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CONTENTS

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Oral Communications

OC1

Steroid metabolome profiling reveals impaired 11β-hydroxysteroid dehydrogenase type 2 activity and reduced mineralocorticoid clearance as key predictors of renal dysfunction in chronic kidney disease

Maria Tomkins[1,2], Darran Mc Donald[1,2], Fozia Shaheen[3], Angela E Taylor[3], Declan de Freitas[2], Carol Traynor[2], Amy Hudson[2], Ciara N. Magee[2], Peter Conlon[2], Colm Magee[2], Mark Denton[2], Conall O'Seaghdha[2], Wiebke Arlt[3,4,5], Michael W. O'Reilly[1,2] & Mark Sherlock[1,2]
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Increased activation of the mineralocorticoid receptor (MR) contributes to progressive kidney and cardiovascular injury in chronic kidney disease (CKD). The enzyme 11β-hydroxysteroid dehydrogenase type 2 (11β-HSD2) plays a critical protective role by converting active cortisol (F) to inactive cortisone (E), preventing glucocorticoid-mediated MR activation. In this study, we sought further understanding of endogenous steroid regulation by studying mineralocorticoid and glucocorticoid metabolism in CKD. Using paired serum and 24-hour urine samples, we conducted targeted steroid profiling via liquid chromatography–tandem mass spectrometry in patients with CKD ($n = 103$) and matched healthy controls ($n = 50$). Despite elevated plasma aldosterone concentrations (357 pmol/l in CKD vs; ^{235} pmol/l in controls, $P = 0.01$), patients with CKD had significantly lower total urinary mineralocorticoid metabolites (398 nmol/l in CKD vs; ^{882} nmol/l in controls, $P < 0.0001$), suggesting impaired renal clearance. 11β-HSD2 activity declined with worsening renal function evidenced by an elevated F/E ratio (11.1 in CKD vs 5.7 in controls, $P < 0.0001$). There was a strong inverse correlation between eGFR and F/E (Spearman $r = –0.75$, $P < 0.0001$). Multivariable regression identified elevated serum aldosterone, lower total urinary mineralocorticoid metabolites and increased F/E ratio as independent predictors of lower eGFR when accounting for age, sex, antihypertensives, urine volume and urine creatinine concentration.The reduced 11β-HSD2 activity and renal clearance of mineralocorticoids demonstrated potentiates MR activity in CKD. This is the first study to interrogate the complete urine steroid metabolome in CKD providing an insight into renal determinants of steroid metabolism. It also highlights potential diagnostic implications for the use of urine steroid metabolomics in CKD.

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OC2

Modified-release hydrocortisone (Efmody) improves sleep, circadian alignment, and quality of life in patients with addison's disease: a phase IIb crossover trial

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Background
Conventional treatment for Addison's disease (AD) with immediate-release hydrocortisone (IR-HC) does not replicate the natural circadian cortisol rhythm, potentially impairing sleep, circadian alignment and quality of life (QoL).
Aim
To evaluate the impact of switching from IR-HC to modified-release hydrocortisone (Efmody) on sleep, circadian hormonal patterns, and QoL in adults with AD.
Methods
In this phase IIb, open-label, within-subject crossover trial, adults with AD transitioned from their standard IR-HC regimen to an equivalent dose of Efmody for 12 weeks. Participants completed sleep questionnaires (Pittsburgh Sleep Quality Index [PSQI], Sleep Condition Indicator [SCI]), wore actigraphy devices for 14 days, and provided salivary cortisol and melatonin profiles before and during intervention. QoL was assessed using AddiQoL and SF-36.
Results
Efmody improved sleep efficiency (+4%, $P = 0.002$), reduced sleep latency (–11 min, $P = 0.01$), and decreased sleep fragmentation (all parameters $P < 0.01$). Subjective sleep improved, with SCI scores increasing (+5.9, $P = 0.0033$) and PSQI scores decreasing (–2.2, $P = 0.0067$). The number of patients reporting "good sleep" rose from 5 to 12. During Efmody treatment, cortisol exposure (AUC) was reduced ($P = 0.012$), with a morning peak approximating physiological rhythm; melatonin profiles retained evening peaks. Dim-light melatonin onset occurred 20 minutes later ($P = 0.02$) but remained aligned with sleep, indicating improved circadian–sleep synchrony. QoL improved, with SF-36 vitality (+20.0, $P = 0.0002$) and general health (+8.0, $P = 0.0175$) increasing, and AddiQoL total score rising (+7.4, $P = 0.0003$), with gains across all domains.
Conclusion
Switching to Efmody improved sleep quality, promoted more physiological circadian alignment, and enhanced QoL in AD.

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OC3

Perchlorate and thiocyanate environmental contaminants in mother-baby cohort in N.I

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Perchlorate (CLO4) and thiocyanate (SCN) are environmental pollutants which inhibit iodine uptake into thyrocytes. Contamination has been found in water, milk and some foods and originates from cigarettes, nitrogen fertilisers, fireworks and rocket fuels. These pollutants may potentially compound iodine deficiency and partly explain the four-fold rise in congenital hypothyroidism described in NI, Ireland and other Western countries over the last 40 years. A cohort of 240 mothers provided urine samples for storage each trimester and postpartum with a subset of 60 providing an offspring sample (6-24 weeks). Mothers were iodine deficient while babies were iodine replete, as previously reported. Maternal median perchlorate levels across trimesters and postpartum were 3.6, 4.1, 3.3, 3.8 mg/lrespectively and 1.9 mg/lin offspring (detectable in 65% babies). Maternal median thiocyanate levels were 353, 709, 572, 751 mg/lrespectively and 136 mg/lin offspring (detectable 100% babies). Smoking was associated with four-fold higher levels in maternal thiocyanate in second trimester vs non-smokers (2970 vs 657 mg/l, $P = 2.5 \times 10^{-16}$). Contemporaneous water samples from across island of Ireland had unmeasurable levels of CLO 4 and SCN (<0.05 and <0.5 mg/lrespectively). To our knowledge this is the first European cohort shown to have evidence of thyroid hormone synthesis blocker contamination in babies. Mothers were iodine deficient in each trimester. Results are similar to a baby cohort from Boston USA. However, in the Boston cohort mothers were iodine replete and this may provide some protection not afforded to Ireland and UK which have no iodine fortification programmes.

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OC4

Hybrid acylated exendin and apelin receptor co-agonist peptides, show promising acute insulinotropic and protective actions in cultured pancreatic beta cells and isolated islets

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Hybrid co-agonist peptides, which activate incretin plus other key receptors, are proving efficacious therapeutic drugs for type-2 diabetes management. Previously we showed that the adipokine apelin-13, operating via the APJ receptor, possesses anti-diabetic therapeutic potential. Here we tested novel acylated and non-acylated hybrid co-agonist peptides (exendin-linker-apelin (ELA)), which simultaneously activate both GLP-1 and APJ receptors. The component peptides exendin-4(1-30), apelin-13 and combined treatments, were examined for their dose-dependent (10-12-10-6 M) insulinotropic actions using pancreatic BRIN-BD11 cells (in presence/absence of specific GLP-1 and APJ receptor antagonists) and isolated islets (10-8-10-6 M). Finally, ELA analogues were examined for their actions on beta-cell proliferation and apoptosis. Exendin-4(1-30), apelin-13 either alone, or combined showed a dose-dependent increase (1.5-4.7-fold, $P < 0.05$-$P < 0.001$) in insulin secretion from BRIN-BD11 cells vs 5.6 mM glucose controls. ELA (10-6 M) stimulated insulin secretion (3.5-fold, $P < 0.001$), which was matched by ELA analogues acylated at position Lys 12 and Lys 38 (3.85- and 3.5-fold, respectively), with receptor antagonists significantly reducing responses ($P < 0.01$-$P < 0.001$). Insulinotropic response were identified in isolated mouse

islets (3.5–4.5-fold increase) vs glucose controls ($P < 0.001$). Finally, ELA and its two best acylated analogues showed enhanced dose-dependent (10-8-10-6 M) increases in Ki-67 cell proliferation and a decrease in cytokine-mediated cell apoptosis in BRIN-BD11 cells, vs respective media controls. Overall, hybrid co-agonist acylated and non-acylated ELA peptide analogues, demonstrated potent insulinotropic actions in beta-cells and isolated islets, plus enhanced beta-cell proliferation and reducing beta-cell apoptosis. In conclusion, these ELA co-agonist peptides demonstrated promising anti-diabetic profiles.

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OC5

Maternal and foetal outcomes of women with normal glucose tolerance in a subsequent pregnancy following an index pregnancy with gestational diabetes

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Background
Gestational diabetes mellitus (GDM) impacts more than 18 million births annually with lifelong risks of type 2 diabetes and cardiovascular disease. Recurrence risk is well established, little is known about the outcomes of subsequent normal glucose tolerance pregnancies in women with prior GDM.
Objective
To examine the pregnancy outcomes of women with normal glucose tolerance in pregnancies following the diagnosis of GDM in a previous pregnancy.
Methods
We examined the outcomes of subsequent pregnancies in women diagnosed with GDM 2016-2020. Data on maternal demographics, laboratory values, maternal, and neonatal outcomes were collected from electronic medical records. Only women who had a; ^{75}g OGTT in the subsequent pregnancy were included and classified as recurrent GDM (rGDM) or a normal glucose tolerance pregnancy (NGTP).
Results
In total, 386 number of women had GDM between 2016-2020. Of these, 166 (43%) went on to have another pregnancy. Only 16 (9.6%) had NGTP, the remainder had GDM. There was no difference in age or body mass index between those with rGDM vs NGTP (34.1 vs 34.5 years and 29.5 vs 23.6 kg/m2 respectively), high rates of obesity were observed in both groups (40.9% vs 37.5%). Women with NGTP had high rates of caesarean delivery (43.8%), foetal macrosomia (18.8%), neonatal care admission (12.5%), respiratory distress (6.3%) and depression (18.8%). No significant differences were determined between those with NGTP and rGDM.
Conclusion
Women with NGTP encounter high rates of serious adverse complications despite the absence of metabolic derangement and their pregnancies should be risk stratified accordingly.

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OC6

Inherited defects of the adipose tissue matrix and human metabolic disease

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Mutations in genes encoding proteins of the extracellular matrix (ECM) result in several human disorders affecting tissues such as bone, skin, vasculature and skeletal muscle. To date, no such disorders principally affecting the ECM of adipose tissue have been reported. We now describe four patients from 3 unrelated consanguineous families in whom severe progressive partial lipodystrophy, severe insulin resistance and dyslipidaemia, is caused by homozygous loss of function mutations in LAMA 4, encoding an adipose tissue-enriched subunit of the abundant, trimeric, basement membrane protein, laminin. We used population genetics to demonstrate that ECM dysfunction contributes to adverse adiposity and metabolic dysfunction in the general population. In an analysis of over half a million participants in population biobanks heterozygous carriers of predicted loss of function mutations in three Collagen genes (COL5A3. COL; ^{3}A1 and COL; ^{12}A1), one matrix metalloproteinase ADAMTS 9 and the heparan sulphate proteoglycan gene HSPG 2, all of which are robustly expressed in adipose tissue, were associated with an increased waist-hip ratio (WHR) and a range of related metabolic dysfunctions. Across known GWAS loci for WHR, we find evidence of marked enrichment for ECM-related pathways. Thus, using evidence from a newly described monogenic syndrome and genetic variation across the allele frequency spectrum we demonstrate that adipose- enriched ECM genes contribute significantly to fat distribution and metabolic dysfunction in the general population. We propose the term "adipose matrixopathy" to describe this pathophysiologically distinct subclass of human metabolic disorder.

