had suspected mitochondrial disease based on phenotype alone. 12 had a gastrosomy in situ, 3 had a nasogastric tube in situ, 10 were receiving oral supplementation. Reasons for supplementary feeding via gastrostomy or nasogastric tube included growth faltering (73.3%) and unsafe swallow (26.7%). Those children with complex neurodisability were more likely to require nasogastric tube or gastrostomy feeding. 

**Conclusion** Children affected by mitochondrial disease have increased metabolic requirements and consideration for supplementary feeding should be made early in order to support growth and development, and enhance quality of life.

### British Association of General Paediatrics

**1377** **CHANGING PATTERNS IN PAEDIATRIC ATTENDANCES DURING THE COVID-19 PANDEMIC**

Sarah O’Loughlin, Suzan Sharaf, Nick van der Spek. Cavan General Hospital

10.1136/archdischild-2021-rpch.600

**Background** The WHO declared COVID-19 a pandemic on 11 March 2020. Irish schools closed on 12 March and a nationwide stay-at-home order was issued on 27 March. A 34–76% decrease in paediatric ED presentations has been reported during the pandemic.

**Objectives** This study aims to assess the impact of the pandemic on attendances and admissions to a regional paediatric unit.

**Methods** A single-centre retrospective review of presentations to the paediatric assessment unit (PAU) and admissions to the paediatric ward from April-July 2019 and 2020 was performed. Data was obtained from the PAU attendance diary and HIPE reporting database. Unscheduled PAU attendances included GP/self-referrals with medical or surgical complaints, excluding injuries. Data was analysed using descriptive statistics.

**Results** There was a 40% decrease in unscheduled PAU presentations in April-July 2020 (n=747) compared with 2019 (n=1244). The most common presenting complaints in 2020 were gastrointestinal symptoms (33.2%), rashes (12.2%), unwell child <1 year including pyrexia (7.4%) and respiratory symptoms (7%).

There was a 67.2% decrease in admissions in April-July 2020 (n=170) compared with 2019 (n=519). Discharge diagnoses were categorised for admitted patients in May-July 2019 and 2020. There was a reduction in most categories in 2020 including dermatological (−80.7%), respiratory (−80%), cardiovascular (−75%), neurological (−62.2%), gastrointestinal (−61.3%), surgical (−60%), musculoskeletal (−57.1%), injury & poisoning (−45.2%) and mental health/safeguarding (−33.3%) cases. There was an 11.1% increase in genitourinary cases in 2020.

**Conclusions** The COVID-19 pandemic has resulted in a drastic decrease in paediatric clinical activity. Not surprisingly, we have seen a reduction in presentations relating to viral transmission (wheeze, gastroenteritis, rashes) and school-related stress (headaches, abdominal pain). Despite the anticipated negative effects of the pandemic on mental health, psychiatric admissions did not increase. The number of surgical cases, comprised largely of acute appendicitis, was 60% lower during the pandemic, supporting the possibility of a viral trigger. Other factors which may have influenced presentations include greater parental supervision at home, fear of contracting or spreading COVID-19, reduced outdoor/sporting activities and reduced vehicular pollution.

Whilst SARS-CoV-2 infections in children have been relatively mild, the pandemic has had a profound impact on paediatric services. Reflecting on these shifts may provide insight into the aetiology of paediatric diseases, the factors influencing a parent’s decision to present to hospital, the factors influencing a clinician’s decision to admit patients and the effect of the pandemic on the health of children in general.

### Association of Paediatric Emergency Medicine

**1378** **A RETROSPECTIVE STUDY OF MRI BRAIN FOR HEADACHES IN THE ABSENCE OF ‘RED FLAGS’ SIGNS AND SYMPTOMS FOR SPACE OCCUPYING LESIONS**

1Daniel O’Reilly, 2Nandini Kandamany, 3Tracey McCrudden. 1Rotunda Hospital; 2Childrens Health Ireland at Temple Street; 3Childrens Health Ireland at Temple Street

10.1136/archdischild-2021-rpch.601

**Background** Headaches are a common and concerning symptom that frequently presents to the paediatric emergency department. While the vast majority of these headaches represent benign processes (viral headaches, migraine headache and sinus headaches), there is considerable worry from both parents and emergency department practitioners that they may represent a sinister malignant process or space occupying lesion.

Headsmart, the UK brain tumour charity, have published guidelines on which children should be imaged in the context of headaches that may represent a brain tumour.

**Objectives** To examine the yield of non-urgent MRI brain requested in Childrens health Ireland at Temple Street emergency department (CHI @TS ED), a tertiary paediatric centre with national paediatric neurosurgery service on site. Specifically we wished to examine how many MRI brains without red flags as set out in the gold standard clinical guidance on the topic (Joint Headsmart-RCPCH guidelines) demonstrated a significant intracranial abnormality (such as Space Occupying lesion/Brain tumour).

**Methods** MRI Brain scans ordered from CHI @TS ED were examined from May 2017-May 2019. Included studies were performed for the primary presenting complaint of ‘Headache’. Studies that were for a primary presenting complaint in the absence of headache were not included (i.e seizures, gait disturbance, eye movement problems, vomiting). Additionally cases which had demonstrated an abnormality prior on CT were also excluded. Case notes were reviewed retrospectively and symptoms compared to the joint RCPCH-Headsmart guidelines.

