

conducted semi-structured telephone interviews with 14 parents focusing on the team's communication with the family and how this could be improved.

**Results** When reviewing patient notes, documentation of clinicians' discussions with families was poor. Only 20% of notes had evidence of these discussions taking place. This was in stark contrast with the feedback from families themselves, with 100% of parents feeling they were adequately updated throughout. It is assumed that the most senior clinician should update parents whereas the parental voice refutes this, with 80% preferring to have an update from a junior member to allow the most senior person to focus on their child. 75% of parents recall needing to have explanations repeated. 88% of parents remember overhearing words that frightened them. Where available, 60% of parents were grateful to other allied healthcare professionals who offered one-to-one support (e.g. play specialists).

#### Take-Home Messages

- Listening to parental voices allows teams to reflect on the true impact of their interaction with families
- Updates can come from any team member, not necessarily the most senior
- Documentation of communication is poorly done, not the communication itself
- Be prepared to re-explain things and re-check understanding
- Be sensitive to medical jargon and discussions that parents can overhear
- We recommend having dedicated teaching for play specialists and allied healthcare workers about the algorithms and the equipment used during emergencies, so they are able to explain to parents what is happening during stabilisation. Allied healthcare workers and play specialists should be involved in MDT in-situ simulation teaching
- Parents may forget the technicalities of what was said and the complexity of the situation – they remember how they felt and how they were made to feel

#### G223(P) AN EVALUATION OF A NEW WHEEZE PATHWAY

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**Background** Wheeze is common in the pre-school age group. Whilst clear guidelines exist for the management of children with bronchiolitis and asthma, there is debate regarding the best treatment plan for children with pre-school wheeze. Following a service evaluation in 2017, a new wheeze pathway was introduced. The pathway aims to provide clear guidance to healthcare professionals on the management of these patients by categorising severity, thereby reducing variation in practice and avoiding adverse outcomes.

**Aims** The primary outcomes for this study included length of admission in hours (length of stay, LOS), analysis of interventions given, and need for HDU-level care. A staff survey was taken to provide feedback on this pathway.

**Methods** Data collection occurred during September and October in 2017 and 2018. Data was collected retrospectively from the notes and charts of all patients aged 12–59 months who presented with wheeze (n=144 (2017), n=181 (2018)). Data analysis, including regression, was performed using SPSS.

**Results** The median LOS reduced from 10 hours in 2017 to 8 hours in 2018 (p=0.013). Nebuliser usage reduced from 58.3% to 23.8% (p<0.01). Back-to-back nebuliser usage was reduced by 27% (p<0.01). The number of children receiving HDU-level care was unchanged (8.3% 2017; 9.7% 2018). SpO<sub>2</sub> <92% on arrival was the only consistent predictor for the need for HDU-level care (p=0.004 2017, p=0.008 2018). Heart rate on presentation was weakly correlated with a longer LOS (R=0.276, p=0.003 in 2017, R=0.167, p=0.003 in 2018). Children from smoking households were associated with a longer LOS (Geometric mean LOS 12.25 hours (smoking), 8.77 hours (non-smoking), p<0.01). The staff survey indicated that most staff found the new pathway helpful and accessible.

**Conclusions** The new wheeze pathway had no negative impact on LOS or need for HDU-level care. It reduced the nebuliser usage in this group of patients with no adverse effect on outcomes. The only predictive factor at admission for need for HDU-level care was SpO<sub>2</sub> <92%, which puts a patient into the severe category on the pathway, supporting the classification system. Staff were encouraging about the pathway and presented suggestions for further improvements. The study highlighted the importance of standardised care, although more research is needed to ensure best practice for all patients.

#### G224(P) RECTAL BLEEDING PRESENTING TO THE PAEDIATRIC EMERGENCY DEPARTMENT

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**Aims** Bleeding per rectum is an alarming symptom for caregivers. The differentials are wide ranging from benign to life threatening. We conducted a literature review and were unable to identify any studies on undifferentiated paediatric patients presenting to the Paediatric Emergency Department (PED) with lower gastrointestinal bleeding in a UK population. We therefore aimed to explore the aetiology, diagnostic tools used and management options for infants, children and young people presenting to the PED with lower gastrointestinal bleeding.

**Methods** Retrospective case note review of all patients presenting to a tertiary PED within a two year period (April 2017 to March 2019) with bleeding per rectum was performed. Cases were identified by reviewing all presenting complaints including the words 'blood' or 'bleeding' for those including key words e.g. rectal, nappy, stool etc. Data was then collected using a standardised data collection form for the following variables; age, sex, diagnosis in PED, urgent intervention required, diagnosis on follow-up, diagnostic concordance between PED and follow-up diagnosis, investigation (stool, blood, imaging), admission, outpatient referral and reattendance during the study period.

**Results** A total of 90 cases were identified, 10 were excluded as they did not meet inclusion criteria (n = 80). This made up 0.14% of all presentations to the PED within the two year period. Median age was 5 years (3 months – 15 years) with 51% female and 49% male. Collectively constipation and gastroenteritis accounted for 76% of diagnoses. 24% of patients were admitted the same day and 38% referred for outpatient follow up. There was agreement between PED diagnosis and outpatient diagnosis in 87% of cases. 5% of cases required urgent intervention.