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OC7

Skeletal muscle bioenergetics, lipid metabolism and androgen excess in polycystic ovary syndrome: evidence from molecular and human in vivo studies

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Polycystic ovary syndrome (PCOS) is characterised by androgen excess and insulin resistance. Skeletal muscle (SkM) mitochondrial dysfunction and altered lipid biology are cardinal features in other insulin resistance disorders; however, their role in PCOS is incompletely characterised. We hypothesised that androgen excess is a central driver of SkM mitochondrial dysfunction in PCOS. Integrated in-vitro, ex-vivo, and in-vivo approaches examined SkM mitochondrial function and lipid handling. Primary myotubes from women with PCOS ($n = 3$) and controls ($n = 1$) underwent high-content live-cell imaging and Seahorse XF extracellular flux analysis. Ex vivo proteomics and super-resolution microscopy were performed on muscle biopsies. Women with PCOS ($n = 10$) underwent a mixed meal test in vivo before and after 28 days of oral bicalutamide. In vitro, androstenedione induced lipid droplet accumulation and altered mitochondrial membrane potential in PCOS myotubes. Baseline bioenergetic profiling revealed reductions in basal (-18 %), maximal (-37%) and spare respiratory capacity (-48%) in PCOS myotubes ($P < 0.001$ for each) compared to controls. Fuel-flexibility testing demonstrated impaired adaptability in PCOS compared to controls. Proteomic analysis revealed downregulation of oxidative phosphorylation proteins and upregulation of glycolytic enzymes in PCOS SkM compared to controls. In vivo, Bicalutamide exposure for 28 days induced significant changes in AUC across a mixed meal test in NEFAs, lactate, glycerol and glucose ($P < 0.05$ for each). These findings suggest that PCOS is associated with altered mitochondrial function, lipid handling and metabolic flexibility at muscle and systemic levels. Modulation of androgen exposure at systemic or tissue-specific level offers therapeutic promise for treatment of PCOS-related metabolic disease.

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OC8

Healthcare costs associated with overweight and obesity in Ireland

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The impact of obesity on healthcare systems requires periodic assessment to inform policy. The primary aim of this study was to determine the direct costs of overweight and obesity in the Republic of Ireland. This study utilised data from Wave 8 (2022) of the Healthy Ireland Survey (HIS), an annual, nationally representative, cross-sectional survey that collects a variety of data pertaining to people aged 15 years and older. Data on demographics, body mass index (BMI) and obesity-related conditions (ORCs) were extracted and analysed, while healthcare resource utilisation (HCRU) was quantified via measurement of general practitioner (GP) visits, hospital inpatient stays, consultant visits, and emergency department (ED) attendances. Multivariable regression analysis was conducted to examine the association between BMI, ORCs, and HCRU, adjusting for sociodemographic and behavioural covariates. A bottom-up costing approach was then applied to estimate the direct healthcare costs associated with overweight and obesity. A total of 7,455 individuals participated in the 2022 wave, with 6,858 respondents suitable for inclusion in the final analysis. We estimate the total direct healthcare cost of overweight and obesity in Ireland to be €1.1 billion in 2025 (representing approximately 3.2% of the healthcare budget for that year). The increased cost was primarily driven by a direct association between increased BMI and frequency of GP visits (€582.2 million) along with an increased HCRU at all levels of the healthcare system by individuals with ORCs (€ 515.0 million). Overweight and obesity continue to account for a significant percentage of the total healthcare budget in Ireland.

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OC9

Glucose responsive hsa-miR-766-3p regulates incretin receptor expression and beta cell survival

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MicroRNAs are small noncoding RNA sequences that bind target mRNA and hinder protein translation. Studies have identified aberrant microRNA expression in type 2 diabetes (T2D), potentially reflecting a compensatory response or contributing to disease progression. Furthermore, microRNAs modulate islet and enteroendocrine peptides, and their respective receptors. TargetScan, miRDB and DIANA microT were used to predict microRNA targeting incretin receptor mRNA. Expression of hsa-miR-766-3p in islets and β-cells was gathered using miRmine. Publicly available islet and non-islet tissue RNAseq data were analysed to explore transcriptome-wide associations between hsa-miR-766-3p and other non-coding and coding RNA transcript abundances. RT-qPCR was utilised to investigate the expression of hsa-miR-766-3p in response to glucose in 1.4E7 human pancreatic beta cells, with further analysis exploring the effect of a hsa-miR-766-3p mimic on incretin receptor expression. The viability and proliferation of 1.4E7 cells post transfection was investigated using the MTT assay and cell count, respectively. Selected hsa-miR-766-3p was consistently predicted to target the GIPR with a strong predictive score (>80) and had evidenced expression in β-cells. In 1.4E7 cells, hsa-miR-766-3p expression was significantly altered in a high glucose environment ($P < 0.05$-0.01). Transient transfection with the hsa-miR-766-3p mimic demonstrated a marked increase in hsa-miR-766-3p expression; ^{72}hrs post transfection ($P < 0.001$), accompanied with reduced GLP-1R mRNA expression ($P < 0.01$) but no significant effect on GIPR expression. Transfection also significantly influenced cell viability ($P < 0.05$-$P < 0.001$) and proliferation ($P < 0.01$) in 1.4E7 cells. In summary, glucose responsive hsa-miR-766-3p regulates incretin receptor expression and modulates β-cell health, revealing its potential as a novel therapeutic target for T; ^{2}D.

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OC10

Nontargeted metabolomics identifies a central role for dysfunctional skeletal muscle lipid metabolism in hypogonadism associated metabolic dysfunction in men

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Hypogonadism in men is linked to an adverse metabolic phenotype which improves after testosterone replacement therapy (TRT). Underlying molecular mechanisms are incompletely defined, however perturbations in skeletal muscle (SkM) energy metabolism have been hypothesised. Here we performed untargeted metabolomic profiling in two separate clinical cohorts with hypogonadism before and after pharmacological intervention. Men with prostate cancer ($n = 15$) underwent blood sampling and SkM biopsies at baseline and after three months of androgen deprivation therapy (ADT). This protocol was replicated in men with hypogonadism ($n = 15$) before and after TRT for six months. Plasma and SkM metabolomic profiling was performed by ultra-high performance liquid chromatography–mass spectrometry. Classes with at least five significantly altered metabolites ($P < 0.05$ for fold change) are discussed. Despite minimal changes in plasma metabolomic profile, the SkM metabolome after ADT revealed significant perturbations, with predominant downregulation of ceramides/sphingolipids, fatty acids, glycerophospholipids and lysoglycerophospholipids. Conversely, the SkM metabolome after TRT showed predominant upregulation of ceramides/sphingolipids, fatty acids, glycerophospholipids and lysoglycerophospholipids. We observed suppressive changes in lipid-related classes in plasma metabolome after TRT. In both cohorts significant changes were observed in SkM metabolites linked with the Krebs cycle and nucleotide metabolism. Divergent trends in the lipid metabolome after ADT and TRT identify novel associations between testosterone deficiency and impaired SkM lipid metabolism. Distinct responses between the plasma and SkM metabolome highlight the tissue-specific effects of androgens in energy metabolism in men. Further research is required to identify therapeutic targets within these pathways to reduce metabolic risk in hypogonadal men.

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OC11

The natural history of pituitary neuroendocrine tumours managed conservatively

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We previously reported a pilot study on the rate of progression of a small number of conservatively managed pituitary neuroendocrine tumours (pitNETs) with a short follow-up. This study presents a 10-year follow-up of a larger cohort and examines predictors of progression. We reviewed 87 adults with non-functioning pitNETs ($\geq$10 mm) monitored for at least 6 months between 2010 and 2020. Two blinded neuroradiologists independently assessed all MRIs, defining progression as a $\geq$20% increase in volume. Kaplan-Meier analysis and multivariable logistic regression models were used for analysis. Median follow-up was 63 months. Baseline visual field (VF) defects and hypopituitarism were present in 36% and 34% of patients, respectively. Thirty-two patients (37%) progressed: 22 radiologically, 10 by VF decline, and 8 by both. Cumulative growth probabilities were 1.2% , 7.1% , 19% and 31.6% at 6, 12, 24 and 60 months, respectively, plateauing thereafter. Baseline VF defects independently predicted progression (OR 5.6, 95% CI 1.5-20.4, p value 0.009) but not tumour size, hypopituitarism, age, gender or tumour extension. An independent neuroradiology review downgraded 35% of the initially reported progression, and none of these downgrades had adverse clinical consequences. Surgery was undertaken in 31% of the progressed cases, mainly due to visual compromise. This extended larger 10-year follow-up study delineates the rate of growth of these tumours which mainly occur in the first 2-5 years of follow-up and is strongly associated with baseline VF defects. These findings support intensified early surveillance and consideration of earlier surgical intervention in high-risk patients.

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OC12

Impaired glucocorticoid metabolism independently predicts cardiovascular morbidity in chronic kidney disease

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Patients with chronic kidney disease (CKD) have an elevated risk of cardiovascular disease (CVD) potentiated by mineralocorticoid receptor (MR) overactivation. MR activation occurs from both mineralocorticoid and inappropriate glucocorticoid binding. The enzyme 11β-hydroxysteroid dehydrogenase type 2 (11β-HSD2) converts active cortisol (F) to inactive cortisone (E) thereby protecting the MR, and its activity has been shown to be impaired in CKD. To investigate the contribution of disrupted adrenal steroid metabolism to CVD risk in CKD we performed liquid chromatography–tandem mass spectrometry on paired serum and 24-hour urine samples from non-diabetic CKD patients ($n = 103$) and age-, sex-, and BMI-matched healthy controls ($n = 39$) alongside detailed cardiometabolic phenotyping, including pulse wave velocity (PWV) and body composition analysis. CKD patients had higher HOMA-IR (2.6 VS 2.0, $P = 0.01$), and PWV (5.9 vs 5.3m/s, $P = 0.0007$), with comparable BMI, body composition, and blood pressure compared to controls. CKD patients had elevated ACTH (25.3 vs 19.6pg/ml, $P = 0.02$), F/E ratio (11.1 vs 5.7 $P < 0.0001$), renin (58.0 vs 27.1mIU/l, $P = 0.0005$), and aldosterone (357 vs; ^{235} pmol/l, $P = 0.01$), alongside reduced urinary excretion of total glucocorticoid (6847 vs; ^{8094} nmol/l, $P = 0.0002$) and mineralocorticoid (398 vs; ^{882} nmol/l, $P < 0.0001$) metabolites compared to controls. Multiple regression revealed an independent association of both the F/E ratio ($\beta = 0.1$, $P = 0.04$) and total urinary glucocorticoid metabolites ($\beta = 0.09$, $P = 0.007$) with increased PWV, controlling for age, sex, renal function, blood pressure, and antihypertensive use. Mineralocorticoid markers showed no independent associations with cardiometabolic outcomes. Our findings highlight the important role of impaired 11β-HSD2 activity, reflected by an elevated F/E ratio, in driving glucocorticoid-mediated MR activation and arterial stiffness.

