P234 PAEDIATRIC AND EMERGENCY STAFF ADHERENCE TO DKA GUIDELINES IN A PERIPHERAL PAEDIATRIC CENTRE

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Background Cork University Hospital (CUH) is peripheral centre of paediatrics that provides a joint adult and paediatric emergency department service. Currently paediatric and emergency department staff use the 2009 BSPED Diabetic Keto-Acidosis (DKA) protocol. In light of upcoming new national DKA guidelines used by the Tertiary Paediatric centres, we aimed to see staff adherence to the current protocol in use.

Objectives To evaluate paediatric & ED staff adherence to this protocol through documentation of management. Our secondary objectives included analysis of patient demographics, severity of DKA, complications and length of stay.

Methods We retrospectively analysed all paediatric patients with T1DM presenting with DKA from January 2015 until July 2017. Patients were identified from Diabetes Nurse Specialist database. Data was recorded and comparison was made between initial treatment from emergency staff and subsequent review by paediatrics.

Results The total number of patients on the DKA protocol during the time period was 53 and, following exclusion criteria, 37 (69%) charts were analysed. Notable exclusions were 6 patients (11%) commenced on protocol despite not meeting criteria for DKA diagnosis.

The average age at presentation was 8.18 years, male to female ratio 2:3 and 81% (n=43) of presentations were new onset T1DM. A majority (56%) of presentations were of moderate severity.

Within management from ED staff, 28% (n=10) had no protocol documentation.

Only 8% (n=3) had the correct protocol documented and commenced. 31% (n=11) were seen by paediatric team directly. Paediatric staff incorrectly calculated protocol management plans in 65% (n=24) of cases.

Despite 55% of presentations in severe acidosis meeting protocol requirement for ICU involvement they were not reviewed by the ICU team and ward managed.

Conclusion Health care providers working in CUH adherence to BSPED 2009 guidelines protocol is poor. It is essential to implement the use of current DKA protocol in use for all DKA at presentation. Recognition of the definition is the starting point.

We recommend thorough emergency & paediatric staff education and implementation of a mandatory proforma for DKA presentations.

P235 THE PREVALENCE OF MICROALBUMINURIA IN CHILDREN WITH TYPE 2 DIABETES MELLITUS (T2DM)

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Background The prevalence of childhood-onset type 2 diabetes mellitus (T2DM) has increased globally, reflecting the pediatric epidemic of overweight and obesity. Children with T2DM have a higher prevalence of other comorbidities at diagnosis,

including obesity, elevated blood pressure, dyslipidemia, fatty liver disease and microalbuminuria, compared to youth with type 1 diabetes of a similar age.

Method A retrospective chart review of the last twenty five children with documented diagnosis of Type 2 diabetes was performed

Results Patients ranged in age from 8 to 15 years at diagnosis. The female:male ratio was 1.3:1. Sixty percent of patients were Hispanics. All BMIs were above 85th percentile for age and sex. Twelve percent of them had micro or macroalbuminuria at diagnosis (only 60% had persistent microalbuminuria after follow up) while only 5% had documented persistent hypertension.

Conclusion Screening for renal disease in children with T2DM should begin at diagnosis and annually thereafter. The best recommended test is a first-morning or random urine for albumin to creatinine ratio. Careful laboratory documentation of persistent albuminuria is critical since transient albuminuria can be caused by acute hyperglycemia at diagnosis. It is therefore important to demonstrate persistent albuminuria over a three- to six month period. Persistent albuminuria is defined as an elevated urine albumin to creatinine ratio in two of three urine samples taken over three to six months.

The diagnosis of T2DM in young children raises concern regarding the possibility of related comorbidities including renal involvement as a similar concern of adult presentation. Early diagnosis, monitoring and treatment of microalbuminuria can prevent the progression of renal disease in diabetes.

P236 PARENTS' EXPERIENCES OF HAVING A CHILD DIAGNOSED WITH TYPE 1 DIABETES: INITIAL IMPACT AND CHANGE OVER TIME

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Aims Treatment of type 1 diabetes in adolescence requires input from parents to support the completion of complex multi-component self-management tasks in order to achieve optimal glycaemic control and maintain adolescent health and well-being. This study explored parents' experiences of learning about their child's type 1 diabetes including their initial reactions to the diagnosis and changes in their perspectives over time, in addition to parents' views of negotiating self-management responsibilities with their adolescent children.

Methods Qualitative interviews were conducted with 32 parents (24 mothers, 8 fathers) of adolescents, aged 11 to 17 years, living with type 1 diabetes to explore parents' experiences of learning about their child's type 1 diabetes and negotiating self-management responsibilities with them. Parents were recruited through two national child and adolescent diabetes and endocrine clinics and online advertisement through a national diabetes advocacy organisation. Interviews were transcribed verbatim and thematically analysed.

