opportunities, including a refresher of the skills of effective bag-valve-mask ventilation, application of defibrillator pads and quality CPR. Reviewing emergency processes such as algorithms and protocols, highlighting situational awareness including bedspace preparation, role allocation and clinical decision-making is supported. Furthermore, expertise within the team encourages the staff to explore clinical conditions of patients, giving context to the disease process including support for modified approaches to resuscitation. Increased visibility in the clinical areas, has resulted in increased requests from staff for this training to develop their confidence, supporting the complex and progressive clinical needs of the child requiring a higher dependency.

Results

	Jan 2019-Dec 2019	Jan 2020-Dec 2020
Total 222 calls attended by Clinical Emergency Team	147	125
Cardiorespiratory arrests	13	10
Respiratory arrests	34	48
Unplanned admissions to Critical Care Units	158	168
Number of staff trained	-	384

Conclusions Aside from the earlier escalation and interventions, resulting in a decrease in 2222 calls overall and cardiorespiratory arrests, the positive impact of this additional bedside teaching has been very well received and praised by the staff in clinical areas, especially those caring for complex, high risk patients at the point of care and in context of the specific disease process.

British Society of Paediatric Endocrinology and Diabetes

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CONGENITAL HYPOTHYROIDISM WITH GLAND IN SITU: EXAMINING RISK FACTORS, HEALTH, AND EDUCATION OUTCOMES USING LINKED ADMINISTRATIVE DATA

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Background Since the introduction of newborn screening 40 years ago, the birth prevalence of Congenital Hypothyroidism (CH) has doubled in the UK. This appears to be due to an increase in screen-detected congenital hypothyroidism with gland in situ (CH-GIS). It is not clear why CH-GIS prevalence has increased, nor are there recent studies examining the health and education outcomes for children with CH-GIS.

Objectives Study objectives are to 1) establish a research-ready clinical CH database of children who screened positive for CH through the North Thames Newborn Screening Programme and were referred to the Endocrinology Team at Great Ormond Street Hospital (GOSH) from 2006

onwards; 2) investigate the reasons for the increase in screen detection of CH-GIS; 3) examine health and education outcomes for children with CH-GIS compared to children who have other forms of CH and to those who do not have CH-GIS.

Methods To address objective 1, we used REDCap (Research Electronic Data Capture) to collate data on children attending GOSH who had screened positive for CH; data had been stored in a number of repositories/formats: EPIC, Excel, Word and GOSH legacy databases. To address objective 2, we will establish a cohort study of children born in the North Thames region and screened for CH through the North Thames Newborn Screening Programme between 2000 and 2020 (~2.2 million children) to investigate perinatal risk factors for CH. These children will be linked to ONS birth and death registration data and to the CH database. To address objective 3, we will use a case-control design. All children on the CH database between 2006 and 2020 will be linked to Hospital Episode Statistics (HES), the National Pupil Database (NPD), and national community dispensing data. Controls will be selected from a pseudonymised national birth cohort created from linked HES-NPD data. We started the process of applying for ethical and Confidentiality Advisory Group (CAG) approval and negotiating with data providers (NHS Digital, GOSH, Department for Education and Public Health England) in May 2020. Public involvement activities have also been undertaken with parents and children/young people, including the British Thyroid Foundation and GOSH Young Persons' Advisory Group (YPAG).

Results The CH database contains 109 variables on 1928 children, with follow-up information on treatment and diagnoses until December 2020. We received ethical approval in November 2020, however negotiations with data providers and CAG are ongoing. As of early March 2021, it has taken 1 research associate 10 months working full-time to obtain these approvals and we expect it to take a further 6 months before the study is fully approved.

Conclusions We have demonstrated the utility of REDCap for developing a clinical database from which datasets for research can easily be extracted. The process of obtaining approvals for projects using linked administrative and health data in England continues to be complex and time consuming, leading to severe delays for data-focused research projects; this needs to be addressed in order to allow population-based research into rare diseases in children using linked clinical and administrative datasets.

Paediatric Critical Care Society

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RISING TO THE CHALLENGE OF COVID-19- HOW OUR PAEDIATRIC INTENSIVE CARE UNIT REFLECTED ON OUR EXPERIENCE CARING FOR ADULTS

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Background During the first wave of the COVID-19 pandemic our Paediatric Intensive Care Unit (PICU) was one of 7 in the UK to care for adults with COVID-19. This strategy allowed the hospital to expand its adult critical care capacity. Towards