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OC13

Type 1 diabetes in pregnancy: a comparative study of hybrid closed-loop systems, continuous glucose monitoring, and home blood glucose monitoring

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Optimising glycaemic control in pregnancies affected by type 1 diabetes (T1D) is critical to improving maternal and neonatal outcomes. While continuous glucose monitoring (CGM) and hybrid closed-loop (HCL) insulin delivery systems are well established in the non-pregnant population, real-world evidence in pregnancy remains limited. We conducted a retrospective study of 84 pregnant women with T; [1]D attending a joint diabetes-obstetric clinic from January 2023 to June 2025. Participants were grouped according to diabetes management: multiple daily injections (MDI) with home blood glucose monitoring (HBGM) ($n = 22$), MDI with CGM ($n = 37$), or HCL systems ($n = 25$; Medtronic; ^{780}G, $n = 20$; Tandem t:slim X 2, $n = 5$). Glycaemic control was assessed using HbA; [1]c and CGM-derived metrics, including time in range (TIR), time above range (TAR), and time below range (TBR), at booking and each trimester. Women using HBGM had significantly higher HbA; [1]c values throughout pregnancy compared with those using CGM or HCL ($P < 0.05$). No significant differences in HbA; [1]c or CGM metrics were observed between the CGM and HCL groups. Preterm delivery (<37 weeks) occurred significantly more often in the HBGM group (50%) than in the CGM (20.8%) and HCL (19.1%) groups ($P < 0.05$). Rates of large- or small-for-gestational-age infants, neonatal hypoglycaemia, NICU admission, and caesarean section did not differ between groups. Outcomes were comparable between CGM + MDI and HCL users, supporting flexibility in technology choice. These findings support the integration of CGM into routine antenatal care for women with T; [1]D and underscore the need for prospective studies to define optimal technology strategies in pregnancy.

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OC14

A risk stratification approach to screening for hypopituitarism based on pituitary radiation dose exposure in adult survivors of primary, non-pituitary brain tumours

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There is no established guidance on how best to screen non-pituitary brain tumours survivors for radiotherapy-induced hypopituitarism (RIH). We aimed to evaluate a risk stratification approach to RIH screening based on pituitary radiation dose exposure in brain tumour survivors treated with modern intensity-modulated radiotherapy (IMRT). Pituitary function was assessed in 140 brain tumour survivors (retrospective cohort $n = 86$ and prospective cohort $n = 54$). Participants were categorised into low (LD, <30Gy), intermediate (ID, 30-44.9Gy) and high (HD, >45Gy) pituitary radiation dose exposure groups. The median age at radiotherapy was 39.7 years (IQR 30.5-49.8) and follow-up interval following radiotherapy was 60.5 months (IQR 36.0-83.0). Groups comprised LD group ($n = 33$), ID group ($n = 30$) and HD ($n = 74$) survivors. The prevalence of GH deficiency was LD-35%, ID-30% and HD-78%. Gonadotropin, adrenocorticotrophic hormone (ACTH) and thyroid stimulating hormone (TSH) deficiency did not arise in the LD. Gonadotropin deficiency occurred in ID-3% and HD-18%. ACTH deficiency occurred in ID-16% and HD-15%. TSH deficiency occurred in ID-3% and HD-14%. A composite of gonadotropin, ACTH and TSH deficiency occurred in 0, 17 and 23% in the LD, ID and HD groups, respectively. Panhypopituitarism was only observed in the HD group ($n = 3/40$, 8%). Pituitary radiation dose thresholds (lowest dose at which specific hormone deficits occurred) were GH axis >12.2Gy, gonadotropin axis >37.1Gy, ACTH axis >36.9 Gy and thyroid axis >43.4Gy. In conclusion, screening for radiotherapy-induced hypopituitarism is unnecessary in LD adult brain tumour survivors (who are not GH replacement candidates). Reduced frequency of screening may be appropriate with intermediate doses.

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Oral Presentations - Case Reports and Case Series

OCR1

Whole genome sequencing identifies two variants (c.2654C>T and c.1597C>T) of the WFS 1 gene in a patient with previously unclassified diabetes

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Wolfram Syndrome (WS) is a rare neurodegenerative disorder associated with diabetes insipidus, diabetes mellitus, optic atrophy, and deafness. Two subtypes, WFS 1 and WFS 2, with autosomal recessive inheritance, are linked to pathogenic variants in the WFS 1 and CISD 2 genes, respectively.WFS1 codes for wolframin. This protein plays a central role in insulin signaling. We present a 49-year-old male with brittle diabetes since age 20 . His background included temporal-lobe epilepsy, cataracts, proliferative retinopathy, peripheral neuropathy, intellectual disability and IgA deficiency. His brother had unclassified diabetes and passed away at age 30. His sister remains unaffected. Over years multiple investigations had failed to classify his diabetes. A glucagon-stimulation-test, a sulphonylurea-challenge and low C-peptide confirmed insulin deficiency. He had negative autoantibodies and negative MODY screening. Genetic testing revealed no pathogenic variants in suphonylurea- receptor or potassium-channel-subunit genes. He had multiple presentations with hypo- and hyperglycaemia. His diabetes was challenging as he was exquisitely insulin sensitive. As the behavior of his diabetes was atypical, we performed whole exome sequencing (WES). This revealed two variants of uncertain significance in WFS 1 gene (c; ^{2654}C>T and c; ^{1597}C>T) . These variants have been associated with WS when inherited in a compound heterozygous state. We believe his diabetes is linked to the WFS 1 variants identified but parental segregation analysis will be performed to establish phase. Our patient has partial WS phenotype including diabetes mellitus, peripheral neuropathy, epilepsy and cataracts. This case highlights the clinical utility of WES in practice and demonstrates a thorough, systematic workup to define diabetes subtypes.

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OCR2

Case Series. not just a biochemical oddity: asymptomatic hypocalcaemia with a genetic basis

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Autosomal dominant hypocalcemia (ADH) is a rare cause of hypocalcaemia that should be considered when no other cause is evident. We describe two patients in whom a diagnosis of ADH was made following appropriate biochemical and genetic investigation. P1 was referred with known, asymptomatic, hypocalcaemia (calcium 2.03mmol/l, RI 2.2-2.6; PTH 3.8 pmol/l, RI 1.6-6.9; vitamin D; ^{42} nmol/l), previously deemed idiopathic. 24 hour calcium excretion 3.1mmol. Genetic testing: heterozygous mutation in CASR (Ala785Vals), confirming ADH Type 1 (ADH1). Her son (12), was later confirmed to have the mutation. P2 was referred for investigation of asymptomatic hypocalcaemia (calcium 2.03mmol/l, RI 2.2-2.6; PTH 1.8 pmol/l, RI 1.6-6.9; vitamin D; ^{70} nmol/l). 24 hour calcium excretion 6.1mmol. Genetic testing: heterozygous mutation in GNA 11 (Arg60Cys), confirming ADH Type 2 (ADH2). Neither patient experienced renal calculi, fractures, dental abnormalities, however P 1 has a small (4mm) intracalyceal calcification on ultrasound. ADH Type 1 phenotype is better described; levels of calcium probably remain stable over time, however nephrolithiasis and nephrocalcinosis can develop at any stage, so periodic renal imaging is recommended. Seizures and basal ganglia calcification can also occur. Long term monitoring is recommended. The ADH Type 2 phenotype is not fully elucidated. In the absence of formal recommendations, follow up for ADH 2 is similar to that for ADH 2. Our cases add to the literature on ADH 1 and 2 and reinforce the need to perform further investigation, even in asymptomatic individuals, if the biochemical profile cannot be explained. Genetic diagnoses allow appropriate follow up and cascade testing, where desired.

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OCR3

Case series: the impact of hybrid closed-loop insulin pumps in the management of cystic fibrosis-related diabetes mellitus

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Cystic fibrosis-related diabetes mellitus (CFRD) is a common complication in people living with cystic fibrosis. Dysglycaemia is associated with adverse outcomes, including reduced pulmonary function. We assessed the impact of initiating hybrid closed-loop (HCL) insulin pump therapy on glycaemic indices in individuals with CFRD. We reviewed the clinical records of all patients with CFRD who commenced HCL therapy between 2023 and 2025. HbA; ^{1}c and continuous glucose monitoring (CGM) data prior to HCL initiation were compared to the same indices at 3 months post-HCL. Descriptive statistics and paired t-tests were used for analysis. In total, 10 individuals with CFRD were included. The mean age was 39 ($\pm$8.49) years, and 80% were female. Before HCL therapy, the mean HbA; ^{1}c was 72 ($\pm$16.9) mmol/mol, time in range (TIR) was 36.6%, and time below range (TBR) was 0.8%. Six patients used the Tandem t:slim X 2™ insulin pump system, and four used the Medtronic MiniMed™ ^{780}G system. Three months after starting HCL, the mean HbA; ^{1}c had improved to 57 ($\pm$7.4) mmol/mol, TIR increased to 66%, and TBR remained low at 0.5%. There was a statistically significant improvement in HbA; ^{1}c ($P = 0.03$) and in TIR ($P < 0.0001$). This case series highlights the impact of HCL insulin pump therapy on glycaemic control in people with CFRD. The observed improvements in HbA; ^{1}c and TIR, without an increase in hypoglycaemia, suggest potential for better long-term outcomes in this population.

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OCR4

Insulin autoimmune syndrome in a caucasian male: a rare cause of recurrent hypoglycemia

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Insulin autoimmune syndrome (IAS), or Hirata disease, is a rare cause of hypoglycemia mediated by insulin autoantibodies (IAA). We report a 76-year-old Caucasian male with hypertension, ischemic heart disease, and benign prostatic hyperplasia who presented with recurrent syncope and seizure-like activity over two months, necessitating his third hospital admission. Initial workup, including CT/MRI brain, EEG, echocardiogram, and Holter monitoring, was unremarkable. During the third admission, hypoglycemia was confirmed (serum glucose 2.2 mmol/l), with markedly elevated insulin (> 6945 pmol/l), C-peptide (2.48 nmol/l), and IAA titers (75%, normal <5.5%). Pancreatic imaging and endoscopic ultrasound excluded neuroendocrine tumours, and negative sulfonylurea screen confirmed IAS. The patient received intravenous hydrocortisone for two days, followed by oral prednisolone, dietary counselling for frequent low-carbohydrate meals, and continuous glucose monitoring. Rituximab was initially considered for severe, refractory hypoglycemia but was not administered due to rapid clinical and serological improvement. Follow-up revealed declining IAA titers and no further hypoglycemic episodes by five months. Historically prevalent in Japan (0.017/100,000), IAS is associated with HLA-DR4 (DRB1*0406) and triggers including sulphydryl drugs or viral infections. Rising global cases among Caucasians likely reflect increased medication use and wider IAA assay availability. IAS involves high-capacity, low-affinity IAA causing glycemic fluctuations through insulin-IAA complex dynamics. Symptoms range from mild to severe (seizures, syncope). Management is complex given an 82% spontaneous remission rate. This case highlights recognising IAS in non-Asian populations and demonstrates the efficacy of corticosteroids and dietary interventions. Recurrence is rare (<5%).

