day, and where a referral was delayed, it took an average of 5.4 days to complete.

The most common reason to refer to safeguarding was for intoxication, drug use and intentional overdose (35%), followed by physical abuse/assault (26%). 2 referrals were felt to have been missed, both were 16 years old, female, and secondary to an eating disorder and self-harm, respectively.

CAMHS 18% of patients (n=12) were referred to CAMHS, of which 66% were female, and 75% were 16 years old. Intentional overdose was the largest group of CAMHS referrals (33%). 2 referrals to CAMHS were missed – one had anxiety; one had an eating disorder.

Psychosocial history Only 4% of patients (n=3) had what was felt to be a full psychosocial history documented in their ED clerking. Those that did were all 16 years old and female. Two of these presented with an intentional overdose and one with assault. Two of these were performed by A&E doctors, and one was by a paediatrician working in adult ED. All patients had some form of psychosocial history documented, but often incomplete, usually only mentioning smoking or alcohol.

Conclusions A huge number of safeguarding referrals were required during this month of lockdown in the 2020 pandemic, adding to the ongoing evidence that the pandemic negatively impacted adolescents.

Thorough psychosocial histories should be routine to best identify safeguarding or mental health concerns.

British Society of Paediatric Gastroenterology, Hepatology and Nutrition

829 A SINGLE CENTRE STUDY INTO THE ADHERENCE IN DIAGNOSING COELIAC DISEASE IN CHILDREN

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Background Celiac disease (CD) is an immune-mediated systemic disorder elicited by the ingestion of gluten. The European Society for Paediatric Gastroenterology, Hepatology and Nutrition (ESPGHAN) guidelines published in 2012 suggested a no-biopsy pathway (NBP) for symptomatic children with IgA Tissue Transglutaminase (TGA-IgA) >10x Upper Limit of Normal (ULN). Biopsy confirmation remained mandatory for other cases.

Objectives This retrospective case note study was aimed at evaluating the adherence to the ESPGHAN 2012 guidelines for diagnosing CD in our unit.

Methods Forty-three cases with positive TGA-IgA were identified by a laboratory database search from January 2013 to December 2019. Six of 43 patients were not referred for a confirmation of CD diagnosis. Data was collected on the diagnostic pathways followed, and appropriateness of adherence was compared with the existing ESPGHAN guidelines.

Results 37 cases were included with 35 children diagnosed with CD. 29/35 (83%) were diagnosed via the NBP; 15/29 (52%) children did not meet all the criteria required for NBP, but were diagnosed and managed as having CD. 20/35 (57%)

children were diagnosed with CD in adherence to the 2012 guidelines.

Conclusions The recommended diagnostic guidelines were frequently not implemented; adherence to the guidelines may improve following regular educational sessions. The revised 2020 ESPGHAN guidelines which exclude HLA-DQ2/DQ8 testing would address the issue of diagnosis for the 10/15 NBP cases (with TGA-IgA >10xULN) in our study who did not have HLA testing and were therefore non-adherent to the 2012 diagnostic guidelines. NBP, with the reduced need for endoscopy may be beneficial in resource limited settings.

British Association of Perinatal Medicine and Neonatal Society

831 USE OF A NEONATAL SEPSIS RISK CALCULATOR REDUCES ANTIBIOTIC USE AND HOSPITAL ADMISSION LENGTH: IMPLEMENTATION OF A DGH PILOT PROGRAMME DURING THE COVID-19 ERA

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Background Early onset sepsis (EOS), defined as the presence of bacteraemia or bacterial meningitis in a neonate within 72 hours of birth, is still a significant cause of neonatal mortality and morbidity. The National Institute for Health and Care Excellence (NICE) guidance is the gold standard for evaluating the risk of EOS. However, there are concerns regarding the high volume of preemptive antibiotic use.

The Kaiser Permanente (KP) Sepsis Risk Calculator (SRC) is a tool that generates a risk score based on multiple variables including both maternal risk factors and clinical presentation of the baby at birth.

A pilot program introducing use of the SRC over NICE guidance to guide the use of antibiotics in infants of ≥ 34 weeks' gestation on the postnatal ward (PNW). It was implemented in our level 2 neonatal unit from 6th April to 5th June 2020, coinciding with the initial peak of the Covid-19 pandemic in the UK.

Objectives To evaluate the:

1. Impact of new protocol on clinical outcomes
2. Rate of 'missed cases' of sepsis in our cohort

Methods Retrospective cohort study comparing infants ≥ 34 weeks of gestation admitted to the PNW pre- and post-SRC implementation. Primary outcome was number of infants who received antibiotics for suspected EOS. Secondary outcomes were duration of initial hospital admission and safety. Safety was assessed by the number of 'missed cases' – defined as infants who required antibiotics >24 hours and ≤ 7 days of age for EOS (defined as positive culture OR negative culture treated with 5 days of intravenous antibiotics) and either death, admission to the neonatal unit during the initial hospital episode, continuing treatment on the PNW or re-admission following initial discharge. Incidence of 'missed' cases was monitored for an additional period (September-December 2020).