**Results** 93 studies were included, 30 studies had any radiological findings. 53% demonstrated sinustitis (n=16). 3 (3.03%) scans demonstrated an intracranial mass (2 posterior fossa, 1 middle fossa tumour). All 3 of these met joint RCPCH-Headsmart guidelines for scanning for suspicion of intracranial mass clinically. The remaining studies showed Chiari/Tonsillar herniation (n=1), and other incidental findings (such as T2 hyperintensity) (n=12) In total 38 studies met headsmart criteria for scanning (39.7% of total included studies, 29.4% of
total MRI brains ordered from the department). The included studies made up ~44% of total MRI ordering for the department and 73.8% of MRI brains ordered in total.

Conclusions No studies performed in the absence of meeting RCPCH-Headsmart guidelines were found to have a space-occupying lesion indicating that these guidelines represent a sensitive decision support tool for intracranial mass albeit with low specificity. Given the limited availability of MRI brain in most departments use of this modality should be reserved for children who meet these criteria.

REFERENCES

British Association of Perinatal Medicine and Neonatal Society

EXPLORING THE ROLE OF BREAST MILK FORTIFIER IN NEONATAL OUTCOMES IN PRETERM NEONATES, A 10 YEAR RETROSPECTIVE AUDIT
Kate Jordan, Laura De Rooy, Anay Kulikarni. St George’s University Hospital NHS Foundation Trust
10.1136/archdischild-2021-rpch.602

Background Breast milk fortifier (BMF) helps maintain adequate nutrition in preterm infants, which is crucial for their physical and neurodevelopmental outcomes. However, conflicting reports have linked BMF with the development of necrotising enterocolitis (NEC), a devastating condition with high morbidity and mortality among neonates.

Objectives We undertook a ten-year retrospective analysis in our tertiary Neonatal Unit (NNU) in London, United Kingdom (UK) to evaluate the association of BMF use in preterm infants with various neonatal outcomes. We primarily examined if BMF use is associated with the development of NEC, as well as with the development of the more high-mortality group of patients who develop surgical NEC. We also examined if there is an association between BMF use and all-cause mortality.

Methods The audit cohort included babies inborn at St George’s Hospital, London, UK, between gestational ages 23+0 and 31+6 weeks, admitted to the NNU from January 2010 – 2020, who had been discharged or were deceased (N=952).

Data was collected from the electronic neonatal database system (Badgernet UK). BMF use and NEC were confirmed from clinical notes and NEC was stratified by severity; those with NEC, Bell’s stage II and above were included.

Statistical analysis: odds ratios and risk ratios were calculated with corresponding confidence intervals and number needed to treat (where applicable). Subgroups for analysis included all gestational ages, and those with gestational ages between 23+0 – 25+6 weeks, 26+0 – 28+6 weeks, and 29+0 – 31+6 weeks.

Results This audit established that BMF has been increasingly used in preterm infants from 2010 – 2020 (10.5% of preterm infants on the NNU in 2010 received BMF, compared to 45.8% in 2020). Contrastingly, NEC rates on the NNU have remained stable across the 10 year audit timeframe (6.3% from 2010 – 2014; 5.8% from 2015 to 2019).

Use of BMF did not increase the odds or risk of developing NEC (OR 0.62, CI 0.30 to 1.29; RR 0.64, CI 0.32 to 1.28). BMF use in preterm infants was associated with a reduced risk of developing surgical/severe NEC (RR 0.24, CI 0.06 to 0.99, P 0.05, NNT (benefit) 18.04 – 344).

Furthermore, BMF did not lead to an increased risk of all-cause mortality in preterm infants across the ten year audit (RR 0.31, CI 0.15 to 0.63, P 0.001, NNT (Benefit) 7.95 – 27.42).

Extremely premature infants, born <26 weeks gestation, had less risk of developing NEC if on BMF (RR 0.36, CI 0.15 to 0.63, P 0.001, NNT (Benefit) 7.95 – 27.42).

RCPCH Trainees Committee

LEAP INTO LEADERSHIP! SUPPORTING TRAINEES WITH THE TRANSITION TO WORKING AS A PAEDIATRIC REGISTRAR
Shona LC Brothwell, Laura Duthie, Isobel Fullwood, Sean Monaghan, Hannah Cooper, Davina Kenyon-Blair, Emily Botcher, Laura Kelly, Sebastian Brown, Matthew Cassey, Penny Broggio. West Midlands School of Paediatrics
10.1136/archdischild-2021-rpch.603

Background Stepping up to the role of Paediatric Registrar is a juncture that many trainees find daunting; adequate support is essential to ensure a smooth transition. Working effectively as a new Registrar requires a range of non-technical skills in addition to clinical knowledge and skills. Some of these important non-technical skills are not covered during regional or departmental teaching, nor routinely addressed during Supervised Learning Events or Supervisor meetings.

Objectives Keen to improve the trainee experience of transition, and to level the playing field for trainees who do not have access to informal sources of information and support, we created the ‘LEAP into Leadership! ST3–4 Transition Day’, broadly covering Leadership skills, Educational tips, Acute assessment tips, and Personal/team wellbeing (LEAP).

Methods Trainees who were stepping up to work as Paediatric Registrars at any point over the following 12 months were invited; 23 trainees attended the day, which was delivered in August 2020 via Zoom. The impact of the Transition day was evaluated using pre- and post-course surveys.

Results Pre-course survey results indicated that 65% (n=15) of trainees thought Level 1 training had prepared them for the transition. However, 100% (n=23) of trainees reported feeling anxious, and 47% (n=11) did not feel confident about the transition. We enquired about previous teaching on pertinent topics; the percentage of trainees reporting that they had received teaching on each topic was as follows: effective handover: 53% (n=9 out of 17 responses), safety-netting: 24%