Background Pneumothoraces are common in the neonatal period, and can cause significant morbidity, at times requiring extended respiratory support, invasive interventions and prolonged neonatal unit (NNU) care. Established risk factors include prematurity, positive pressure ventilation (PPV) and meconium aspiration. Due to a perceived increase in the number of pneumothoraces seen at our NNU, investigating their prevalence and associations was important to identify any modifiable risk factors.

Objectives This service evaluation aimed to determine the prevalence, clinical presentation, outcomes, and risk factors for pneumothorax in a Level 2 NNU.

Methods A single-centre retrospective case note analysis was undertaken, evaluating the care of all neonates with radiologically confirmed pneumothorax, born over a one-year period from October 2019 and managed in a Level 2 NNU.

Results Thirty-two neonates were eligible for inclusion. The prevalence of pneumothorax was 6 per 1000 live births (0.64%), and 31 per 1000 NNU admissions (3.09%). Most neonates were male (23/32), born over 37 weeks gestation (29/32) and with a birthweight of more than 3000g (26/32). Of note, the majority of these neonates were born at ³ 40 weeks gestational age (17/32). Thick meconium was documented at the delivery of 7/32. Pneumothoraces were predominantly unilateral (27/32), with tension pneumothorax in 2/32, and bilateral pneumothorax in 3/32. Twenty-one neonates required respiratory support using PPV within the first ten minutes of life. Reviews of the maternity resuscitaires were conducted, and out of 19 resuscitaires checked, 6 showed inappropriate pressure settings. Prior to diagnosis, a total of 30/32 neonates showed signs of respiratory distress, and 24 of them required respiratory support, including low-flow oxygen, CPAP, BiPAP or mechanical ventilation. The remaining 6 improved without intervention. Five neonates required chest drain insertion, and the rest were managed conservatively. Eighteen cases were diagnosed within the first 24 hours of life, and two cases on day two of life. The remaining 12 were reported on the chest X-ray, but the diagnosis was not documented in the clinical notes or on the BadgerNet neonatal patient records. The single neonatal death (1/32) was not attributed to the pneumothorax, but to hypoxic ischaemic encephalopathy.

Conclusions Our analysis showed a higher prevalence of pneumothorax in this cohort compared to data from similar studies, especially considering the large proportion of term neonates. An association of pneumothorax with respiratory support at birth was observed, which is a known risk factor. However, the outcomes were generally good, with the majority of cases being managed conservatively and overall low mortality. Our findings highlight the importance of checking pressure settings on the resuscitaire prior to use, and the need for thorough interpretation of chest X-rays with documentation of all findings. We recommend introducing a formal check-list to record pressure settings when the resuscitaire is checked by maternity staff prior to each delivery. Documented consultant X-ray reviews should be formalised on the NNU, for instance by using log-sheets for each patient. In the future, the acute use of chest ultrasound for the diagnosis of pneumothorax should be considered, with appropriate training provided for neonatal doctors.

British Society of Paediatric Endocrinology and Diabetes

1168 NOT BEING IN DKA ON ADMISSION AND NORMALISING BLOOD GLUCOSE VALUES FROM ONSET ARE KEY TO EXCELLENT HbA1c VALUES ONE YEAR AFTER DIAGNOSIS OF TYPE 1 DIABETES

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Background NICE guidance recommends paediatric patients with Type 1 Diabetes Mellitus (T1DM) should achieve a HbA1c target level of 48mmol/mol (6.5%) or lower.

Objectives We therefore wanted to investigate potential factors that led to an optimal HbA1c one year after diagnosis in paediatric patients.

Methods We did a case review of paediatric patients newly diagnosed with T1DM from 01/01/17 to 31/12/20 who are managed by the paediatric diabetes team at Doncaster Royal Infirmary. Factors we looked at included initial presentation (DKA or no DKA), gender, index of multiple deprivation, family structure and average glucose control at week 1,2,3, and one month. We compared these factors with HbA1c at 1 one year to establish any patterns associated with better control, as dictated by HbA1c <48 mmol/mol (6.5%).

Results 49 newly diagnosed T1DM patient were identified. 37.5% (18 patients) presented with diabetic ketoacidosis (DKA) at diagnosis. 88.9% of children who presented with DKA at diagnosis had a HbA1C >48mmol/mol one year after diagnosis. There was also a positive correlation between lower average blood glucose values one week and two weeks after diagnosis with lower HbA1c values at one year. No associations with age at diagnosis, index of multiple deprivation decile, and two parent households were found.

Conclusions Evidence from this case review shows that identifying diabetes early (thereby preventing development of DKA) and achieving target bloods glucose values from the outset of diagnosis can lead to an optimal HbA1C (48mmol/mol or lower) one year after diagnosis. More awareness needs to be created among primary care and paediatric teams in recognising symptoms of diabetes and the importance of normalising blood glucose values early.

