This study investigated the prevalence and evolution from diagnosis of cardiovascular risk factors (hypertension, obesity (BMI), dyslipidaemia, albuminuria) in an ethnically diverse population of children with Type 1 diabetes (T1D).

Methods The study included all children diagnosed with T1D attending three paediatric diabetes clinics in East London between 2005–2015. Clinical and demographic information was collected prospectively during routine check-ups. Linear longitudinal mixed effects modelling (growth curve analyses) were used to analyse the development of cardiovascular risk factors from diagnosis. Models were adjusted for age, gender, ethnicity, diabetes clinic, glycated haemoglobin (HbA_{1c}).

Results Of 565 children 60% were non-white, of whom 8% were Bangladeshi and 8% from Somali backgrounds. Mean age at diagnosis was 8.5 years (0.9–19.4). Mean length of follow-up was 4.3 years (0–10.8). There was variation between clinics in commencing screening, range 8.8–13.8 years ($p < 0.001$).

33% of all measures demonstrated an unhealthy BMI, 15% revealed microalbuminuria, 66% were above lipid targets with 5% reaching treatment thresholds. The frequency of abnormalities before or after 12 years of age was unchanged.

Longitudinal modelling revealed mean increases in BMI (0.6 kg/m², 95% CI: 0.6 to 0.7), blood pressure (1.8 mmHg, 1.5–2.1), total cholesterol (0.05 mmol/mol, 0.03–0.06) and low density lipoprotein (LDL) (0.2 mmol/mol, 0.01–0.04) per year from diagnosis for the entire cohort. HbA_{1c} directly affected all variables other than albuminuria. Results from subgroup analysis in children over 12 years old were similar but not statistically significant.

There was significant ethnic variation: Annual increments were greater for Bangladeshi children's cholesterol and LDL (0.38 mmol/mol, 0.1–0.6 and 0.32 mmol/mol, 0.09–0.55 respectively) and Somali children's BMI (1.6 kg/m², 0.7–2.5) compared to White.

Conclusions Levels of abnormalities were above regional and national averages in children of all ages. Somali and Bangladeshi children had less favourable profiles, which supports findings of increased cardiovascular risk in these ethnicities. Commencing screening in younger children and introducing tailored interventions for ethnic minorities with T1D may help reduce cardiovascular events in adulthood.

G225(P) DISORDERS OF SEXUAL DIFFERENTIATION CLINIC, OXFORD, UK

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Aim Disorders of sexual differentiation (DSD) are a heterogeneous group of genetic disorders with a mismatch of chromosomal, gonadal and phenotypic sex. The John Radcliffe Hospital is one of the largest and few DSD centres in the country, providing a highly specialised multi-disciplinary team service. The aims were to analyse the patient cohort with DSD under the care of the hospital, including their diagnoses, medical and surgical interventions and ascertain the strengths of the DSD service provided, and how the service can be improved to meet UK guidance on a DSD clinic.

Methods A retrospective review was conducted from 2012–2016 to identify the diagnoses and medical and surgical

interventions of the DSD patients. The DSD clinic service was compared with UK guidance.

Results 46 patients were identified with 28 males, 18 females and 91% of patients having attended the DSD MDT clinic at least once. The average age of patients was 7.5 years. The number of patients with a genetic diagnosis was 96% and of those with a confirmed diagnosis, the most common diagnoses were partial androgen insensitivity syndrome (27%) and congenital adrenal hyperplasia (25%). The majority of patients were diagnosed by ambiguous genitalia- 85%. Endocrinological problems were identified in 43% of patients, requiring input in the form of hormone replacement. Surgical intervention was required in 89% of patients, with hypospadias repair being the most common procedure. Currently, the DSD clinic involves input from surgery/urology, endocrinology and psychiatry, in order to devise a clinical management plan, as per UK guidance. Further areas for improvement include an endocrinologist to act as 'clinical lead' for newborns, improved links to adult services and an annual MDT meeting to review and discuss the patients and review the DSD clinic performance.

Conclusions The DSD MDT clinic meets many of the UK requirements. Importantly, an MDT clinic allows families to retrieve all results in one day with liaison between specialties for holistic care, and minimises time taken off work and school thus improving attendance, whilst forming a support group in the waiting room. Therefore, despite being a costly service, it is certainly worth continuing.

G226(P) COELIAC DISEASE SURVEILLANCE IN CHILDREN AND YOUNG PERSONS WITH TYPE 1 DIABETES-ARE WE COMPLIANT?

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Aims To evaluate current practice with regards screening for coeliac disease (CD) in children and young people with type 1 diabetes (T1D) within our Trust and to compare it with the other 6 hospitals within in the region. This also includes ongoing surveillance practice for CD at subsequent follow-ups until the young person is transitioned into adult services.

To compare our practice with national and international guidelines.^{1,2,3,4,5}

To undertake cost analysis for various screening strategies.

Methods A complete list of all known T1D children and young persons within our Trust in 2017 was obtained. The upper age limit was restricted to 18 years. A pre-designed proforma was used to record demographic information including sex, current age, age at diagnosis and current coeliac status. We also recorded how often and what method was used to undertake coeliac surveillance. This was compared with national and international recommendations for CD in high-risk groups.

Simultaneously we sent out a questionnaire to all other children and young people's services in the region regarding their screening and surveillance practices for CD in T1D children and young people. The results obtained were compared with our practice.

We undertook economic evaluation for various screening strategies