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OCR5

Refractory gastrointestinal stromal tumour (GIST)-associated paraneoplastic hypoglycaemia: resolution with recombinant growth hormone

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Background
Gastrointestinal stromal tumours (GIST) are a rare cause of non-islet cell tumour hypoglycaemia (NICTH), usually due to paraneoplastic secretion of incompletely processed insulin-like growth factor-2 ("big IGF-2"). Glucocorticoids are first-line therapy; somatostatin analogues and diazoxide have variable efficacy.
Case
A 54-year-old woman with GIST and hepatic metastases presented with recurrent symptomatic hypoglycaemia (capillary glucose 1.9–2.8 mmol/l). Thyroid function, adrenal reserve, and hepatic synthetic function were normal. During hypoglycaemia, insulin and C-peptide were suppressed; IGF-2:IGF-1 ratio was elevated at 17.7 (normal $<$ 10), consistent with NICTH. Hypoglycaemia persisted despite continuous carbohydrate supplementation and prednisolone 30 mg daily. Over subsequent weeks, prednisolone was replaced with dexamethasone, short-acting octreotide (100 μg subcutaneously three times daily) was commenced, and diazoxide was added, without benefit. Trans-arterial chemoembolisation (TACE) was performed in an attempt to reduce metastatic burden and IGF-2 secretion, however hypoglycaemia persisted. Recombinant human growth hormone (Somatropin 1 mg subcutaneously daily) was initiated but hypoglycaemia recurred after 5 days; increasing the dose to 1.6 mg daily achieved sustained euglycaemia. Treatment was well tolerated, and euglycaemia has been maintained to date despite ongoing disease progression.
Discussion
This case illustrates GIST-associated NICTH unresponsive to glucocorticoids, somatostatin analogue, diazoxide, and TACE, but resolving with recombinant growth hormone. Benefit likely reflects stimulation of hepatic gluconeogenesis and increased IGF-binding protein concentrations, which sequester "big" IGF-2 and reduce its bioactivity. While glucocorticoids remain the mainstay of NICTH therapy, this case adds to limited evidence supporting growth hormone as an effective salvage option in refractory disease.

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OCR6

Plasmapheresis to control resistant graves thyrotoxicosis prior to planned thyroidectomy

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A 27-year-old female was attending endocrinology services since April 2024 with graves' thyrotoxicosis. She remained thyrotoxic despite thionamides, beta blockers, a trial of lithium therapy and corticosteroids. Thyroidectomy was planned. To achieve euthyroid status, pre-operative plasmapheresis was performed. . Three plasma exchanges were on day -6, day -3 and day -1 pre-thyroidectomy (day 0). The initial two procedures used albumin as a replacement fluid and the third used plasma for the last 50% of replacement fluid. Thyroid function tests (TFTs), thyroid-stimulating hormone-receptor antibodies (TRAB), fibrinogen and electrolytes were tested pre and post exchanges. Her TRAB fell from 31.45 to 12.28 IU/l(RR $<$3.10) pre surgery. Her thyroxine (T4) reduced from 39.3 to 14.7 pmol/l(RR 8-16 pmol/l) and her triiodothyronine (T3) reduced from 21.8 to 8.1 pmol/l(RR 3.8-6 pmol/l). Pre-operatively intravenous hydrocortisone was given. Her peri-operative observations were normal. Post-operatively her thionamide and betablockers were stopped, prednisolone was weaned and levothyroxine was commenced. Post-operative TRAB rose slightly 14.62 IU/l. Plasmapheresis is used in a range of conditions to reduce abnormal antibodies. It has been used in refractory thyrotoxicosis including thyroid storm. This case demonstrated how plasmapheresis can reduce thyroid hormone levels through reducing circulating TRAB and demonstrates its utility in achieving a euthyroid state prior to surgery.

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Research, Audit and Quality Improvement Projects

Physical Posters

P1

Digital assessment of rare pituitary neuroendocrine tumour subtypes reveals increased expression of cytotoxic T-Lymphocyte associated protein 4

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Pituitary neuroendocrine tumours (PitNETs) are common intracranial neoplasms, with rare subtypes causing growth hormone (GH) excess and hypercortisolaemia. The immune microenvironment of such tumours remains incompletely characterised, and with the description of cytotoxic T-lymphocyte-associated protein 4 (CTLA-4) inhibitor-induced hypophysitis, interest in the potential roles of CTLA-4 in the pituitary has grown. The aim of this work was to investigate the expression of CTLA-4 in PitNETs causing GH excess ($n = 74$) or hypercortisolaemia ($n = 27$) and compare it to the expression of CTLA-4 in normal pituitary tissue ($n = 4$). PitNET tissue samples and normal pituitary resected adjacent to Rathke cleft cysts were stained with a bespoke multiplex biomarker panel using the Leica Bond RX then scanned with the Phenoimager HT. CTLA-4 expression was assessed using QuPath image analysis software. In brief, the subcellular detection function was used calculate fluorescent pixel areas in spots and clusters to quantify CTLA-4 expression. CTLA-4 expression was significantly different across tumour subtypes and normal pituitary tissue ($P < 0.001$). Expression was higher in corticotrophinomas compared to PitNETs causing GH excess ($P = 0.001$) and normal pituitary ($P = 0.002$). It was also higher in PitNETs causing GH excess compared to normal pituitary ($P = 0.004$). These findings indicate that CTLA-4 is upregulated in PitNETs, particularly corticotrophinomas. With recently published guidelines now considering immunotherapy as a therapeutic modality for aggressive PitNETs, quantification of CTLA-4 and functional studies of its role in PitNETs may become increasingly important.

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P2

Pregnancy outcomes after bariatric surgery

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Bariatric surgery is increasingly performed in women of reproductive age to reduce obesity-related complications and restore ovulatory function. However, postoperative anatomical and metabolic changes may affect pregnancy by altering nutritional status, glycemic control, and fetal growth, potentially increasing the risk of adverse outcomes. We retrospectively analyzed 39 pregnancies (38 singleton, 1 twin) in women with previous bariatric surgery. Maternal anthropometric parameters, surgery-to-conception interval, antenatal and perinatal complications and vitamin profiles were collected. Sleeve gastrectomy was the most frequently performed procedure ($n = 27$, 69.2%), followed by gastric banding ($n = 6$, 15.4%), unspecified bariatric surgery ($n = 4$, 10.2%) and gastric bypass ($n = 1$, 2.6%). Pregnancy occurred 2.6 ± 2 years after surgery. At booking, mean age was 32 ± 5.2 years and BMI of 32 ± 5.8 kg/m2, with a gestational weight gain of 7.8 ± 5.9 kg. Gestational diabetes (GDM) was diagnosed in 28.2% of pregnancies. Micronutrient deficiency, particularly iron, vitamin A, and B 12/folate, was more prevalent among women who underwent sleeve gastrectomy (91% vs. 61%, $P < 0.0001$), and was associated with lower neonatal birthweight (median 2950g vs. 3225g, $P = 0.04$). However, adjusting for surgery type, this association was not confirmed ($\beta = -270.4$ g, $P = 0.17$). Maternal complications occurred in 59% of pregnancies. Cesarean delivery occurred in 46.2% (17.9% emergency). Preterm birth (5.1%), macrosomia (7.7%) and NICU admission (10%), rarely occurred. Pregnancy after bariatric surgery is generally safe, with low rates of serious maternal and neonatal complications. Sleeve gastrectomy was associated with significantly higher rates of micronutrient deficiency. These findings support the need for preconception counselling in this cohort.

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P3

Gonadal recovery of males post non-medical use of androgenic anabolic steroids: a systematic review and meta-analysis

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Introduction
Anabolic androgenic steroids (AAS) are frequently used to improve athletic performance and/or appearance. However, there are many negative health sequelae associated with their use, with multisystem effects including on reproductive health. AAS misuse suppresses the hypothalamic-pituitary-gonadal axis and therefore suppresses endogenous gonadotropins and testosterone.
Method
A systematic review & meta-analysis was conducted using PRISMA guidelines. Eligibility was based on the PICO tool. Population: males >18 years with previous non-medical AAS use. Intervention: Cessation of AAS to allow gonadal recovery. Comparison: Control arm; no AAS use. Outcome: Recovery in gonadal function measurements.
Results
Seven studies were included in the meta-analysis with 288 former AAS users and 329 control subjects. Meta-analysis of hormonal changes showed a significant reduction in serum testosterone in former AAS users vs controls with a weighted mean difference (WMD) of -5.27 nmol/l, 95% confidence interval (CI) -7.04 to -3.50, $P < 0.00001$. There was no statistical difference in gonadotropins, FSH or LH. Of studies analysing semen changes, there was no difference in sperm concentration or motility between the groups. Using the International Index of Erectile function (IIEF), there was a decrease in erectile function with a WMD for erectile function -3.78(no units), CI 95% -6.32 to -1.24, $P = 0.004$ in former AAS users vs controls.
Conclusion
In former AAS users, serum gonadotropin levels return to normal after abstinence. However, there's a lasting reduction in testosterone and erectile function which is potentially permanent. These lasting effects of AAS likely go beyond HPG axis disruption, given the recovery of gonadotropins.

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P4

The impact of metabolic complications in pregnancy on later life maternal cardiometabolic health: findings from the ROLO longitudinal cohort study

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Pregnancy is a physiological "stress test" for women's health, where pregnancy-induced metabolic complications associate with later-life risk of cardiometabolic disease. Pregnancy and the puerperium may represent an opportunity to improve long-term cardiometabolic outcomes. We hypothesise metabolic complications in pregnancy (pregnancy-induced hypertension, impaired glucose tolerance, gestational diabetes) will be associated with lasting effects on maternal cardiometabolic health. Health and lifestyle data were obtained from 422 women during pregnancy and 10 years postpartum. Anthropometry, dual-energy X-ray absorptiometry scans and non-fasting blood samples were recorded 10 years postpartum. Crude and adjusted linear regressions explored associations between pregnancy metabolic complication and cardiometabolic risk profile. The mean (SD) age at follow up was 42.7 (3.9) years. The rate of T2DM was 0.02% ($n = 7$), and 100% of these women had a pregnancy metabolic complication. Women who experienced pregnancy metabolic complications ($n = 117$, 27.9%) had significantly higher median BMI at study entry, and higher rate of non-white Irish ethnicity. Pregnancy metabolic complications were associated with greater postpartum weight retention (B = 1.72, 95% CI 0.08,3.36, $P = 0.040$), higher BMI (B = 0.70, 95% CI 0.09,1.31, $P = 0.025$), greater visceral adipose tissue mass (B = 0.12, 95% CI 0.01,0.23, $P = 0.033$), greater total cholesterol (B = 0.36, 95% CI 0.15,0.58, $P = 0.001$), greater LDL-cholesterol (B = 0.29, 95% CI 0.09,0.50, $P = 0.005$), greater triglycerides (B = 0.06, 95% CI 0.03,0.32, $P = 0.012$), greater glucose (B = 0.22, 95% CI 0.03,0.40, $P = 0.022$) levels and a

higher cardiovascular QRISK 3 score (B = 0.28, 95% CI 0.08,0.49, $P = 0.006$) at 10 years postpartum. In conclusion, metabolic complications in pregnancy were associated with persistent alterations in maternal cardiometabolic profile at 10 years postpartum.