Quality Improvement and Patient Safety

1169 SATISFACTION IN TELEPHONE CONSULTATION IN THE HULL ROYAL INFIRMARY, PAEDIATRIC DEPARTMENT DURING COVID-19 LOCKDOWN; A SURVEY STUDY

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Background During the national lockdown due to COVID-19 pandemic, the majority of out-patient Paediatric face-to-face appointments in Hull Royal Infirmary had been cancelled. Telephone consultation was introduced as a replacement.

Objectives To evaluate the parental and clinician's level of satisfaction in telephone consultation that has taken place during the lockdown period.

Methods Telephone survey was conducted on all out-patient telephone consultation in our Paediatric Department from 14th April to 29th May 2020. The Telephone survey was anonymous. It was conducted by 2 clinicians retrospectively between June and July 2020. The Telephone Survey consisted of 14 questions, which are mixtures of ratings on a 5-point Likert Scale, Yes/No questions and open suggestions. Simultaneously, an anonymous online survey was sent to our clinicians conducting the consultations to evaluate their level of satisfaction.

Results 144 Patients met our inclusion criteria and their parents were contacted by phone. We eventually contacted 100 patients. Over half (71%- 97%) declared that they 'Strongly agree' or 'Agree' regarding 'Consultation experience', 'Communication and Information', 'Technical Quality', 'Efficiency, 'Convenience' and 'Prescription system'. 27 clinicians responded to the on-line survey. The clinician level of satisfaction had been mixed. Although most our clinicians were willing continue with telephone consultation, over half of our clinicians (60%) had disagreed that the clinical assessment via telephone consultation had been adequate.

Conclusions This pilot study provided evidence of satisfaction with telephone consultation in a Paediatric Department of a large UK Teaching Hospital. Additionally, other comments and suggestions from parents and clinicians were a valuable source of feedback that should be considered in future service development.

Paediatric Educators' Special Interest Group

1171

REMOTE 360 VIRTUAL SIMULATION- CAN YOU 'DO SIM' COMPLETELY ONLINE?

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Background Simulation is resource heavy in terms of time, space, equipment, and faculty, with limitations on the number of people you can deliver each session to. During the COVID-19 pandemic, social distancing makes face to face simulation more challenging.

After working with a local healthcare VR team through a return to training project¹, we explored benefits and acceptability of remotely debriefing 360° videos of simulated paediatric emergencies. Remote debrief has been used successfully in the past to train teams² and faculty³. However, its use in the context of 360 content is still novel. The theory being that because the participant is an 'active observer' this would bring a more immersive experience.

Objectives We were keen to assess whether this novel method of experiencing simulation teaching was engaging, immersive and safe.

Methods Using 360° content filmed at Royal Devon and Exeter hospitals, we ran a remote virtual simulation session over MS Teams video conferencing platform in local and regional paediatric teaching sessions.

After a quick but vital pre-brief we asked the learners to watch a pre-filmed scenario (www.youtube.com/watch?v=1SqvH6TA_Kw).

We guided them to interact with the video, directing their view in the 360° media to whatever interested them. This was followed by a debrief using a modified 'standard' simulation debrief structure.

We collected feedback on its acceptability and similarity to face to face simulation.

Results Between April 2020- March 2020. 9 Sessions around 130 learners, 60 gave feedback. Sessions were embedded in local, regional (South west) and international (Wales) teaching.

Group sizes ranged from 6 to 40 learners. Levels ranged from medical students, foundation doctors, trainees and Paediatric consultants. Sessions were accessed on phones or computers at work or home.

Feedback was globally positive 100% 'would do it again'.

Qualitative feedback was rich and promising:

- 'more life-like than expected'
- 'safer than real sim as I didn't feel judged'
- '360 element meant you had a different perspective'.

Interestingly for some sessions we had more senior grade learners than our usual simulation sessions – this directed debriefs towards the non-technical learning which was discussed more than the medical learning.

The debrief often led to learners sharing stories of clinical encounters and it did not seem to matter that they did not actively participate in the simulation.

Additional positives include:

- Easy accessibility for anyone to view 360 video (no need beyond normal consumer technology).
- No need for additional faculty or manikins.
- Relatively quick and engaging to run remotely.
- Larger groups can be engage (and fit in a room) than standard simulation.

After presenting this work in 2020, other hospitals have taken our pre-made scenarios and have used them for their own virtual sessions.

Conclusions We recommend remote 360 sim with debrief as a fantastic adjunct to standard simulation. The modality is low cost, well received and a safe method of providing people with an experience of emergency scenarios. This is enhanced though a supportive debrief.

The experiences have helped establish some 'best practices' for this evolving modality, which we are keen to share.

British Association of General Paediatrics

1172

UMBILICAL GRANULOMAS: A PINCH OF SALT DRIES IT UP

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Background An umbilical granuloma is an overgrowth of tissue that usually occurs when the umbilical stump has fallen off. It occurs commonly in the neonatal period usually after Day 15 of life. Parents usually describe a fleshy mass and persistent cumbersome discharge from the umbilical area. The potential risk of omphalitis and necrotizing fasciitis means that it is important umbilical granulomas are identified and treated