Background The National Institute for Health and Clinical Excellence recognises that times of transition, including adolescence, offer opportunities for intervention in health-related behaviour. Adolescence is characterised by the building of identity, independence and relationships, while navigating complex emotional and physical change. According to Public Health England, half of the most common health problems in adults arise from behaviours that are established during adolescence (Rise Above Programme, 2017). Smoking is a key example, with 40% of adult smokers in the UK starting smoking before the age of 16 years.

Aim To design an objective structure clinical examination (OSCE) station to assess the medical students' communication skills to challenge unhealthy behaviours in which adolescent smokers play a central role from inception to final assessment.

Methods We initially developed a workshop with medical educators and adolescent smokers to identify which behaviours and attributes of doctors would facilitate their engagement with smoking cessation services. Together, we co-created the consultation narrative for a smoking cessation OSCE that assesses the ability of medical students to practice motivational interviewing, a behavioural change technique included and taught in their curriculum. This OSCE station was included in the summative assessment of 364 medical students in their penultimate year. We recruited trained examiners and adolescent actors (all of whom had to give written feedback to the candidates) as well as administrators specifically for this station.

Results Descriptive analyses of students' OSCE marks demonstrated the feasibility of assessing and giving feedback on different elements of students' motivational interview skills, with substantial agreement between the examiners' and role-players' scores. Most students (85%) were successful in providing structure to the consultation and building rapport with adolescent role-players. However, only 50% of students sufficiently explored the young person's life circumstances and tailored the management plan and practical advice to the individual. Adopting a personalised consultation approach was identified by adolescents as a crucial factor in supporting their autonomy and improving their engagement with smoking cessation services.

Conclusion Adolescents can be key partners in improving medical education to shape the attributes of new doctors and increase the relevance of assessments to real-life clinical practice.

British Association for Paediatric Nephrology and Paediatric Intensive Care Society

G20

NEONATAL HYPERTENSION AS A RESULT OF TRANSIENT HYPERALDOSTERONISM: CASE SERIES

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Neonatal hypertension (NH) is an uncommon but important clinical problem in neonates. The most important non-renal association with NH is Bronchopulmonary Dysplasia (BPD).

Exact mechanism of hypertension in BPD infants is not known.

The purpose of this case series is to describe our experience with the use of spironolactone, an aldosterone antagonist, in neonates with hypertension and BPD.

Methods Retrospective case review conducted at Level II NICU in Calgary from 2013 to 2017 revealed 10 preterm infants with BPD and NH who had plasma renin and aldosterone levels done as part of their investigations for hypertension. NH was defined by blood pressure >95 th centile of the normative data. Maternal characteristics included age, smoking and drug use, history of pregnancy induced hypertension, preeclampsia, gestational diabetes, antenatal steroids and mode of delivery. Neonatal characteristics included gestational age, birth weight, sex, intrauterine growth restriction, APGAR scores, insertion of umbilical arterial catheterization and the presence of BPD. All infants had serum creatinine, electrolytes, urinalysis, plasma renin and aldosterone levels, renal ultrasound and ECHO done. Data collected also included age at diagnosis of hypertension, age at initiation of treatment, medications used, response to treatment and follow up.

Results NH in all infants was diagnosed after 36 weeks GA and treatment was started at presence of persistent hypertension >99 th centile. 3 infants were initially started on amlodipine and Furosemide with no response and were changed to aldactazide. 2 infants received only Furosemide with no response. 5 of the remaining infants were started on aldactazide as a first line treatment to target hyperaldosteronism. All infants responded within 48 hours of treatment with aldactazide. All 10 infants developed mild hyponatremia which required sodium chloride supplementation until aldactazide was discontinued. Hypertension was transient lasting from 3 months till 16 months post term and medications were discontinued with normal blood pressures.

Conclusion Transient hyperaldosteronism is one of the possible causes for hypertension in preterm infants. Our case series demonstrates association preterm of NH with elevated aldosterone and low rennin without any other apparent cause for the hypertension. All infants responded to aldactazide, an aldosterone antagonist containing medication.

G21

LONG-TERM OUTCOME OF PNEUMOCOCCAL HAEMOLYTIC URAEMIC SYNDROME

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Aims Haemolytic uraemic syndrome [HUS] is defined by microangiopathic haemolytic anaemia [MAHA], thrombocytopaenia and oliguria/elevated creatinine for age clinically manifesting from endothelial cell injury and microvascular thrombosis. Occurring as a rare complication of pneumococcal infection, P-HUS accounts for 5%–15% of HUS cases in young children and is characterised by a more severe disease course compared to Shiga-toxin associated HUS.¹ We determined the long-term renal outcome of P-HUS¹ and serotype profile of P-HUS following the introduction of the pneumococcal conjugate vaccines (PCV7 and PCV13) in the UK.

Methods A case note review of P-HUS was undertaken in 5 participating UK centres. P-HUS was defined as reported¹ and cases were included if followed for at least 5 years' duration.

