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IMPACT OF SMOKE-FREE VEHICLE LEGISLATION ON CHILDHOOD HOSPITALISATIONS FOR ASTHMA: SCOTLAND-WIDE STUDY OF 32,342 HOSPITALISATIONS OVER 19 YEARS

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10.1136/archdischild-2021-rcpch.1

Background In Scotland, childhood asthma hospitalisations fell in March 2006 following legislation to prohibit smoking in public places, and again in March 2014 following a mass-media campaign (Take It Right Outside TIRO). In December 2016, new Scottish legislation banned smoking in vehicles. It is unknown if this produced additional benefit.

Objectives To use interrupted time series analysis to determine the presence of a change in trend for asthma admissions to hospital in Scotland after the 'car ban' smoking legislation was introduced.

Methods Data were obtained on all asthma emergency hospitalisations in Scotland between 2000 and 2018 for individuals aged <16 years. Interrupted time series analyses studied changes in monthly incidence following the introduction of smoke-free vehicle legislation, taking account of TIRO (2014) and the smoke free public spaces legislation (2006). Sub-group analyses were undertaken by age and area-deprivation, and the analyses repeated for a control condition, gastroenteritis.

Results Of the 32,342 hospitalisations, 13,954 related to children <5 years old. After the smoke-free vehicle legislation there was a fall in the slope of asthma hospitalisations (1.49%/month [95% CI 2.69, 0.27]) among children <5 years, but not older children. Hospitalisations fell significantly among children living in the most affluent areas (2.27%/month [95% CI 4.41, 0.07]) but not those living in the most deprived areas. There was no change in gastroenteritis hospitalisations following the legislation.

Conclusions Legislation banning smoking in vehicles was associated with reductions in severe asthma attacks requiring hospitalisations among pre-school children, over and above those already achieved through previous interventions. The legislation may have benefitted children in more affluent communities.

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CLINICAL FEATURES OF CHILDREN PRESENTING WITH PROLONGED SEIZURES – A DATA LINKAGE STUDY FROM A SCOTTISH POPULATION COHORT

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10.1136/archdischild-2021-rcpch.2

Background Prolonged seizures (PS) are a common paediatric medical emergency. According to the International League Against Epilepsy (ILAE) PS are now defined as any seizure activity lasting over 5 minutes or where there is incomplete recovery in-between seizures with the recommendation to administer emergency medication at this time point.

PS result when the excitatory and inhibitory signals within the brain become unbalanced, resulting in a vast release of

electrical signalling. The developing brain is particularly susceptible to this. Whilst in the short-term PS can result in acute morbidity and even fatality, in the long-term they often lead to seizure recurrence, epilepsy and cognitive as well as behavioural impairment.

Objectives Despite this, PS are not yet well correlated to clinical data. Here we aimed to study the correlation between PS, clinical features and investigation data including MRI reports, EEG data and treatment details.

Methods This study draws on an existing cohort of children who presented with PS to a tertiary children's hospital in Scotland between January 2011 and December 2017. We conducted data linkage using a unique identifier (CHI-number). These were used to link A+E admission data with seizure clinic records, the EEG database and radiology reports of MRI scans. Each episode and duration of prolonged seizure was recorded from the A+E admission notes. Neurology clinic records were used to identify children with a diagnosis of epilepsy and specific epilepsy syndromes. The prescription of any regular seizure medication was also noted from these clinic notes.

Results There were 665 children with 1,234 presentations with PS. 57.30% of children were male. The median age was 3.65 years (IQR 6.33). 60.45% of admissions had a diagnosis of epilepsy, 24.40% were diagnosed before the PS and 75.60% after. Of these 61.88% were generalised seizures and 38.12% focal seizures. 55.67% had an EEG of which 30.28% were normal, 40.47% were abnormal and specific to epilepsy diagnosis and 29.26% abnormal but non-specific. 61.35% had an MRI scan of which 49.80% were normal, 41.08% were abnormal and associated with epilepsy, 7.40% were abnormal and possibly related to epilepsy and 1.72% were unrelated abnormal. 35.01% of patients were prescribed maintenance AED of which 43.35% were on polytherapy; the commonest AED prescribed was levetiracetam.

Conclusions This large cohort allows a detailed analysis of the clinical features and aetiology of PS through data-linkage. Epilepsy diagnoses (previously known or subsequently diagnosed) are the commonest group with PS. Hence it is important to investigate children presenting with PS. In those investigated further, EEG and MRI abnormalities were specific to epilepsy. Of those prescribed AED, a large proportion were on polytherapy suggesting worse seizure control and PS. Overall, this serves as a valuable prognostic factor and aid in planning a clear emergency care plan for managing PS. We will be continuing to follow this cohort to study the clinical and educational outcomes.

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SWEET TALK-OUT OF HOURS DIABETES RELATED PHONE ADVICE SERVICE FOR CHILDREN AND YOUNG PERSONS-AN EDUCATIONAL AND A SERVICE IMPROVEMENT INITIATIVE

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10.1136/archdischild-2021-rcpch.3

Background Patients with Type 1 diabetes should have access to 24/7 specialist advice on diabetes related issues by trained health care professionals and consistent with nationally agreed guidance

Objectives

- To review the out of hours diabetes advice line for Children and Young People with diabetes over a 9 month period
- To analyse feedback from families regarding the quality of service
- To understand paediatric trainees' perspective, confidence and perception of training offered in this area.

