COVID-19 exposure. Most patients were hypotensive at referral, and 67% needed transfer to PICU for inotropic support.

British Association of General Paediatrics

**1095 POPULATION BASED SCREENING METHODS IN BILIARY ATRESIA – A SYSTEMATIC REVIEW AND META-ANALYSIS**

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Background Biliary Atresia (BA) is the leading cause of new-born cholestasis and the foremost reason for liver cirrhosis and liver transplantation in the paediatric population. The clinical course of BA can be improved with a Kasai portoenterostomy; however, this is time sensitive and delays in BA detection and treatment, with poor native liver survival, have been reported across paediatric hepatology centres worldwide.

The nature and clinical course of BA indicates a need for effective new-born screening. There is a clear definition of the illness, improved clinical outcomes from early recognition and potential cost savings. However, there is no consensus on the most effective method of population-based screening for the condition.

**Objectives** We aimed to systematically review and meta-analyse the methods of population-based screening for BA.

**Methods** We searched 11 databases between January 1 1975 and January 4 2021, identifying 5377 relevant titles. Studies exploring the use of a population screening tool to identify BA were included. Outcomes included sensitivity and specificity in screening for BA, age and time to Kasai, associated morbidity and mortality, and overall cost-effectiveness of screening. All studies underwent independent review by 2 trained reviewers, who extracted study data and assessed the risk of bias using the Newcastle Ottawa tool.

**Results** Twenty-four studies were identified, that included 2697 BA infants. Five methods of population-based screening for BA were present (number of papers): stool colour charts (SCC) (12), conjugated bilirubin measurements (4), assessments of stool light saturation (2), measurements of urinary sulphated bile acids (2) and assessment of bile acids in blood spots (4).

In a meta-analysis, conjugated bilirubin measurements were the most sensitive and specific in detecting BA, with an average sensitivity and specificity of 100.0% and 99.2% respectively. This was followed by urinary sulphated bile acid measurements (100.0%, 99.5%), SCC (88.7%, 99.9%), stool colour saturations (100.0%, 90.1%) and bile acid blood spot measurements (80.3%, 83.7%). Across 5 studies, the use of SCC was observed to reduce the age of subsequent Kasai to approximately 60 days, compared to 36 days for conjugated bilirubin measurements. The use of SCC and conjugated bilirubin was associated with improved overall and transplant free survival. Finally, the use of SCC was considerably more cost-effective than conjugated bilirubin measurements.

**Conclusions** Both SCC and conjugated bilirubin measurements are the most researched methods of population-based BA screening. Conjugated bilirubin measurements have improved sensitivity and specificity in detecting BA. However, its use is expensive and considered invasive. SCC appear to not provide acceptable improvements in the age of Kasai. Further research into the practicality of conjugated bilirubin measurements, as well as alternative methods of population-based screening for BA, are required.

British Academy of Childhood Disability

**1096 MODERN ILLNESS OR A THING OF THE PAST? SURVEILLANCE STUDY OF CHILDHOOD/ADOLESCENT SYDENHAM’S CHOREA IN THE UK AND THE REPUBLIC OF IRELAND**

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Background Sydenham’s chorea (SC) is a neuropsychiatric condition largely affecting children and adolescents, associated with prior group A streptococcal infection. SC is characterised by purposeless, involuntary, non-stereotypical movements of the trunk or extremities (chorea), often associated with muscle weakness and emotional and behavioural symptoms. Symptoms may range from mild to severe and last for two years or more. Although SC is considered a ‘rare disease’, such paediatric conditions may in fact have greater impact on families, who may become more isolated, lack information and experience more diagnostic delays. To date there have been no prior UK prospective surveillance studies to capture current incidence or to study presentation, management or outcomes. Working with partners including the Sydenham’s Chorea Association, we designed a surveillance study to be carried out through the British Paediatric Surveillance Unit (BPSU).

**Objectives** Our main objective was to conduct the first prospective surveillance study of SC in the UK and ROI, and describe the current paediatric service-related incidence, presentation and management of SC in children and young people aged 0–16.

**Methods** Using standard BPSU surveillance methodology, clinicians notified the BPSU when they saw a case meeting our inclusion criteria (new case of suspected or confirmed SC in those aged 0–16). Clinicians were then contacted by the research team to complete a questionnaire on clinical presentation, investigation, management, and functional impairment. The case-reporting period lasted for 24 months from December 2018 to December 2020.

**Results** Over a 24 month period, 72 reports were made via BPSU, of which 40 were eligible cases of suspected or confirmed SC. The remainder were ineligible, duplicates, or did not have returned questionnaires from clinicians. The mean age of cases was 9 years, and 60% were female. The majority (65%) presented with ‘moderate’ severity of chorea. The most common neurological presenting features (apart from chorea) were loss of fine motor skills, gait disturbance, and dysarthria. Over 75% also presented with emotional and/or behavioural symptoms. Almost all cases had evidence of prior
strepトックal infection, and were prescribed courses of antibiotics of varying duration. Other treatments used included symptomatic treatment with anticonvulsants and neuroleptics. Approximately a quarter of cases (22%) received immunomodulatory treatment with steroids or immunoglobulins. Please note: as we are still pursuing the final responses these figures remain provisional.