Results In June-July 2019 (pre SRC pilot), there were 750 live births ≥ 34 weeks gestation and 104 babies ≥ 34 weeks admitted to the postnatal ward who received antibiotics (13.9%). In April-May 2020 (post SRC introduction), there were 698 live births ≥ 34 weeks gestation and six postnatal babies ≥ 34 weeks received antibiotics (0.9%; risk reduction 87%). In the post SRC cohort, 46 babies would have received antibiotics under NICE guidance but were not preemptively treated for sepsis following SRC. There were no missed cases and average length of stay decreased from 3.3 days to 2.2 days post SRC implementation. Additionally, 73 babies born between September-November 2020 underwent KP SRC. There was one missed case but the blood culture was negative.

Conclusions The marked reduction of antibiotic use led to shorter average initial hospital stay and this was particularly important in the post-SRC group for mothers who were without their birthing partner due to the Covid-19 visiting restrictions.

Our department continues to use the SRC to guide preemptive antibiotic use in infants born ≥ 34 weeks and admitted to the postnatal ward. Safety outcome monitoring continues and we are participating in a pan-London EOS observational study which aims to be sufficiently powered to assess safety comparison data between SRC and NICE guidance.

Paediatric Special Interest Group: British Society of Haematology

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IMPORTANCE OF IDENTIFYING ASTHMA IN PAEDIATRIC SICKLE CELL PATIENTS TO PREVENT ACUTE CHEST SYNDROME AND OTHER SICKLE RELATED MORBIDITIES

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Background Asthma and Sickle Cell Disease (SCD) both trigger airway inflammation, and the interplay of these two conditions when present together, as well as their relationship with acute chest syndrome (ACS), have been a matter of increasing scientific interest.

Objectives We investigated the clinical and laboratory characteristics of our paediatric sickle cell patients with asthma and compared them to the non-asthma group.

Methods Retrospective review of electronic patient records from the departmental sickle cell database and laboratory results.

Results The prevalence of asthma in our paediatric sickle cell cohort was 10.8%, which is comparable to other studies. The incidence of ACS in the group of patients with asthma was 64.3% which is significantly higher compared to the 28.4% in non-asthma group, [RR 3.7 (1.3, 10.5)]. Reversely, the prevalence of asthma appeared to be higher in children with history of ACS [RR 2.25 (1.4, 3.6)]. The asthma group also had higher incidence of vaso-occlusive crises requiring hospital attendance (71%) compared to the non-asthma group (51%). The laboratory and clinical characteristics of sickle cell patients with and without asthma are summarized in table 1. There was no significant difference in the mean Haemoglobin, LDH and Vitamin D levels between the asthma and the non-asthma group, but the mean eosinophil count was significantly higher

Abstract 833 Table 1

	Asthma group (n=14)	Non-asthma group (n=116)
Demographics		
Gender (% Female)	29%	53%
Mean Age, years	11.6	9.2
Genotype		
HbSS	71.4%	69%
HbSC	14.3%	26.7%
HbS/beta thalassaemia	14.3%	4.3%
Treatments		
Hydroxycarbamide treatment	21.4%	31%
Transfusion Programme	0%	5%
Clinical Characteristics		
ACS (% yes)	64.3%	28.4%
Painful episodes (% yes)	71%	51%
OSA (% yes)	42.9%	6%
Atopy (% yes)	57.1%	7.8%
Laboratory parameters		
Mean Steady State Haemoglobin (95% CI), g/L	88.7 (80, 98)	93.7 (90, 97)
Mean LDH (95% CI), U/L	973 (675, 1272)	973 (896, 1052)
Mean Eosinophil count (95% CI), $10^9/L$	1.03 (0.57, 1.49)	0.35 (0.27, 0.43)
Mean Vitamin D levels (95% CI), nmol/L	56.1 (41, 72)	59.3 (54, 64)
Vitamin D sufficiency (%)	43%	51%

in the asthma group ($p=0.008$), as were the rates of obstructive sleep apnoea (OSA) and atopy ($p<0.001$). Vitamin D deficiency was highly prevalent across our entire SCD cohort; 57% of patients in the asthma group had suboptimal levels. Although all our asthma patients were prescribed regular preventer inhalers, issues with poor adherence were documented in 36% of cases.

Conclusions Children with SCD and asthma have increased morbidity when compared to non-asthmatic SCD children, including higher incidence of ACS and vaso-occlusive crisis. Clinicians can use the already available haematological indices (including eosinophil counts) and atopy-focused history as screening tools to identify cases that require further evaluation of asthma. Confidently diagnosing asthma, aided by spirometry, FeNO and IgE levels, initiating appropriate management with preventer therapy and actively addressing adherence issues, may reduce sickle related morbidities such as ACS. Finally, in light of the recently emerging evidence linking vitamin D and atopic diseases, we recommend regular monitoring and treatment of vitamin D deficiency in children with SCD and asthma.

Association of Paediatric Emergency Medicine

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COMPARISON OF PREVALENCE AND CHARACTERISTICS OF FRACTURES IN TERM AND PRETERM INFANTS IN THE FIRST 3 YEARS OF LIFE

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