Methods

- Recorded out of hours phone advice for Children and Young people with diabetes was reviewed over a 9 month period and results summarised.
- A survey of all paediatric trainees' level of confidence and perception of specific training offered with suggestions for future design of education package was undertaken
- A phone survey of 23 families was undertaken to seek their feedback and suggestions for improvement.
- A resource pack created within our health trust with frequently asked questions and scenarios was reviewed and further refined based on feedback

Results A total of 119 calls were recorded over a 9 month period. Average 13-calls/month. Week days= 68 calls (27 between 1700–2100 and 41 after 2100). Weekends and bank holidays= 49. 2 calls. Common issues - new diagnosis checking doses, help with correction, hypos, high sugars with or without ketones, vomiting, wrong insulin given, pump failure, technical issues. Advice offered by- F2, GPST, SD, ST1-8, Consultant

35 trainee surveys were returned with 80% from level 1& 2 trainees. 74% rated their personal confidence at giving advice as 3 or below (scale of 1–5). Trainees found 'pump troubleshooting' and 'ketone management' most challenging. 62% said they received no specific teaching on managing out of hours diabetes related phone queries and would welcome creation of a resource pack with frequently asked questions and scenarios. Additionally they asked to include further scenarios such as correcting hyperglycaemia in the middle of the night, threshold for admission and specific guidance on this.

13 families said they have used the service at least 5 times or more over the last 12 months. All families were satisfied by the quality of advice and felt reassured. The Health Care Professionals were perceived as confident and time efficient. 50% of the families were calling after having recently been diagnosed with type 1 diabetes and seeking reassurance on practice or checking if dose was appropriate.

The Trust 'out of hours diabetes advice line' standard operating procedure and scenario document was disseminated by email to all Children and Young Persons diabetes teams across the region through the Regional Diabetes Managed Clinical Network for comments. Responses were received from most trusts with helpful suggestions to create a consistent training package.

Conclusions Out of hours diabetes advice line was used at least 3 to 4 times per week by families with proportionately higher use over the weekend, most commonly for a new diagnosis in type 1 diabetes. Families offered positive feedback on the quality of telephone advice. Trainees would welcome training in this area. There is an appetite for a regional training package.

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KNOWLEDGE AND ATTITUDE OF THE HEALTHCARE STAFF TOWARDS EPILEPSY: EXPERIENCE FROM ONE CENTER IN THE UNITED ARAB EMIRATES

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10.1136/archdischild-2021-rcpch.4

Background Children with epilepsy along with their families often suffer from stigma and discrimination. Such stigma is mainly because of a lack of awareness and knowledge about this condition. Unfortunately, this negative attitude exists in the individuals with whom the affected person can come into contact on daily basis, such as school teachers or relatives. The impact of such stigma can be even more harmful than the disease itself, affecting the quality of life of the patients.

Objectives This study was conducted to assess the knowledge, awareness, and attitude towards epilepsy of the healthcare staff from one of the specialized hospitals in Dubai, United Arab Emirates

Methods An online survey was created using Google documents which consisted of seven sections. The first section included information about the responder's work area and designation. Sections 2 and 3 had questions assessing the basic knowledge and understanding about epileptic seizures and epilepsy; whereas sections 4 and 5 were targeted to understand the behaviour and attitude of the responder towards the person with epilepsy. The questionnaire was emailed to all the pediatric doctors and the nursing as well as administrative staff who were working in the emergency, outpatient, and inpatient settings. Out of the total 120 requests, 88 responses were collected (73%).

Results Except for three responders, all others had mentioned that they had either heard or read about epilepsy through more than one source. For the question- 'What causes epilepsy in children?', there were options like 'blood disorders' and 'stress or mental illness' in addition to the known etiological factors as per the 2017 ILAE classification of epilepsy. 14% of the responders thought that epilepsy is caused by some blood disorders; whereas 48% thought that stress or any mental disorder cause it.

Almost 94% of the responders knew that an epileptic seizure happens due to 'abnormal electrical activity in the brain'. However, only two-third knew what an 'aura' is. Nearly half of the responders (49%) were aware that some epilepsies can be dealt with or treated with surgical approaches. There was less awareness or acknowledgment of the other forms of seizures like autonomic or absence seizures.

A quarter of the responders thought that they could feel anxious while dealing any child with active seizures during their shift which included even the general practitioners (4%) and staff nurses (14%). Only 24% did not mind their children getting married to a person with epilepsy. 24% believed that anyone with epilepsy should not be employed with a job like nursing in any hospital and 80% believed that an affected person should never consume alcohol.

The majority of the responders felt that there is still some need of acquiring more education in the field of epilepsy.

Conclusions Our survey which was conducted in a single-center highlights the knowledge gap and issues with the attitude and behaviour among healthcare professionals towards the