Findings Parents discussed their initial reactions to their child's type 1 diabetes diagnosis (e.g. upset, shock, worry). Parents identified the sources of support which they relied on following their child's diagnosis, including ongoing support from the diabetes team at their child's hospital and

other supports in their communities (e.g. family, school, and other parents of children living with type 1 diabetes). Parents described the process of learning how to manage type 1 diabetes with many relying on the diabetes team as a source of information. Most parents noted that how they felt about their child's type 1 diabetes had changed over time; however many stated that being involved in their child's self-management of type 1 diabetes continued to have an impact of their own well-being.

Conclusions It is important that parents are supported as they deal with their own emotions in relation to their child's type 1 diabetes diagnosis. Understanding the impact of a type 1 diabetes diagnosis on parents may enable healthcare professionals to provide more effective support to parents as they come to terms with their child's diagnosis and learn to manage type 1 diabetes. Ensuring that parents are supported as their role in their child's type 1 diabetes management changes over time may subsequently impact the negotiation of self-management between parents and adolescents as adolescents take on increasing levels of responsibility.

P237 AN ASSESSMENT OF CONFIDENCE AND KNOWLEDGE REGARDING SELF-MANAGEMENT OF TYPE 1 DIABETES AMONGST ADOLESCENTS ATTENDING A DIABETES TRANSITION CLINIC

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Aims To collate the questionnaire responses of adolescents with Type 1 Diabetes Mellitus (T1DM) who attended a transition clinic between paediatric and adult diabetes care in University Hospital Limerick (UHL) and to analyse their confidence levels in specific parts of their diabetes management (hypoglycaemia, insulin dose adjustment, carbohydrate counting) and their knowledge levels around sexual health, alcohol safety, safe driving and smoking.

Results 100% of patients said their expectations of the clinic were met. 100% of patients felt that they had adequate information and education on the management of hypoglycaemia, high glucose and ketones. 14% felt they did not have adequate information on insulin dose adjustment and carbohydrate counting. When it came to adolescent specific topics, 100% of patients felt they had adequate information on the effects of alcohol and smoking on diabetes management, with 29% stating they did not have adequate knowledge on sexual health and safe driving education prior to this clinic. 86% of patients said that they felt 'more confident' about transitioning to adult diabetes care after attending this transition clinic.

Conclusion The transition from childhood to adulthood can be a difficult and turbulent period for any child, but especially more so for those with T1DM. Along with increased autonomy comes an increased risk of poor glycaemic control due to changes in health needs, management, and providers. This study allows us to assess the need for and the benefits gained from this new transition clinic initiative whilst also highlighting areas where diabetes education may be lacking in some adolescents, allowing us to fill these knowledge gaps prior to their transition to adult diabetes care.

P238 EXERCISE AND ACTIVITIES UNDERTAKEN BY CHILDREN WITH TYPE 1 DIABETES MELLITUS (T1DM)

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Aims A physically active lifestyle helps with managing diabetes by improving cardiovascular fitness, increasing insulin sensitivity, improving school performance, cognition, and enhancing quality of life. However, despite efforts to promote an active lifestyle, a significant proportion of children with T1DM remain inactive. The aim of this study was to examine exercise and activities undertaken by young people with T1DM.

Methods The study was a regional level observational clinical trial within the University Hospital Limerick T1DM outpatient clinic, focusing on self-reporting of activity using the Children's sport participation and physical activity study (CSPPA) questionnaire. Questionnaires were completed between June and August 2018 and analysed using SPSS statistical software.

Results 55 children completed the survey. 55% of respondents were female and age range was from 5 – 17 years, with all respondents being diagnosed a minimum of 2 years previously. 64% of respondents were based in a rural location. Almost two-thirds of respondents undertook between 60 and 180 min of physical activity per weekday. 83% of respondents watched television with one-third watching daily. 57% of respondents used computers with two-thirds daily. 20% of respondents used a mobile phone with one-third using daily. 83% of respondents travelled to school by car or bus with two-thirds living within 5k of school. The most common reason for using a car or bus was for road safety reasons with only 4% stating becoming hypoglycaemic was an issue.

Conclusion The results from this study show that there was a variable level of activity amongst children with T1DM. The majority watched television on a daily basis while most were transported to school on the basis of road safety. Future work in this area should be to further promote undertaking activity, including the provision of schemes to help promote activities such as walking or cycling to school.

P239 QUALITY OF OUTPATIENT CARE RECEIVED BY CHILDREN AND YOUNG PEOPLE WITH TYPE 1 DIABETES MELLITUS (T1DM) IN A PERIPHERAL HOSPITAL

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Introduction Type 1 Diabetes Mellitus (T1DM) is a common health condition affecting children and young people. T1DM is managed largely in the outpatient setting. Regular and ongoing outpatient care is essential to maintain optimal glycaemic control and to monitor for complications.

Aims The objective of this study was (1) to examine the quality of outpatient care received by children and young people with T1DM in a peripheral hospital and (2) to suggest ways to improve the service in peripheral hospitals in Ireland. A re-audit could be done after implementation of such suggestions.

Methods This was a retrospective study where patients (0 to 16 years old) with T1DM were identified by an electronic search of the Hospital In-Patient Enquiry (HIPE) system