**Conclusion** Bleeding per rectum is an infrequent presentation to the PED. The most common diagnoses are benign and may be managed without need of invasive investigation, admission or outpatient follow up. A high index of suspicion remains necessary to identify infrequent but serious pathology.

#### G225(P) THE INCIDENCE AND OUTCOMES OF PNEUMOTHORAX IN NEONATES IN THE 21<sup>ST</sup> CENTURY

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**Introduction** A pneumothorax is most common in the neonatal period. There are many risk factors associated with its development including meconium aspiration syndrome, respiratory distress syndrome, pulmonary hypoplasia and mechanical ventilation (MV). Definitive management includes: expectant therapy, thoracentesis or insertion of a chest drain.

**Aims** To describe the incidence, aetiology and outcomes of pneumothorax in a tertiary neonatal unit to determine the risk factors with the most clinical relevance to prognosis.

**Methods** This study was a retrospective cross-sectional analysis of 9446 patients admitted to the NICU between August 2010 and December 2018, of which 178 met the inclusion criteria. There were 80,000 live births during this 8-year period. The data was taken from the Badger.net neonatal patient database, local electronic record and local radiology imaging archive. Analysis used Microsoft Excel and SPSS.

**Results** The incidence of pneumothorax was 2 per 1000 live births (0.22%) and 19 per 1000 NICU admissions (1.9%). The overall mortality was 20%. The median gestation was 37 +5 and the mean birth weight was 2475 g. Males accounted for 63% ( $p=1.43$ ) and females 37% ( $p=1.87$ ). Of the total, 61% had a unilateral right-sided pneumothorax while unilateral left-sided pneumothorax accounted for 11%. Birth weight was a significant risk factor for mortality ( $p=0.002$ , OR 0.998 CI 0.997–0.999). Of the 44% of neonates that had expectant management only, the mortality before discharge was 5%. Of the 56% that had a chest drain inserted, pre-discharge mortality was 33%. Of the term infants, 24 neonates received expectant management and had no MV prior to or after diagnosis. The survival rate in this group was 100% and the recurrence rate was 0%. Amongst preterm neonates, there was a 28% chance of recurrence compared to 10% in term infants.

**Conclusion** The overall pre-discharge mortality in the cases was 20% with preterm neonates being more likely to have a recurrent pneumothorax and a higher rate of mortality. As birth weight decreases, mortality increases. Term neonates without an acute requirement for respiratory support can often be safely managed with expectant therapy.

#### G226(P) IT WILL STICK LIKE GLUE: IMPROVING THE MANAGEMENT OF SIMPLE LACERATIONS IN A&E

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**Background** Lacerations are the 6th most common presentation to A&E in the UK. These vary from complex wounds requiring specialist review to those that can be repaired with steri-strips or glue. Most wounds are simple enough to be repaired by the nurse who first assessed the child. However, local practice in Children's Emergency Area (CEA) has been for every wound to be reviewed by a doctor. Consequences include long waiting times and crowded waiting rooms.

**Aim** Decrease time spent in CEA by children with 'simple lacerations' to 90 minutes by September 2019.

**Methodology** PDSA Cycle 1: A Standard Operating Procedure (SOP), designed by our multi-disciplinary team, was implemented on 18th August 2019. This sets a standard management pathway for children presenting to CEA with lacerations, and allows a nurse-led-discharge for 'simple lacerations' which do not meet exclusion criteria.

Average encounter times (AET's) were recorded on a Run Chart for the first six children presenting to CEA with 'simple lacerations', each week between March–October 2019. Prior to implementation, only AET's for lacerations which could have been managed by nurses were included. After implementation, AET's reflect the first six patients managed by either nurses or doctors.

We compared AET's between 31st March–18th August prior to implementation, to AET's between 18th August–15th October after implementation.

PDSA Cycle 2: Senior CEA nursing staff provided teaching to improve confidence and adherence to the SOP.

**Results** The average AET prior to implementation was 192 minutes. After implementation, average AET reduced to 117 minutes.

Since implementation, 52% were managed by nurses, with an average AET of 80. In the same time period, average AET for those managed by doctors was 163

**Conclusion** Using the SOP resulted in significant improvement of overall AET's in CEA. AET's for nurse-led-discharges were lower than for doctor-led-discharges.

Lower AET's result in lesser exposure to pathogens in the waiting room and allow doctors more time with acutely unwell children. We hope the pathway could serve as a model for other CEAs across the UK.

With evidence that AET's are shorter for nurse-led-discharges, our next PDSA cycle will focus on increasing number managed by nurses. We will monitor balancing measures: returning patients, and patient satisfaction.

#### G227(P) LIQUID DETERGENT CAPSULES ARE THE COMMONEST CAUSE OF ACCIDENTAL POISONING IN CHILDREN LESS THAN 5 YEARS-OLD PRESENTING TO TWO UK EMERGENCY DEPARTMENTS

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**Aims** Despite a global campaign on the dangers presented by liquid detergent capsules (LDC) – which look like sweets to a toddler – young children continue to present to emergency departments with LDC ingestion. We aimed to determine how often LDCs, or 'liquid tabs', were the cause of children