costly for healthcare services. It is exacerbated by the unnecessary prescription of antibiotics for viral infections. One suggested intervention to help reduce inappropriate prescriptions is point-of-care-testing (POCT) for biomarkers. This systematic review aims to identify the role that POCT for inflammatory biomarkers has in antibiotic prescribing in children.

Methods Embase, Medline, Web of Science, Scopus, and Global Health databases were all searched. Studies had to include POCT for biomarkers in children aged 0–18 years. They also had to include antibiotic prescriptions as a measured outcome. A narrative systematic review of the data was then performed.

Results After duplicates were removed 6461 studies were reviewed. After title and abstract review and full text review 5 papers were included. The study periods were from 2000 to 2015 with 4 of the studies being RCTs and 1 study being a cross sectional study. The intervention of all the studies was CRP POCT with none of the studies looking at white cell count of procalcitonin.

Only one paper showed strong evidence that POCT reduced antibiotic prescribing with 64.3% of children in the control group immediately prescribed antibiotics compared with 43.4% in the CRP POCT group (P value <0.0001 and a CI: 0.3 to 0.52). Due to heterogeneity within studies and with a lack of robust high quality RCTs the extent of any association is difficult to quantify. What was seen in the majority of papers is that the context in which POCT is performed appears to be very influential on the outcome be it the country, the ambulatory setting or the doctor performing the test. All papers suggested that POCT was a safe and acceptable test for use in children.

Conclusion Based on this review POCT for general biomarkers can not be recommended as a global strategy to improve antibiotic prescribing in children. More high quality research is needed and other biomarkers such as PCT should be researched as well as CRP and WCC. POCT should also be assessed against other antibiotic stewardship interventions and a cost benefit analysis should be performed before any suggestion of wider implementation is made.

G278(P) DEVELOPMENT OF SUCCESSFUL AND SUSTAINABLE PAEDIATRIC ONCOLOGY SHARED-CARE NETWORKS IN LOW-MIDDLE INCOME COUNTRIES

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Background/Aims World Child Cancer has created twinning partnerships with developing oncology services in low-middle income countries (LMICs) to support improvement of services for children with cancer. Central to success for these is the creation of effective shared-care networks not just single centre support. There is a dearth of good literature on network development. Our aim was to create an ideal model.

Methods The model was developed through learning from a 3 year UK Government (DFID) funded programme in Ghana and Bangladesh in which new shared care units were created and from lessons shared from other WCC-funded programmes in Myanmar and the Philippines. A 2 day workshop was held, focussing on lessons learnt from paediatricians representing networks in different stages of development to identify key elements and steps necessary to optimise planning.

Results The over-arching proposed themes for the model were need for; excellent, regular communication between the centres; twinning partnerships and funding. A successful shared-care network must have a strong hub hospital at its centre with at least one fully trained paediatric oncologist and a committed multi-disciplinary team. The hub (referral) centre must have dedicated space/beds, develop treatment guidelines and protocols and provide training for the staff populating the satellite units. Shared-care centres must, be strategically chosen based on population demography and accessibility, create development plans and service provision to replicate the hub centre as close as resources allow... Collaborative working and good communication, using the same treatment protocols, developing two-way referral systems and sharing successes and any failures are essential. Sustainable development is ensured