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P5

The effects of device and non-device guided slow breathing on autonomic function in individuals living with diabetes: a systematic review

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This systematic review examined slow breathing as a non-pharmacological adjuvant intervention to improve autonomic function in individuals with Type 1 and Type 2 Diabetes Mellitus. We searched 6 databases (MEDLINE, PsychINFO, CINAHL, EMBASE, Web of Science, Scopus) up to October 9th 2024. Eligible studies included RCTs, non-randomised controlled trials (NRCT), before-and-after time series, and case-control studies involving adults with type 1 or type 2 diabetes undergoing slow breathing interventions (<10 breaths/minute) with or without HRV biofeedback. Extracted data covered intervention characteristics, population, comparator and outcomes. Methodological quality was assessed using Cochrane and JBI risk-of-bias tools. A systematic search identified 6,641 articles, of which 125 underwent full-text review and 7 reported autonomic outcomes. 2 studies evaluated patients with T1DM, 4 focused on T2DM, and 1 included both. Interventions ranged from single-session experiments (4) to programmes with long-term interventions up to 8 weeks (3). Across single session interventions, heart rate variability (HRV) and baroreceptor sensitivity (BRS) consistently improved during slow breathing, attenuating baseline differences vs. healthy controls. While these findings suggest autonomic dysfunction may be temporarily reversible, blunted responses in a subgroup with diabetic kidney disease, suggest limited reversibility with advanced disease. Among the three longitudinal studies, two demonstrated a significant increase in ≥ 1 HRV metric vs. standard care. The third, involving individuals with diabetic polyneuropathy, found no change, suggesting reduced responsiveness at advanced disease stages. These findings support the short-term autonomic benefits of slow breathing in uncomplicated diabetes; however, whether such modulation leads to long-term adaptation remains unclear.

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P6

Assessing the use of an agenda setting tool within tallaght university hospital's diabetes clinic

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Agenda Setting Tools (AST) help doctors and patients identify topics for discussion at OPD. ASTs can enhance interactions between Healthcare Professional's (HCP's) and patients, and promote shared-decision making. Patients (aged $\geq$ 18 years) attending T1D clinics completed the AST. HbA1c levels were taken on the day of consultation. Semi-structured interviews were carried out on patients and HCP's who used the tool. Data analysis was carried out using Microsoft Excel and SPSS®27 (SPSS Inc., Chicago, Illinois, USA). 94 AST's were assessed. 40 patient completed feedback questionnaires. Mean HbA1c was 62 mmol/mol. 38% of patients experienced elevated distress (DDS2 $\geq$3), of whom 37% were referred for psychological evaluation. 80% found discussing DD beneficial. Positive correlation was found between DD and HbA1c ($r = 0.45$, $P < 0.01$) and DD and impaired hypoglycaemia awareness ($r = 0.60$, $P < 0.001$). 83% of patients rated the AST as "helpful" or "Very helpful". "Pump/Sensor" was the most requested topic on the patient's agenda (21%). Patients new to the diabetes service and young patients found the AST helpful for building rapport and structuring consultations. All HCP's found the AST useful in structuring consultations and identifying patient priorities. All expressed a willingness to continue its use in clinics. Challenges identified included time constraints in busy clinics and individualized goal setting. Patients and HCP's responded positively to the use of the AST during consultations, favouring its ability to guide discussions and encourage shared-decision making. Key learnings led to service improvements, including the development of the DD protocol and directory of support options for patients.

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P7

Clinical characteristics and long-term management of HNF1A-MODY in a dedicated MODY clinic

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HNF1A-MODY is sensitive to sulphonylureas (SU). Efficacy can decline over time with weight gain and diabetes duration. GLP-1RAs improve glycaemic control and reduce weight in HNF1A-MODY. This study aimed to establish long-term treatment response. 79 HNF1A-MODY subjects participated in a retrospective observational study. Subjects were phenotyped with annual follow-up. Non-parametric data provided as median and interquartile range with Wilcoxon signed-rank test performed in SPSS. Median age was 48 (37-63), BMI 24.4 kg/m2 (22.0-27.5), diabetes duration 20 (15-31) years and follow-up 8 (3-14.5) years. Prior to genetic diagnosis, 20 (25.3%) were on insulin alone, 14 (17.7%) SU alone, 11 (13.9%) SU combination, 17 (21.5%) diet and 17 (21.5%) non-SU and/or insulin. Following genetic diagnosis 65 (82%) switched to SU-containing therapy with 27 (41.5%) on SU monotherapy at follow-up. 5 maintained pre-diagnosis SU monotherapy. Follow-up SU monotherapy dose (modified release) and HbA1c was 30 mg (15-60) and HbA1c 53 mmol/mol (45-58) respectively. HbA1c was non-inferior after SU conversion (54 mmol/mol [48-63] vs 53 mmol/mol [45-58], $P = 0.210$). 16 switched insulin to SU therapy with 7 remaining on SU monotherapy (HbA1c 52 mmol/mol [45-63] vs 54 mmol/mol [46-56], $P = 1.00$). 19 (24%) were on a GLP-1RAs at follow-up (4 [3-4.25] years) with improvement in HbA1c (63 mmol/mol [58-65] to 55 mmol/mol [44-60], $P = 0.01$) and weight (88.6 kg [80.1-104.2] to 82 kg [74.1-87.9], $P = <0.001$). Retinopathy occurred in 45.6% (11.4% significant). There was low burden of cardiovascular disease, nephropathy and neuropathy. Diagnosis of HNF1A-MODY facilitates SU switch with adequate long-term glycaemic control in 41.5%. GLP-1RAs can be utilised for glycaemic and weight control.

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P8

GLP-1 receptor agonist treatment is associated with increased endogenous DHEAS in men with type 2 diabetes mellitus but is not associated with an increased in patient-reported sexual function outcomes in either sex

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Sexual dysfunction is common in patients with type 2 diabetes mellitus (T2DM). The aetiology is multifactorial. Apart from erectile dysfunction in men, contributing factors are poorly understood. Dehydroepiandrosterone (DHEA), an androgen produced predominantly in the adrenal cortex, positively correlates with improved physical, cognitive and sexual function, including erectile function in men. The aim of this study was to determine if treatment with Glucagon Like Peptide-1 Receptor Agonists (GLP-1RAs) impacts on androgen levels in patients with T2DM and to correlate any change with clinical response, and patient-reported sexual function. Serum androgens, including DHEA sulphate (DHEAS), were measured in patients with T2DM, prior to, and 16 weeks following initiation of GLP-1RA treatment. Validated sex-specific questionnaires were used to measure sexual function. Paired student t-tests were used to compare androgen concentrations and sexual function domain scores pre- and post-treatment. The Spearman correlation test was used to evaluate for the association between percentage weight loss and change in androgens. In men, there was no difference in total or free testosterone following treatment. DHEAS increased from 3.56 + 2.56 to 4.09 + 2.83 μmol/l, following GLP-1RA treatment ($P = 0.0185$). There was no association between percentage weight loss and change in DHEAS ($r = 0.497$, $n = 11$). There was no significant difference in androgens in female patients, following GLP-1RA treatment ($n = 8$). There was no significant change in any domains of sexual function in male or female patients following GLP-1RA treatment. Treatment of T2DM with GLP-1RAs may improve endogenous DHEA in men with type 2 diabetes.

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P9

Medical nutrition therapy assessment as part of the multidisciplinary obesity staging system

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The Irish Obesity Model of Care recommends multidisciplinary team (MDT) assessment. The Multidisciplinary Obesity Staging System (MOSS) was created to assess obesity complexity from a broad MDT perspective 1. The registered dietitians (RDs) have amended their medical nutrition therapy (MNT) assessment to define obesity complexity from a nutrition perspective in MOSS across 6 key areas. This was a retrospective audit of baseline data in the MOSS electronic database, from its inception in August 2023 to December 2024. Data were gathered and analysed using Microsoft Excel 2010 (Microsoft, USA) and are presented as mean $\pm$ standard deviation. Complete MNT assessment data were available on 205 individuals (68.2% female, age 46.7 $\pm$ 14 years, body mass index 52.4 $\pm$ 11.8kg/m2). Across the 6 domains assessed the sources of nutritional complexity were: biochemical nutritional deficiency (74%); poor nutritional intake - meeting some or minimal requirements (50.7%); disordered eating – chaotic pattern, excessive restriction/rigidity, sensory avoidance, loss of control eating or pica (47%); food insecurity (21.5%); Night Eating Syndrome (14.6%); and limited food preparation / planning skills (7.3%). The majority (59.5%) had 1 or 2 sources of nutritional complexity, while 40.5% had 3 or more. Over half of patients had more than one domain of nutritional complexity. Assessing nutritional complexity is necessary to guide individualisation and intensification of MDT obesity care. Future work will look at changes in nutritional complexity and MOSS following obesity treatment. 1O'Malley et al (2024). A pilot study of the Multidisciplinary Obesity Staging System. Obes Facts. 17 (Suppl. 1): 516–586, LBC 4.22.

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P10

Differences in patient reported outcome measures for telehealth vs in-person appointments among people with diabetes using continuous glucose monitors

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The HSE Digital For Care Framework and ADA Standards of Care recommend offering telehealth to enhance patient-centred care access. In diabetes management, integrating technology and telehealth supports real-time data interpretation and shared decision-making, improving outcomes. We surveyed individuals with diabetes using continuous glucose monitors (CGM) attending a Level 3 Diabetes Service in Dublin, comparing experiences of telehealth and in-person care. The survey included items from the Telemedicine Satisfaction and Usefulness Questionnaire (TSUQ), Diabetes Treatment Satisfaction Questionnaire (DTSQ), and custom questions on travel and costs. An anonymous SurveyMonkey link was created with Dexcom Ireland support and distributed during clinics from September–November 2024. Data were analysed using Excel and Python. Eighty-seven participants responded. Among in-person attendees ($n = 41$), 70% drove (37% $>$30 km), and 48% travelled $>$30 minutes—an estimated carbon footprint of 11.52 $kgCO_2$. Virtual appointments saved $\sim$20 minutes on average due to short waiting time (69% waited $<$5 minutes). In-person visits cost $\sim$€20 (food and parking); virtual visits had no associated cost. Annual/unpaid leave was taken for 33% of in-person and 31% of virtual visits. TSUQ showed high satisfaction ($>$3.7) for privacy, clinician engagement, and problem-solving but lower scores ($<$3.1) for equipment trust and perceived health benefit. DTSQ indicated low treatment burden, with no notable difference in treatment satisfaction or burden across in-person and virtual care Satisfaction was similar across care models, while virtual visits were more time- and cost-efficient. This cohort experienced low treatment burden with CGM and flexible clinician access. Addressing technical barriers could further expand telehealth adoption.