Conclusions Whilst SC remains a rare condition, our findings confirm that it is not ‘a thing of the past’, and that clinicians across pediatrics and child psychiatry should remain aware of the presenting features. Clinical management appears variable, suggesting the potential to explore ‘best practice’ through consensus development and further research. In the next phase of this study we will also follow-up cases with their clinicians at 12 months and 24 months post notification, to study the course and outcomes of the condition. This will allow us to provide fuller information for families as well as to better define parameters for research.

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British Association of Child and Adolescent Public Health

1099 AN ANALYSIS OF STUNTING IN ENGLAND USING NATIONAL DATA FROM THE NATIONAL CHILD MEASUREMENT PROGRAMME

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Background Stunting, defined as height-for-age under 2 standard deviations below the population median, is an important indicator of child health. Stunting has been extensively researched in low- and middle-income countries, but less is known about the extent and burden in high income settings.

Objectives To map stunting prevalence in children aged 4–5 years in England between 2006 and 2019.

Methods We used data from the National Child Measurement Programme (NCMP) for the school years 2006/07 to 2018/19. All children attending state-maintained primary schools in England are invited to participate in the NCMP, which has an average response rate of 93%. We used spatial analyses in SatScan to assess geographic clustering of stunting. A total of 7,062,071 children aged 4–5 years were analysed, and a subsample of 5,765,707 children with valid ethnicity and area-level deprivation data were included in adjusted analyses.

Results The prevalence of stunting in England was 1.93% (95% confidence interval (95%CI) 1.92 to 1.94). Spatial analysis showed geographic heterogeneity in stunting, with high prevalence clusters more likely in the North and Midlands, leading to 4-fold variation between local authorities with highest and lowest stunting prevalence. Girls were more likely to be stunted than boys (2.09% (2.07 to 2.10) vs 1.77% (1.76 to 1.78), respectively). There was ethnic heterogeneity: stunting prevalence was lowest in Black children (0.64% (95%CI: 0.61 to 0.67)) and highest in Indian children (2.52% (2.45 to 2.60) and children in other ethnic categories (2.57%) (2.51 to 2.64)). Stunting was linearly associated with IMD, with almost 2-fold higher prevalence in the most deprived compared to least deprived decile (2.56% vs 1.38%; P<0.001). Stunting prevalence declined over time, from 2.03% (95% CI 2.01 to 2.05) in 2006–2010, to 1.82% (1.80 to 1.84) in 2016–2019. Stunting declined at all levels of area-deprivation, with faster declines in more deprived areas, but disparities by IMD quintile were persistent.

Conclusions There is a clear social gradient and substantial regional variation in stunting across England. Many children in the most deprived areas of the country may be failing to reach their full growth potential.

British Society of Paediatric Gastroenterology, Hepatology and Nutrition

1098 HOW USEFUL ARE DAILY REFEEDING BLOODS IN PAEDIATRIC PATIENTS WITH ANOREXIA NERVOSA?

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Background The National Institute for Health Care Excellence (NICE) have no specific guidance on managing refeeding syndrome in paediatric patients. Current recommendations are based on the 2012 Junior Management of Really Sick Patients with Anorexia Nervosa (MARSIPAN) report which recommended that, because of the risk of refeeding syndrome characterised by low serum phosphate (PO4) levels less than 0.5mmol/L, paediatric inpatients require daily blood tests during the first 5 days of admission.

Objectives To determine the utility of daily blood testing during the first 5 days of admission, and whether blood investigations could be minimised.

Methods A single centre retrospective case note review of patients admitted to the paediatric Community Eating Disorder Service (CEDS) for inpatient treatment of anorexia nervosa January 2018- August 2020. Patients identified through the first 5 days of admission, and whether blood investigations could be minimised.

Results There were 37 patients, all were female; ages ranging from 11–17 years old, weight ranging from 21.4 - 61.75Kg. Body Mass Index (BMI) on admission ranged from 11.6- 22.1 Kg/m², mean 16.56, median 16.4. The range of PO4 levels was 0.6–1.6 mmol/L. Mean PO4 levels were 1.22 on admission and 1.16, 1.22, 1.20, 1.19 over the remaining days. These were all within the reference range (0.8–1.5mmol/L).

Over the 5 days of testing, the mean and median values of all blood results remained within the reference ranges. No phosphate supplementation was given during the study period, and no medical intervention was needed.

Conclusions No patients had any biochemical indication of refeeding syndrome during the first 5 days of their in-patient treatment for anorexia nervosa. We propose that that there is limited utility in routine daily blood testing of all patients during the first 5 days of admission.