hours following injury. The administration of cool running water not only serves an analgesic function but is also associated with significantly reduced odds of skin grafting. The present re-audit evaluates the FA care of paediatric burn patients with a focus on the adequacy of cool running water.

Objectives Our aim is to determine the adequacy of cool running water FA provided in the management of children with thermal burns. The FA treatment of paediatric burns was specifically examined in the context of pre-hospital and emergency department (ED) care. A target of 100% compliance with current guidelines was set.

Methods Retrospective study of patients presenting to ED with thermal burns in a three-month period between 2019 and 2020. Electronic records were identified by coded diagnosis of 'burn' or 'scald' to evaluate the practice of cool running water FA in pre-hospital & ED settings as recorded by nursing and medical staff. Demographics, mechanism of burn, percentage (%) body surface area, nature and duration of prehospital & ED FA were recorded and compared with the baseline data from the first cycle.

Results Twenty-seven (27) patients were identified with an average age of 2.9 years. Upon reaudit, contact burns from the oven door remained the most commonly cited mechanism of burn injury (37%). Compared to the first cycle, adequate documentation of cooling time was significantly improved (28% vs. 8%). In the prehospital setting, the rate of adequate cooling completed among children doubled upon reaudit from 12% to 24% respectively. In contrast to the first cycle where only 29% of children with inadequate prehospital FA went on to complete adequate cooling in ED, this figure rose by over 100% in the second cycle to 66%. Among children presenting to the ED with suboptimal prehospital FA, the completion of adequate cooling was lowest among those under 2 years of age and those who has previously completed between 10 to 20 minutes of cooling prior to attending.

Conclusions The initial care provided in prehospital and ED setting continues to fall short of current guidelines calling for twenty minutes of cooling with running water. Despite emphasising the need for ongoing education on the importance of adequate cooling in both healthcare and public domains, the reaudit represents a substantial improvement in FA practice and documentation from the first cycle. Re-education combined with multidisciplinary team (MDT) engagement may have contributed to the improved results. Our findings call for continued education on burns management among medical staff and the introduction of campaigns to increase public awareness of appropriate FA, to include time parameters for appropriate treatment and its association with improved outcomes.

Paediatric Educators' Special Interest Group

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EXPLORING THE IMPACT OF HUMAN FACTORS AND HIERARCHY IN COMMUNICATION AND FOLLOWERSHIP DURING PAEDIATRIC AND NEONATAL EMERGENCY SITUATIONS: A QUALITATIVE STUDY

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Background Paediatric and neonatal emergencies are rare but may be associated with high morbidity and mortality, and require skilled leadership, good communication including ability to call-out critical information, active followership and teamwork. Hierarchy may also impact on those factors and affect the outcome.

Objectives Our study explores human factors and hierarchical structures that impact communication, call out and followership during paediatric and neonatal emergencies.

Methods A semi-structured audio recorded interview study was carried out across multiple UK hospitals. Health professionals from different backgrounds (doctors, nurses, nurse practitioners and midwives) involved in neonatal and paediatric emergencies were invited to reflect on their experience of resuscitation scenarios. Their views on human factors and hierarchy were also explored. Demographic data and self-reported confidence during certain aspects of resuscitation were also collected. These interviews were transcribed and analysed using an inductive approach according to grounded theory framework.

Results 25 people were interviewed, describing 60 scenarios:

Participants Male: Female	4:21
Neonates:Paediatrics	22:38
Secondary hospital: Tertiary Hospital	41:19

Within the scenarios discussed, communication issues occurred in 44%, followership and teamwork issues occurred in 24%, and hierarchy had a negative impact in 40% of cases.

Barriers to communication included lack of experience or familiarity of team members, unfamiliar environments or being within a big team.

Ability of members to do a call-out depended on fear of undermining colleagues, having had a prior negative experience and a steep, rigid hierarchy.

Parents had a significant negative impact on effective communication, particularly discussions regarding stopping resuscitation and on the ability to call-out.

Followers were likely to act passively based on their personality, experience, exposure and reflection to previous scenarios, but more likely to follow actively if there in a smaller group, supported by other team members, with good role allocation and having a clear leadership encouraging a shared mental model during the resuscitation.

There were different expectations and perceptions of leadership from different team members within the hierarchies experienced, with leadership unclear in 21% of scenarios. Leadership varied depending on the case, team composition, type of scenario and hospital. Flattened hierarchical structures were seen in paediatrics and neonates, but expression and experience of an innate 'chain of command' persisted across all professional participants.

Team members in tertiary hospitals were more exposed to complex cases, had more regular resuscitation training and felt more confident with intensive care unit support on-site. They therefore were more active followers during resuscitation scenarios.

Conclusions Human factors impact on communication, call-out, teamwork, leadership, followership and hierarchy during paediatric and neonatal emergencies. These seemed to improve

with regular in-house simulation training involving multiple specialities.