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P11

Obstetric and neonatal outcomes in HNF1A-MODY

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Birthweight of HNF1A-affected offspring is largely similar to the background population with rarely reported cases of large for gestational age (LGA) and neonatal hypoglycaemia (NH). Conventional clinical management for pre-gestational diabetes appears sufficient in managing HNF1A-affected women in pregnancy. We aimed to evaluate pregnancy outcomes and review glucose management in HNF1A-affected pregnancies and compare outcomes in offspring of maternal and paternal cases. Obstetric history was recorded at MODY study screening and reviewed at follow up visits. Antenatal variables included pregnancy planning, glycaemic treatment and doses, capillary glucose readings, HbA1c, fructosamine and gestational weight gain. Neonatal variables were birthweight, gestation, mode of delivery, incidence of neonatal hypoglycemia (NH) and offspring diabetes status. 217 pregnancies were included with a live birth rate of 85.2% in the maternal group. Maternal offspring were heavier than paternal cases (75th centile (40-95) vs. 40th centile (21.5-63), $P < 0.001$). NH was more prevalent in pregnancies affected by maternal dysglycemia (13 infants vs. 0 infants, $P = 0.003$). There was an increased rate of LGA ($P = 0.006$) and LSCS ($P = 0.002$) in offspring of insulin treated pregnancy compared to diet control. There was no significant difference in rates of NH ($P = 0.321$). Weight adjusted total daily dose of insulin was 0.61unit/kg/day (0.49-0.62) in trimester 3 ($n = 26$). LGA and NH can occur in HNF1A offspring although these sequelae are less frequent and less severe in paternally inherited cases. Relevant obstetric and neonatal teams should be aware of perinatal concerns to reduce potential morbidity. Prospective studies of glibenclamide in early pregnancy are warranted.

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P12

Peritoneal dialysis is superior to haemodialysis in removal of steroid metabolites in end-stage kidney disease

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Impaired 11β-hydroxysteroid dehydrogenase type 2 activity in chronic kidney disease results in ineffective conversion of cortisol(F) to cortisone(E) which may result in glucocorticoid-mediated mineralocorticoid receptor activation. Previous reports have identified inefficient removal of glucocorticoid metabolites in haemodialysis (HD), however, glucocorticoid metabolism in peritoneal dialysis (PD) has not been studied. In this study, 30 patients ($n = 15$ HD, $n = 15$ PD) underwent multiple time-point sampling of serum and dialysate fluid during either a morning HD session or a peritoneal equilibrium test (PET). There were no statistical differences in age, sex or duration of HD session/PET (4 hour) between the groups. Samples were analysed using liquid chromatography–tandem mass spectrometry. At baseline, there were no significant differences in serum F (PD 362 nmol/lvs HD 339 nmol/l, $P = 0.44$) or E (PD 27 nmol/lvs HD 27 nmol/l, $P = 0.81$) between the two groups. During PET, the PD group showed significant reduction in serum F (362 nmol/lto 267 nmol/l, $P = 0.01$) with a corresponding increase in dialysate fluid F (3.1 nmol/lto 13.1 nmol/l, $P < 0.0001$) and E (1.5 nmol/lto 10.1 nmol/l, $P < 0.0001$). In contrast, patients undergoing HD did not exhibit significant changes in glucocorticoid concentrations in serum (F 339 nmol/lto 294 nmol/l, $P = 0.2$; E 0.03 nmol/lto 2.6 nmol/l, $P = 0.08$) or dialysate (F 0.08 nmol/lto 5.8 nmol/l, $P = 0.4$; E=0.03 nmol/lto 2.6 nmol/l, $P = 0.08$). These findings suggest that PD is more effective than HD in clearance of glucocorticoid metabolites, offering potential advantages in managing glucocorticoid metabolism in patients with end-stage renal disease.

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P13

Sustainable care in endocrinology: carbon footprint comparison of virtual and in-person thyroid clinics

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Climate change is a global health emergency, and the healthcare sector is a significant contributor to greenhouse gas emissions—largely through transport. Telemedicine has emerged as a promising strategy to reduce this impact. This project aimed to assess the carbon footprint of thyroid outpatient clinics, comparing virtual and in-person consultations. Data were collected from two thyroid outpatient clinics in April 2025. For in-person attendees, mode of transport and starting point of travel to clinic were recorded. For virtual attendees, home addresses were used to estimate the distance to clinic. Travel distances were calculated using Google Maps™, and carbon emissions were estimated using published emission intensity values from the Irish Passenger Transport Emissions and Mobility model. A total of 104 patients were included: 75 (72.1%) attended in person and 29 (27.9%) virtually. Among in-person attendees, transport modes included private car (n = 45, 60%; petrol 26.7%, diesel 25.3%, hybrid 5.3%, electric 2.7%), bus (17.3%), walking (8.0%), rail (6.7%), taxi (6.7%), and bicycle (1.3%). The median round-trip distance travelled was 18.0km (IQR: 11.3-83.6km), with a median emission of 1.84 $kgCO_2e$ (IQR: 0.59-8.64 $kgCO_2e$) per consultation. Total in-person travel emissions were 470.12 $kgCO_2e$. For virtual attendees, the median estimated round-trip distance was 20.4 km (IQR: 14.3-131.6 km). Assuming the same transport distribution, the estimated median emission was 2.0 $kgCO_2e$ (IQR 2.0-6.43 $kgCO_2e$) per consultation, with total emissions of 150.28 $kgCO_2e$. Including 27.9% virtual consultations led to a 24.2% reduction in total travel-related carbon emissions, supporting telemedicine as a strategy for sustainable outpatient care.

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P14

Gender differences in the experience of hypoglycaemia: results from the Hypo-METRICS study

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Insulin clamp studies have shown that women have a lower counterregulatory hormone response to hypoglycaemia. We explored associations between gender and experience of hypoglycaemia among people with type 1 diabetes (T1D) and insulin-treated type 2 diabetes (T2D) in the Hypo-METRICS study. Hypo-METRICS was a 10-week cross-sectional observational study of hypoglycaemia experience. Participants (274 T1D, 321 T2D) wore blinded study continuous glucose monitors (CGMs) and recorded their symptoms of hypoglycaemia on a bespoke Hypo-METRICS app in real-time. Symptomatic hypoglycaemia was defined as symptomatic episodes resolved by carbohydrate ingestion. Chi-squared, Fisher's and Wilcoxon rank sum tests were used to test for differences between genders. In the T1D group, there was a female predominance (54%), and 76% used CGM. In the T2D group, there was a male predominance (63%), and 40% used CGM. In both T1D and T2D, there were no significant differences in time below range between men and women (all $P > 0.05$). Women reported more symptomatic hypoglycaemia (4.3 vs 3.3 episodes/week in T1D, 1.4 vs 1 episode/week in T2D; $P < 0.05$). In T1D, women had higher overall rates of autonomic and neuroglycopenic symptoms, specifically sweating, palpitations, coordination difficulties and headache (all $P < 0.05$). Men reported higher rates of hunger ($P < 0.001$). In T2D, women had higher overall rates of neuroglycopenic symptoms, and higher rates of shaking, confusion, difficulty speaking and headache (all $P < 0.05$). Despite similar exposures to hypoglycaemia, women reported greater hypoglycaemia symptoms in this free-living environment. Further work is needed to elucidate the potential underlying causes of these findings.

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P15

Associations between impaired awareness of hypoglycaemia and mental health in insulin-treated type 2 and type 1 diabetes in the hypo-METRICS study

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Impaired awareness of hypoglycaemia (IAH) is associated with an increased risk of depression, anxiety, diabetes distress, and fear of hypoglycaemia in type 1 diabetes (T1D). We explored these associations in people with insulin-treated type 2 diabetes (T2D) and T1D in the Hypo-METRICS study. Hypo-METRICS was a 10-week cross-sectional observation of the hypoglycaemia experience, collecting data on glucose and activity. Participants (325 T2D, 277 T1D) completed questionnaires scoring depression (PHQ-9), anxiety (GAD-7), diabetes distress (PAID), and fear of hypoglycaemia (HFS-II [worry]) at baseline. IAH was defined as a Gold score ≥ 4. The relationships between IAH and the mental health scores were explored using generalised linear regression analyses. In the T2D group, there was a male predominance (63%). 27% had IAH (88/325), and 40% used continuous glucose monitors (CGM). In the adjusted linear regression, IAH was associated with higher HFS-II (worry) (5.3% [0.3%-10.6%]; P 0.048) but not PHQ-9 (P 0.582), GAD-7 (P 0.221), or PAID (P 0.23) scores. In the T1D group, there was a female predominance (54%). 21% had IAH (58/277), and 76% used CGM. In the adjusted linear regression in T1D, IAH was associated with higher PHQ-9 (8.3% [3.2%-13.3%; P 0.001), GAD-7 (9.33% [2.69%-16%; P 0.006), PAID (8.43% [2.62%-14.24%; P 0.005), and HFS-II (worry) (7.86% [1.57%-14.12%; P 0.015) scores. Our data demonstrated associations between IAH and a greater mental health burden in both T2D and T1D. Addressing these mental health challenges should be an important part of the holistic care of people with IAH and insulin-treated diabetes.

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P16

Autoimmunity behind the mask: identifying latent autoimmune diabetes among adults diagnosed with type 2 diabetes

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Background
Latent Autoimmune Diabetes in Adults (LADA) is frequently misclassified as type 2 diabetes mellitus (T2DM), leading to delayed insulin initiation and suboptimal outcomes. International guidelines recommend autoantibody and C-peptide testing in adults with atypical diabetes to guide accurate diagnosis and treatment.
Methods
We retrospectively reviewed adults diagnosed with diabetes at St Luke's General Hospital between January 2022 and December 2024. Using the Cellma electronic health record, we analysed demographics, initial classification, glutamic acid decarboxylase (GAD) antibody status, C-peptide levels, treatment changes, and HbA1c outcomes. Statistical analyses included independent t-tests for C-peptide comparisons and Fisher's exact test for HbA1c improvement.
Results
Of 200 adults with diabetes, 143 (71.5%) were initially classified as T2DM. GAD antibody testing was performed in 116/143 (81.1%), with 16 (13.8%) positive, confirming LADA. Mean C-peptide was significantly lower in LADA patients (0.39 nmol/l) than in GAD-negative T2DM patients (0.97 nmol/l, $P < 0.001$). Following reclassification, 14/16 LADA patients commenced insulin therapy; all demonstrated significant HbA1c improvement ($P = 0.003$). Two patients were awaiting clinical review.
Conclusion
Over one in eight adults initially diagnosed with T2DM in our cohort had LADA. Routine C-peptide and antibody testing in atypical diabetes presentations facilitates early reclassification and targeted therapy, improving glycemic control and potentially preventing complications. Incorporating this diagnostic approach into standard clinical pathways is essential for optimizing diabetes care.

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P17

Clinical outcomes of advanced hybrid closed-loop (AHCL) therapy in adults with type 1 diabetes: implementation in a regional centre

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Introduction
Randomized trials and real-world evidence have demonstrated that advanced hybrid closed-loop (AHCL) insulin delivery systems improve glycaemic ranges and quality of life in people with type 1 diabetes (T1D). In autumn 2023, our diabetes centre launched an insulin pump service for adults with T1D. This study assessed glycaemic outcomes in adults with T1D using AHCL therapy within our service.
Methods
We performed a retrospective analysis of adults with T1D (age $\geq$16 years) who shared glycaemic data with our service up to July 2025. Data were obtained from Dexcom Clarity, Medtronic CareLink, and Ward Enquiry laboratory systems.
Results
Seventy adults with T1DM using AHCL systems were included (mean age 34.3 $\pm$ 13.9 years; 46 females, 24 males). Prior to AHCL initiation, their glycaemic ranges were suboptimal with mean Time -in-Range (TIR) of 16.5 $\pm$ 18.6 %, and mean HbA1c of 67.0 $\pm$ 19.9 mmol/mol. Only 2.7 % of them achieved the recommended $\geq$70% TIR. Following AHCL initiation, mean TIR increased to 75 $\pm$ 11.3 % with 63.5% of the cohort meeting $\geq$70% TIR. Mean glucose management indicator was 7.45 $\pm$ 1.53% .Mean HbA1c decreased to 55.44 $\pm$ 10.6 mmol/mol (P = 0.0012 pre- vs. post-AHCL). By July 2025, the average duration on AHCL therapy was 17 $\pm$ 7.2 months, with average SmartGuard usage of 91.2 $\pm$ 12.9 %. All participants used the MiniMed™ 780G system.
Conclusion
Implementation of AHCL therapy in our regional diabetes service led to substantial improvements in glycaemic parameters among adults with T1D. Ongoing service-level data capture, coupled with sustained resource allocation, will support continuous quality improvement in T1D service.