Data pertaining to duration of dialysis at presentation, duration of follow up, estimated GFR at follow up, proteinuria, blood pressure percentile, dialysis requirement and transplantation was collected. Additional information pertaining to mortality and co-morbidities were also collected. Information on pneumococcal serotype in post 2007 cases [following PCV vaccine introduction in UK] was also collected. Research protocols were approved by regional governance teams.

Results Long-term outcome data was available for 16 of 38 patients who were previously reported¹. All patients presented with P-HUS between April 1999 and February 2010: Median age at presentation: 10 months (IQR:8,17), M:F 6:10, (0.6). Median duration of hospitalisation: 37 days (IQR:23,75 days). Median eGFR 54 mls/min/1.73 m² (IQR:25,81) with median duration of follow-up: 10 years (IQR: 8,12). At time of follow up, none were on dialysis but three patients [18%] had received renal transplants without recurrence. Nine patients [56%] were on anti-hypertensive treatment at follow up, 7 of whom are on monotherapy [ACEI(5)] and 2 on dual therapy [ACEI with other]. Three patients had persistent proteinuria. Individual data will be presented. Following PCV7 introduction in 2010, the predominant serotype was 3 [previously 19A] and after PCV13 introduction, no cases of P-HUS have been observed since 2012.

Conclusion Over 60% of P-HUS patients under follow-up have chronic kidney disease. Ongoing analysis involving more UK centres is underway including those discharged from care.

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G22

AN OBSERVATIONAL STUDY OF CHANGE IN OXYGENATION INDEX (OI) AND PAO₂/FIO₂ (PF) RATIO FOLLOWING ADMINISTRATION OF METHYLPREDNISOLONE FOR PAEDIATRIC ACUTE RESPIRATORY DISTRESS SYNDROME (PARDS)

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Aims Indiscriminate corticosteroid use in pARDS is likely to be harmful, and the development of a randomised, controlled trial (RCT) may be difficult as corticosteroid exposure is very common.¹ The only existing RCT evidence is involving adult patients, and a recent meta-analysis is suggestive of benefit.² We have performed a retrospective observational study of serial OI and PF ratio measurements in a cohort of patients with pARDS and failure to wean from invasive mechanical ventilation at 7 days. All patients were treated with prolonged, low dose methylprednisolone.

Method All patients in a single, general PICU treated with methylprednisolone for pARDS between 01 st January 2011 and 31 st December 2016 were included. OI and PF ratio were calculated daily from admission until weaned from invasive mechanical ventilation.

Results 55 patients. Median age 10 months, 45% female. The majority had a respiratory infection as the trigger for pARDS and 95% had significant co-morbidity. Median duration of methylprednisolone therapy=11 days.

Median OI was highest on the day of commencement of methylprednisolone (20, IQR 15–30.5) and was significantly improved on day 4 of treatment ($p=0.0021$ Wilcoxon test).

Median PF ratio was lowest on the day of commencement of steroids (96.5, IQR 63–124) but not significantly improved on day 4 of treatment ($p=0.0529$ Wilcoxon test). Adverse effects observed included new infections in 40%, hypertension in 9% and hyperglycaemia in 13%. The frequency of these were not different between survivors and non-survivors ($p=0.284$, 0.644 and 0.1 respectively).

Survival to ICU discharge was 69%.

Conclusion This data is limited as it is single centre retrospective analysis. However, the appearance of a temporal association between an improvement in respiratory status and commencement of methylprednisolone is suggestive of a possibility of benefit and should therefore be explored further in an RCT, or a multi-centre, comparative effectiveness study.

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G23

WHAT IS THE IMPACT ON NURSING STAFF CARING FOR CHILDREN WHERE LEGAL JUDGEMENTS HAVE BEEN SOUGHT TO WITHDRAW LIFE-SUSTAINING THERAPY?

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Aims In recent years legal judgements have been sought more frequently seeking withdrawal of life-sustaining therapy (LST) for patients in paediatric intensive care units (PICUs). However, there is limited information regarding the impact these cases have on nursing staff. This research aims to explore the impact on staff caring for children where legal judgements have been sought to withdraw LST.

Methods Qualitative research was conducted using data collected from semi-structured interviews. A purposive sample was selected ensuring all participants have had experience caring for children in these circumstances. Exploratory research enabled detailed insight into the impact of these situations in addition to participant's experiences and perspectives.

Results Our findings have shown that the majority of participants feel caring for these children impacts negatively on their mood; this was commonly associated with beliefs that the nursing role actively contributes to prolongation of suffering. Managing relationships with the child's family has been found to be one of the most demanding aspects of caring for children when such judgements are sought. A number of complex components involved in the formation and maintenance of these relationships have been explored, all of which appear to result in significant additional stresses for the nursing staff involved. Further findings suggest that less experienced staff find it harder to dissociate themselves from the emotional aspects of these situations and as a result experience more psychological impact. Despite this, relatively little senior support is routinely offered; participants felt that this is due to the relative clinical stability of the children. Consequently, staff morale is perceived to be low when such children are on the unit.

Conclusion Our findings highlight numerous contributors that are involved in nursing staff being negatively impacted by