Methods In 2019, programme mentors identified factors outside the control of the intervention potentially affecting performance as reflected in the QoC data, including lack of oxygen concentrators, electricity and essential medicines. Alongside QOC measures, narrative data were recorded to test this. QOC data from one four-week period (May 2019) in four 'hub' regional hospitals were assessed against qualitative data. Frequency of UK mentor intervention was also recorded.

Results Variability in QoC between hospitals corresponded with narrative findings. While 3 hubs showed 100% correct oxygen prescription for SRD, one recorded 33% corresponding with narrative reporting of issues with oxygen concentrators and electricity supply. The same hub recorded 8% appropriate blood transfusions, with narrative reporting of prescriptions managed by a practitioner without ETAT+ experience; the other hubs reported 100%. Need for external mentors to intervene e.g. for management of critically unwell children and intravenous cannulation varied from 20–79%; a higher frequency of mentor intervention corresponded with higher QoC scores.

Discussion ETAT+ plausibly improves QOC in participating facilities in Sierra Leone. However it is important to observe factors outside of the intervention's direct control which may negatively affect results. Staff knowledge and performance may improve but remain constrained by poor equipment and infrastructure. Presence of external programme clinical mentors may affect results (with thresholds to intervene varying between clinicians). More detailed understanding of the hospital care 'ecology' is required to assess ETAT+'s impact on care quality and health outcomes.

G449(P) USING THE MODIFIED DELPHI METHOD TO ESTABLISH CONSENSUS ON CLINICAL ALGORITHMS FOR A NEONATAL MOBILE HEALTH APPLICATION FOR LOW-INCOME COUNTRIES

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Aim A neonatal m-health application (NeoTree) is being co-designed to support health care workers (HCWs) in low-income countries (LICs). A key function is the digital implementation of evidence-based guidelines. Clinical support algorithms have been developed using best available national and international evidence and clinical judgement. We aimed to determine whether a panel of neonatal experts could address evidence gaps by reaching a consensus on four algorithms: neonatal sepsis, birth asphyxia, respiratory distress and hypothermia.

Methods This was a consensus-generating study using a two-step modified Delphi method. In round one, experts rated algorithm items and justified their responses. Items meeting consensus (>80% agreement) were included. Items not meeting consensus were excluded or only included following major edits or unchanged if they presented core elements of evidence-based guidelines. In round two, experts further rated items from round one that did not reach consensus.

Results Fourteen experts participated in round one, ten in round two. Nine were from high-income countries, five from

LICs. Experts included physicians and nurse practitioners with an average neonatal experience of 20 years, 12 in LICs. After two rounds, a consensus was reached on 52% of 84 items. Experts consistently stated that items must be consistent with local and WHO guidelines. An example of a key change in an algorithm included the management of transient tachypnoea of the newborn (TTN). The proposed NeoTree algorithm aimed to differentiate TTN from other respiratory conditions to avoid unnecessary antibiotic use. Expert consensus was that HCWs would be unable to appropriately distinguish and monitor patients with TTN. In the revised respiratory algorithm, all neonates with respiratory distress will be given antibiotics. As a result, the final algorithms included 53 (62%) items.

Conclusion Four algorithms in a neonatal m-health treatment app were reviewed and refined by consensus expert opinion. Revisions to the NeoTree app were made in response to these findings and will be clinically validated in an imminent study. Expert discussion reinforced gaps in evidence in neonatal care in LIC, highlighting areas for future research.

G450(P) SHORT TERM GLOBAL HEALTH PROJECT: A PILOT SCHEME IN SIERRA LEONE TO ENHANCE TRAINEE DEVELOPMENT

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Introduction The NHS is experiencing declining number of doctors entering specialist training. Additionally, the BMA reports travel as the main reason for taking time out of training. The Global Health Qualitative Evaluation Project (GH-QEP) is an innovative pilot scheme that aims to address this. We believe opportunities to work abroad for a short term within a training program will appeal to those considering leaving the NHS or as an alternative to time out of program. It also builds skills and understanding, enhancing long term development as clinicians.

Design GH-QEP was a 4-week program based in Sierra Leone. Our team comprised of one paediatric and two GP trainees from the UK. Senior support was provided by UK and local consultants. The project consisted of qualitative evaluation of the Sierra Leone healthcare system post-Ebola through interviews of healthcare professionals and the public. The Ebola epidemic exposed an already stretched healthcare system within the country creating a climate of uncertainty. Significant effort implemented by the government and private organisations looked to rectify this. We received training in qualitative research methodology, and led the project design and implementation. Observing clinical practice in a variety of settings (hospital, rural feeding clinic, and district health unit) allowed hands-on experience of health issues in a challenging environment.

Outcome Undertaking qualitative evaluation is an opportunity not routinely provided in UK specialty training programs. Through patient interviews we learnt about the impact of government policies, education, local health beliefs and priorities of rural and urban population. It allowed us to reflect on the assumptions which shape our own understandings of health,