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P18

Lipoprotein(a) distribution in a specialized cardiovascular cohort: a single-centre analysis

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Lipoprotein(a)[Lp(a)] is a genetically determined, independent risk factor for cardiovascular disease (CVD) and aortic stenosis. Risk thresholds from the European Atherosclerosis Society (EAS) stratification include normal ($<$75 nmol/l), intermediate risk (75–125 nmol/l), and abnormal ($>$125 nmol/l). Moreover, it is estimated that in Caucasian populations approximately 20% are classified as abnormal and there is no difference between males and females. Currently, Lp(a) availability to laboratory service-users is restricted. This service evaluation characterises Lp(a) in a cohort of patients from specialist CVD risk factor clinics in St. James's Hospital, Dublin, where Lp(a) is considered a key laboratory investigation. Serum Lp(a) data from 1,336 patients (50.2% male) tested between January 2022 and June 2025 were analysed. Patients ranged in age from 16 to 91 years (median 49 $\pm$ 14 years). The overall median Lp(a) was 33 nmol/l(interquartile range [IQR] 14–154 nmol/l). Of note the median Lp(a) in females was 45.7 nmol/l(IQR 16–177 nmol/l) and in males 27.9 nmol/l(IQR 11.5–123 nmol/l). Based on EAS thresholds, the cohort's Lp(a) distribution was skewed with 63% $<$75 nmol/l, 8% $\geq$75 and $\leq$125 nmol/l, and 29% $>$ 125 nmol/l. Overall, in this selective cohort of patients a significant proportion (29%) had Lp(a) levels indicative of an independent causal CVD risk factor, reinforcing the importance of Lp(a) screening in high-risk populations. The data also showed a higher median Lp(a) in females suggesting possible sex-based differences. The results are consistent with both recently reported national data and international studies of similar cohorts.

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P19

A study of blood glucose testing modalities in people with type 2 diabetes attending diabetes clinics at an acute hospital

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For many patients with Type 2 Diabetes (T2D), effective management requires regular blood glucose monitoring. While traditionally, this has relied on self-monitoring of blood glucose (SMBG), Continuous Glucose Monitoring (CGM) has emerged as an alternative that can reduce risk of hypoglycemia, lower HbA1c and reduce hospital admissions for patients with T2D on insulin. CGM is not currently reimbursed for T2D patients in Ireland. This study was approved by the local ethics committee. Our goal was to determine the scale of the resulting lack of access to CGM in people with T2D in Ireland. We recorded the blood glucose monitoring modalities of patients attending outpatient diabetes clinics in secondary care. The proportion of patients using SMBG and CGM and their medical therapies were recorded. Data were collected through a self-administered survey from participants attending outpatient diabetes clinics. We found that, of 137 patients surveyed, only 17 (12%) were using CGM for blood glucose monitoring, while 102 (74%) were using SMBG; the remainder were not testing glucose. Amongst 45 patients on insulin therapy, 15 (33%) were using a CGM, and 29 (64%) were using SMBG. This study highlights that a preponderance of patients with T2D in a representative Irish secondary care cohort do not use CGM for blood glucose monitoring, even amongst those on insulin therapy. These findings underscore the lack of access to CGM amongst patients with T2D on insulin in Ireland, which is potentially compromising their level of care and quality of life.

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P20

Management of diabetes in the last days of life- a retrospective review in a tertiary irish hospital

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At end of life, the focus of Diabetes management shifts from the prevention of long-term complications to ensuring that the symptoms of hypo/hyperglycaemia are minimised. We audited the management of diabetes in End-of-Life Care (EOLC), against Diabetes UK "End of Life Guidance for Diabetes Care" to identify strengths and weaknesses of current practice. We identified patients with diabetes who had a "Do not attempt resuscitation-comfort focused care" (DNAR-CFC) order" and died between June 2024-January 2025, excluding Emergency Department and Intensive Care Unit Deaths. We recorded demographics, medication, BGL data, palliative care and endocrine team input. n = 36 patients met inclusion criteria. 1 patient had Type 1 DM, with basal/bolus regimen and multiple BGL checks continued inappropriately on transition to DNAR-CFC. 35/36 had T2DM. 5/35 were on Metformin monotherapy, which was ceased appropriately in all on transition to DNAR-CFC. 30 were on Oral Hypoglycaemic Agents (OHAs), glucagon-like-peptide-1-agonists (GLP-1s), Insulin or a combination. OHAs/GLP1s were ceased in 17/17 patients on transition to comfort care as per guidelines. Insulin was ceased in 21/22 patients (95.45%) and only 3 had further BGL checks despite guidelines recommending at least once daily measurement. Palliative care were consulted in 29 (82.86%) and Endocrine were consulted in 6 (17.14%) in the last days of life. There was varying practice of diabetes management at end of life with infrequent measuring of BSL post insulin cessation. Development of a St. James's Hospital specific Guideline and education of nursing and medical staff is required to improve management of DM in EOLC.

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P21

National audit of pre-gestational diabetes care in 2023: scope for further optimisation

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Pregnancy outcomes in pre-gestational diabetes mellitus are suboptimal. Identified modifiable risk factors include pre-pregnancy care (PPC) and optimisation of glycaemic control prior to conception. This is a retrospective review of pregnancy preparedness, pregnancy care and outcomes relating to type 2 diabetes (T2D). In total 321 pregnancies from 15 hospitals were included. In the T2DM group ($n = 153$), mean maternal age was 34.9 years, BMI 34.3kg/m^2 and ethnicity largely white (40%). Diabetes was present for 4 years before pregnancy. 12 (7.8%) attended pre-pregnancy clinic. Pre-pregnancy HbA1c was 56mmol/mol ($n = 44$). Following conception, 11 (7.2%) women discontinued oral hypoglycaemic agents contraindicated in pregnancy (4 GLP1RA, 5 SGLT2i, 2 DPP4i). 54 (35%) took folic acid. The majority received insulin & metformin (68 women, 44%), insulin alone (42, 28%) and metformin alone (13, 8.5%). Mean HbA1c was 51 mmol/mol in the first trimester and 41 mmol/mol in the third trimester. A minority had access to sensor therapy (18 continuous, 5 flash). 51 women (33%) were hospitalised during pregnancy, 7 (4.6%) had hypertension and 1 (0.1%) experienced pre-eclampsia. Live birth rate was 73%. 80 women (71%) underwent Caesarean section, 28 (25%) had spontaneous delivery and 4 (3.6%) assisted delivery. Mean birthweight was 3224 g at gestation 37+3 weeks. 19 (17.6%) were large for gestational age and 8 (7.4%) were small. 3 cases of congenital anomaly occurred. 25 neonates were admitted to SCBU. Rates of PPC were low. Consequently, glycemic control in early pregnancy was above target. Ongoing effort to modify risk and improve outcomes is needed.

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P22

Standardised Proforma Improves Documentation of Thyroid Eye Disease (TED) in Graves' Disease Patients

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Background
Thyroid eye disease (TED) is a common manifestation of Graves' disease, ranging from mild symptoms to sight-threatening complications. Early recognition is essential for timely ophthalmology referral. An initial audit at our centre identified gaps in documenting TED symptoms and risk factors.
Aim
To evaluate whether a standardised TED proforma improved documentation quality in patients with Graves' disease.
Methods
Two retrospective audits were conducted at the endocrine thyroid clinic, St. Vincent's University Hospital: an initial audit (November 2024, $n = 26$) and a re-audit (June 2025, $n = 20$) after introducing a standardised proforma. Data collected included TED assessment, patient-reported symptoms, symptom-specific findings, and smoking status. Proportions were compared using Fisher's exact test ($P < 0.05$).
Results
TED assessment was documented in 92% of patients (24/26) initially vs 100% (20/20) post-proforma ($P = 0.49$). Smoking status documentation improved significantly (54% vs 100%, $P < 0.001$). The proportion of patients with documented specific symptoms increased for eyelid swelling (27% to 50%, $P = 0.04$), diplopia (15% to 40%, $P = 0.03$), and visual acuity changes (4% to 20%, $P = 0.04$), all statistically significant. Documentation of proptosis (31% to 45%, $P = 0.27$) and eye pain (19% to 15%, $P = 0.75$) also improved, though not significantly. The proportion of patients diagnosed with TED remained similar (50% vs 35%, $P = 0.31$).
Conclusion
A standardised proforma significantly improved documentation of TED symptoms and smoking status. Incorporating structured tools into endocrine clinics can enhance TED recognition and facilitate timely ophthalmology referral.

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P23

Measurement of blood glucose in the emergency department setting may provide an opportunity to detect undiagnosed diabetes

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It is estimated that up to one third of people with type 2 diabetes may be undiagnosed. The Irish College of General Practitioners (ICGP) and the Health Service Executive (HSE) recommend diabetes screening for (1) all adults with BMI $\geq$ 25 kg/m2 with one or more additional DM risk factors, and (2) all adults age $\geq$ 45 years, at least once every 3 years. Every interaction with health care services is a potential opportunity to screen for undiagnosed diabetes. We audited the frequency of glucose measurement amongst patients of age $\geq$ 45 years attending our Emergency Department (ED) over a 6 day time period. Of 389 patients seen, 192 (49%) had glucose tested and 85 patients (44%) were found to have a blood glucose $\geq$ 7 mmol/l. Of those who had blood glucose $\geq$ 7 mmol/l, 65% were known to have diabetes meaning that 35% were potentially undiagnosed. Of patients with a blood glucose $\geq$ 10 mmol/l, 20 had a known history of diabetes and 4 did not. Among the 55 people with glucose $\geq$ 7 mmol/lwithout known diabetes, only 3 (5%) were referred to the diabetes service and these did not include any of the 4 without diabetes and with a blood glucose $\geq$ 10 mmol/l. We conclude that, while it is not the role of the ED to screen for diabetes, it is likely that an opportunity to pick up undiagnosed diabetes and refer patients to specialist services is being missed when glucose is measured.

