

Results 6 exchange sessions were held covering 12 paired paediatric cases (table 1).

Feedback was collected from 13 participants (7 Malawi, 6 UK). Mean score of all 10 questions was 4.26 out of 5 for all responders (4.3 for Malawi, 4.2 for UK), indicating perceived learning was high and similar for both groups. There was no significant difference in mean scores between the groups ($p > 0.05$ using Mann-Whitney-U) for all feedback questions.

Conclusions Cases without borders was perceived to enhance learning across settings, equally benefiting both sides, suggesting it is a suitable model for telemedicine programmes. Qualitative feedback suggests potential for increased interest and participation in evidence-based medicine and global child health in both contexts. Future iterations would benefit from an improved internet connexion and a larger feedback sample using a validated feedback tool.

Abstract G285(P) Table 1 Malawi

Organophosphate poisoning	Asthma exacerbation
Malaria, Malnutrition and dehydration	Diabetic keto-acidosis
PJP Pneumonia	Sickle-Cell Painful crisis
Congenital syphilis	Cerebral Malaria
Prematurity with RDS	Sepsis and metabolic condition
Rheumatic fever and Sydenham's chorea	Bronchiolitis

G286(P) THE ACCEPTABILITY, FEASIBILITY AND USABILITY OF THE NEOTREE APPLICATION IN MALAWI: AN INTEGRATED DATA COLLECTION, CLINICAL MANAGEMENT AND EDUCATION MHEALTH SOLUTION TO IMPROVE QUALITY OF NEWBORN CARE AND THUS NEWBORN SURVIVAL IN HEALTH FACILITIES IN RESOURCE-POOR SETTINGS

¹C Crehan, ^{1,2}E Kesler, ³B Nambiar, ⁴Q Dube, ^{5,6}N Lufesi, ⁷M Giaccone, ⁸C Normand, ¹M Heys. ¹Great Ormond Street Hospital Institute of Child Health, University College London, UK; ²University of Pennsylvania, USA; ³Institute for Global Child Health, University College London, UK; ⁴Paediatric Department, College of Medicine, University of Malawi, Blantyre, Malawi; ⁵Ministry of Health Acute Respiratory Illness Unit, Government of Malawi, Lilongwe, Malawi; ⁶Paediatrics and Child Health Association (PACHA), Blantyre, Malawi; ⁷Ubiqueworks Ltd, London, UK; ⁸Spinspire Consulting Ltd, London, UK

10.1136/archdischild-2018-rcpch.278

Background An estimated 70% of newborn lives could be saved globally if evidence-based interventions were successfully implemented. The 'NeoTree' application (app) addresses the need for quality care for sick newborns in resource-poor settings, particularly where care is nurse-led, by providing an integrated electronic platform for three functions;

- 1) immediate digital data capture on admission,
- 2) clinical decision support according to evidence-based clinical guidelines, and
- 3) newborn education. Here, we develop the first two functions and test the acceptability, feasibility and usability of The NeoTree in a district hospital, Malawi.

Methods A mixed methods intervention development study was conducted with facility-based health care workers (HCWs) to co-develop and test the app. Methods included Focus Groups (FGs) exploring the acceptability and feasibility of digital health solutions, one-to-one usability workshops and a one-month ward-based usability study. Quantitative usability

data (systems usability score – SUS) were collected before and after the ward study. Finally, end-line qualitative FGs were completed.

Results Digital aids, specifically the NeoTree were reported to be acceptable, feasible and a potential facilitator to quality newborn care. Identified factors predicted to aid the success of the NeoTree included a positive staff attitude, training, strong leadership, teamwork and staff engagement. SUS score was high at baseline (under workshop conditions) and following the ward study ($>68/100$ average) and HCWs reported high perceptions of improved quality of care after embedding NeoTree into routine practice (see table 1).

Conclusions The NeoTree has the potential to address multiple Malawian and global policy directives around improving quality of care and outcomes for newborns. It is an acceptable, feasible and highly usable tool. Co-production and user-focused, mixed methods iterative development have been key to its success thus far. The next phase of development will focus on the educational function and data linkage with national systems.

Abstract G286(P) Table 1

Neotree usability and quality improvement scores (n=13)	Baseline	End-line
SUS (calculated from 10 questions)	80.8/100	86.1/100
PIQC (mean of 11 questions)	N/A	4.6/5

SUS=System usability score, PIQC=Perceived improved quality of care score

G287(P) INVESTIGATING THE NEED, FEASIBILITY AND INTRODUCTION OF KETAMINE SEDATION IN A PAEDIATRIC EMERGENCY DEPARTMENT IN A RESOURCE-POOR SETTING

¹J Rasquinha, ²C Ngulube, ¹J Langton. ¹Department of Paediatrics, Queen Elizabeth Central Hospital, Blantyre, Malawi; ²Department of Orthopaedics, Queen Elizabeth Central Hospital, Blantyre, Malawi

10.1136/archdischild-2018-rcpch.279

Aims To evaluate the need for and practicalities of introducing ketamine sedation for manipulation of fractures, within a Paediatric Emergency Department in a resource-poor setting.

Methods Patient journeys were observed and 6 months of the theatre records reviewed to evaluate the current fracture management pathway and determine a need for a change to service provision. In consultation with the orthopaedic team, a draft ketamine sedation policy was created, for fracture manipulation within the paediatric emergency department. Using one patient, this was then piloted to determine the practicalities of use.

Results Review of the current patient journey confirmed that for those requiring manipulation, this is lengthy process. Patients are discharged home and subsequently return for admission to the orthopaedic ward the following Monday or Friday. They are kept nil by mouth prior to general anaesthesia and following their procedure they return to the orthopaedic ward for recovery and review of post-procedure imaging. Over a 6 month period, 307 paediatric patients underwent a manipulation under anaesthesia in theatre, with a maximum of 16 performed on one list. Approximately half of these had fractures which would have been suitable for reduction under