The presence of parents in this study also had a significant negative impact on communication, including decision to stop resuscitation and performing call-outs. Human factor training should focus on dealing with this aspect during resuscitation, along with finding ways to establish clear leadership, and for leaders to be able to empower passive followers within the team.

British Association for Paediatric Nephrology

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CALCINEURIN INHIBITORS IN NEPHROTIC SYNDROME SECONDARY TO PODOCYTE GENE MUTATIONS: A SYSTEMATIC LITERATURE REVIEW

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Background International Pediatric Nephrology Association (IPNA) recommends the use of a calcineurin inhibitor (CNI) as first line immunosuppressive therapy for steroid resistant nephrotic syndrome (SRNS) with response rates up to 50%. Response to CNI carries a strong predictive value for long term renal survival in these patients. However, their use in children with SRNS secondary to podocyte gene mutations (representing 10–30% of all SRNS cases) is controversial due to the significantly lower response rates compared to non-genetic disease. Nevertheless, there are several reports in the literature of CNI-induced remission in monogenic SRNS.

Objectives We systematically reviewed publications on monogenic SRNS treated with a CNI to determine: (1) CNI response rate; (2) impact of response on renal outcome; and (3) clinical and molecular predictors of response.

Methods PubMed was searched for English language publications providing clinical and genetic data of patients with CNI-treated monogenic SRNS. Variant pathogenicity was assessed according to American College of Medical Genetics criteria and patients were assigned to 1 of 4 categories based on estimated genotype contribution to phenotype: (1) non-existing; (2) unknown; (3) possible; or (4) confirmed contribution. Cases with non-existing phenotype-to-genotype contribution were excluded. Subgroup analysis was performed for the possible and confirmed genetic cases in order to eliminate bias from inclusion of non-truly genetic (presumably of immune aetiology) patients.

Results Data of 187 SRNS cases (of unknown, possible or confirmed genetic basis) from 22 studies were analyzed; 35.4% responded (7.3% fully and 28.1% partially) to CNI with commonest biopsy patterns being minimal change disease in full responders and focal segmental glomerulosclerosis in partial and non-responders ($P = 0.001$). Corticosteroids were more frequently co-administered with CNI in responders compared to non-responders ($P = 0.002$). Full and partial responders had the lowest risk for progression to end-stage kidney disease (ESKD) compared to non-responders (HR [95%CI] 0.4 [0.2–0.8]; $P < 0.05$). Carriers of WT1 variants were most likely to remit under CNI versus any other mutation (OR [95%CI] 4.7 [2.0–11.3]; $P = 0.001$). Subgroup analysis

including only possible or confirmed genetic cases ($n=123$) yielded similar CNI response rate (35.7%), lowered risk for ESKD in responders (HR [95%CI] 0.3 [0.2–0.8]; $P < 0.05$) and WT1-associated favorable response profile (OR [95% CI] 5.3 [2.0–14.4]; $P = 0.001$).

Conclusions The current IPNA recommendation that all children with SRNS should be trialed with a CNI allows assessment of treatment response even in cases later established as genetic. WT1 variant carrier status might predict a favourable response. Genetic FSGS patients are least likely to benefit from CNI therapy. At present, and until larger scale studies are available, decision on CNI continuation in responsive monogenic SRNS needs to be made on a case-by-case basis.

International Child Health Group

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DEVELOPMENT OF A PARTNERSHIP TO IMPROVE PALLIATIVE CARE SERVICES FOR CHILDREN IN THE GAMBIA

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Background Paediatric palliative care services in LMIC countries compete for resources with many other priorities. Their provision is desirable and includes advocacy, training health and community care workers, policy development and mentorship.

Objectives The THET J&J start-up grants provided an ideal opportunity to establish a partnership with the Ministry of Health (MoH). The long term aim being to develop children's palliative care services in The Gambia. A needs assessment was carried out in early 2020. We hope reporting the results raises awareness of the gaps and possible solutions in LMIC.

Methods The study took the form of a cross-sectional design with a focus on estimating the need for CPC and gaps at the country level. A mixed methods approach utilising both quantitative and qualitative data was used. Both primary and secondary data sources were used. The estimation of the need for CPC was based on estimation techniques using the prevalence and mortality of the specific diseases known to require palliative care. The response to the need and existing gaps were analysed using interviews and focus groups with key persons as well as survey data from service providers.

Ethical approval for this study was given by the University of the Gambia, School of Medicine. Reference number R020 004

Results Five organisations completed a Capacity Self-Assessment Tool, 17 staff from 5 facilities were interviewed and 2 Focus Group Discussions were conducted (8 staff). The leading cause of death in children was heart disease, then lower respiratory infections and neonatal disorders, with HIV/AIDS being 5th, Tuberculosis 7th and cancer 9th. Under 5 mortality is 47.8 per 1,000 live births. It was not possible to estimate prevalence. Facility capacity assessment to provide CPC ranged from 23%-74%.

Themes identified were a need to improve diagnostic ability; a desire for training; improve access and utilisation of medicines; and provide support for families. Training in