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P24

The efficacy and safety of semaglutide use in women with polycystic ovary syndrome: results from a dedicated reproductive endocrinology clinic

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Polycystic ovary syndrome (PCOS) is an endocrine disorder characterised by androgen excess, ovulatory dysfunction and insulin resistance. PCOS is commonly associated with obesity. Weight loss has been shown to improve health outcomes in women with PCOS. The aim of this study was to examine the safety of semaglutide in a cohort of women with PCOS, as well as its impact on weight and clinical and biochemical features. Data was collected via retrospective chart review, with a minimum treatment duration of six months required for inclusion. A total of 61 patients with PCOS completed a minimum of six months treatment with semaglutide. Median baseline weight was102 kg (IQR 94-118). Median weight loss at 6 months was 9.8 kg (IQR 5.0-13.2), corresponding to a median of 9% weight loss (IQR 5-13%, $P = 0.005$). This increased to 14.3 kg (IQR 7.9-18.0) after 12 months ($P = 0.007$). Serum testosterone levels reduced by a median of 0.6 nmol/l(IQR 0.1-1.0, $P = 0.01$) after six months. Patients reported significant improvement in acne (52.4%) and oligomenorrhea (68.6%) with semaglutide. Significant gastrointestinal side effects including nausea, vomiting, diarrhoea and dyspepsia were reported in 17 patients (32%), with no reports of pancreatitis. One patient conceived and subsequently had a healthy pregnancy. Our data show that the use of semaglutide in this cohort of women with PCOS was effective for weight reduction, as well as improving symptoms of PCOS and biochemical androgen excess. We further demonstrated that semaglutide was generally safe and well tolerated, and is a useful tool in the management of women with PCOS.

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P25

Significant improvement in breast feeding rates amongst women with diabetes undergoing elective caesarean section (ELCS) following implementation of 2 successful quality improvement projects (QIP) "Implementing blood glucose monitoring on infants born to women with Diabetes on the post-natal ward"

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In 2022,a diabetes-midwife led QIP aimed at reducing unnecessary separation of babies from mothers with diabetes was conducted. This resulted in a new protocol facilitating neonate glucose monitoring on maternity(implemented 2023). In 2023,a further QIP(ERAC- Enhanced Recovery after Caesarean) was launched to

enhance care for women undergoing ELCS. The existing recovery process was inconsistent ,limited maternal autonomy leading to unnecessary separation of mother and baby. A multidisciplinary working group guided by enhanced recovery principles supporting faster return to normal function was implemented. It was divided into 4 phases, including immediate skin-to-skin contact in theatre to strengthen maternal-infant bonding. Aim:Review the impact of these 2 QIPs on NICU admissions and breast-feeding rates amongst women with diabetes undergoing ELCS. Prowellness and EuroKing were utilized for data collection. In 2022, 29 women with diabetes underwent an ELCS, all neonates were transferred to NICU (71% of those were admitted for <24 hour).The rate of breast-feeding on discharge in this cohort was 41%(20% exclusive breast-feeding). In 2024, 43 women with diabetes underwent an ELCS, 16% of neonates were transferred to NICU, with majority (83%) admitted >24 hours. The rate of breast-feeding on discharge was 67% (44% exclusive breast feeding). Glucose monitoring of neonates on maternity and the ERAC pathway are now embedded as standard cate for ELCS births. These QI initiatives resulted in a significant reduction in both NICU admissions (-84% change) and breast-feeding rates ($+26$% change) amongst women with diabetes. Preventing separation of women from their babies, allowing skin-skin contact plays a significant role.

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P26

An audit of continuous glucose monitor (CGM) prescribing following introduction of preferred CGM sensor guidance

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Annual expenditure on Continuous Glucose Monitors (CGM) increased from €18.8 to €55.72 million between 2021-2023. The HSE Reimbursement Application System, launched in December 2023, restricts new CGM access to type 1 diabetes mellitus only. Guidance regarding preferred CGM systems was published in July 2024 following evaluation by the Medicines Management Programme (MMP). Failure to implement recommendations risks continued restricted access to CGM for all individuals living with diabetes. We sought to simplify the MMP guidance aiming to increase adherence and demonstrate significant cost savings. We developed a prescribing support tool and audited adherence across outpatient attendances in May 2025. Data collected includes subtype of diabetes, CGM prescription status pre and post attendance, and the prescriber's rationale for deviation from MMP guidance. Cost saving analysis was completed based on annual total cost saving for all those transitioned to preferred CGM system within this 30 day period. Data is available for 174 of 220 outpatient attendances. 70 insulin pen users were prescribed CGM, 16 of whom were prescribed a preferred CGM system at baseline. From the remaining 54 eligible individuals, 10 were transitioned to a preferred CGM system following their outpatient review (18.5%). The total annual cost saving generated by these 10 changes was €13,329.80. The most common rationale provided for deviation from MMP guidance related to prevention, management or monitoring of hypoglycaemia. This suggests supported implementation of the MMP Guidance is associated with modest cost savings in practice due to perceived clinical benefit from advanced features available only with non-preferred sensors.

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P27

Assessing the prevalence of metabolic associated steatotic liver disease in patient with T2DM attending tipperary university hospital endocrine clinic using FIB-4 index

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Patients with type 2 diabetes (T2DM) are at increased risk of developing metabolic-dysfunction associated steatotic liver disease (MASLD), which can progress to fibrosis, cirrhosis,and hepatocellular carcinoma. Early detection and referral are key to improving outcomes. The EASL-EASD-EASO guidelines recommend screening all T2DM patients for MASLD. The FIB-4 index is a non-invasive tool to assess liver fibrosis in T2DM patients and identify those requiring further evaluation. We are introducing routine FIB-4 assessment in our diabetes clinics and sought to evaluate the level of referral to hepatology for further assessment that this would generate. As this cohort is likely to benefit from GLP 1 receptor agonist (GLP1-RA) treatment we evaluated prevalence of their use in those at high risk. We retrospectively reviewed 689 consecutive T2DM patients attending the diabetes OPD at Tipperary University Hospital over 12-months period. Demographics, medications, BMI, HbA1c, were collected along with laboratory results to calculate FIB-4 scores. Of 576 patients included, 433 (75.17%) had advanced fibrosis excluded (Group 1), and 143 (24.83%) were classified as advanced fibrosis likely or requiring further investigation (Group 2). Mean age, BMI, weight, and HbA1c were similar between groups (66.5 years, BMI ≈ 31 kg/m^2, weight ≈ 90 kg, HbA1c ≈ 64.6 mmol/mol). GLP 1-RA use was reported in 60.1% of Group 2; treatment duration was not analysed. This review highlights the prevalence of MASLD in T2DM and those at high fibrosis risk, enabling timely hepatology referral and intervention. Integrating risk stratification into routine diabetes consultations extends care beyond glycaemic control. We plan to review progress following implementation.

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P28

Applying european thyroid association/american thyroid association consensus statement on management of thyroid eye disease in practice; 2 year outcome of a multidisciplinary thyroid eye disease pathway in Ireland

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The European and American Thyroid associations consensus statement from 2022 on the management of Thyroid Eye Disease(TED) was applied in the development of a new clinic. This pathway established a 12-week course of pulsed intravenous-methylprednisolone(IVMP) as first-line treatment for patients with moderate-to-severe active TED. All patients were managed within a multidisciplinary clinic. A retrospective review was conducted of all consecutive patients treated with pulsed IVMP for active TED from March 2023-2025. Data collected included patient demographics, thyroid status at diagnosis, baseline Clinical Activity Score(CAS), rate of treatment completion, adverse events and additional therapies. Forty-six patients(37 females, 9 males, average age 51 years) were treated; median cumulative dose of 4.5g IVMP. At baseline, 81% had Graves' disease, 11% hypothyroidism, 5% euthyroid and 2% hypothyroid evolving to thyrotoxicosis. At screening, 37% smoked or vaped, 20% were ex-smokers and 43% did not smoke. Thyrotropin receptor antibodies(TRAb) were elevated in 80% and 86% had an orbital MRI. 10% of patients had undergone thyroidectomy or radioactive iodine. Mean pre-treatment CAS was 2.8(range 1–5) improving to 1.5 post IVMP. Diplopia was common(44%). Two patients(4.3%) showed early resolution, discontinuing IVMP. Seven(15.2%) discontinued due to adverse events: deranged liver function($n = 3$), mood disturbance($n = 3$) and atrial fibrillation requiring ablation($n = 1$). Additional therapies included orbital radiotherapy(65%), oral prednisolone(7%), mycophenolate mofetil(4%) and eyelid or muscle surgery(12%). Pulsed IVMP was well tolerated in the majority of patients. Additional treatment modalities were required in a number of patients suggesting the importance of a multimodal approach to patients with active TED.

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P29

Audit of diabetes-specific autoantibodies use in new presentations of type 1 diabetes in St. Vincent's university hospital

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Type 1 diabetes (T1D) is diagnosed in the appropriate clinical context with diabetes-specific autoantibodies (DSAABs). Consensus guidelines on diagnosing T1D advise a cascade testing approach: if glutamic acid decarboxylase (GAD) are negative, it should be followed by paired islet tyrosine phosphatase 2 (IA2) and zinc transporter 8 (ZNT8). This audit evaluated at the use and cost of DSAABs in new T1D presentations in SVUH. We reviewed clinical files and laboratory testing for the last 100 people newly diagnosed with T1D in the outpatient setting. Costs were based on retail price from the laboratory (GAD €25, ZNT 8 €88.88, IA 2 €38.88, insulin antibodies [INSAB] €35.33 and islet cell antibodies [ICA] €40). We examined the cost savings of cascade testing. Of the 100 people audited, 42% were female. Median age was 36 years (interquartile range[IQR]$=18$). All had GAD tested, 88% were positive. Of these 81% ($n = 71$) had other DSAABs

ordered (ZNT8 = 40, IA 2 = 39, ICA = 60, INSAB = 31). Of the 12 GAD negative patients, 10 underwent further antibody testing (ZNT8 = 7, IA 2 = 4, ICA = 9, INSAB = 8). For these 100 patients, the total cost of antibody testing was €11,066.75 (GAD = €2,500, ZNT 8 = €3,555.20, IA 2 = €1,516.32, ICA = €2,400, INSAB = €1,095.23). If cascade testing was used, the total cost would have been €4,033.12, resulting in a cost saving of €7,033 or €70.33 per patient (GAD = €2,500, IA 2 = €466.56, ZNT 8 = €1,066.56). This audit shows that improvements in testing efficiency and cost savings of potentially up to 60% could be achieved if a protocol-based testing cascade following consensus recommendations was implemented.

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P30

A point study of steroid sick day rule awareness in an inpatient population in university hospital waterford

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Patients receiving long-term corticosteroid therapy are at risk of adrenal crisis if they do not adhere to steroid sick day rules during periods of physiological stress or illness. While this is well recognised in Addison's disease, similar risks apply to patients with a range of medical conditions. This point prevalence study aimed to assess awareness of steroid sick day rules among inpatients on long-term steroid therapy at University Hospital Waterford (UHW). On a single day, all inpatients across nine medical and surgical wards were screened. Medication records (Kardex) and admission notes were reviewed to identify patients on long-term steroids. These patients were then asked a single question: "Do you know what to do with your steroids when you become unwell?" Responses were recorded as "yes" or "no." Of 237 inpatients reviewed, 18 (7.6%) were on long-term steroid therapy. Only 2 patients (11.1%) were aware of steroid sick day rules. Among subgroups: 6 patients had Addison's disease (0% aware), 6 were renal transplant recipients (33.3% aware), and 7 had rheumatological conditions (0% aware). Within the rheumatology group, 3 had polymyalgia rheumatica, 2 had rheumatoid arthritis, and 1 had vasculitis. These findings highlight a significant gap in steroid safety education among patients on long-term corticosteroids in the inpatient setting at UHW. Improved patient education strategies, including routine counselling and provision of steroid emergency cards, are urgently needed to reduce the risk of adrenal crisis in this vulnerable population.

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P31

Translating national guidelines into clinical care: an audit of type 1 diabetes care at st james's hospital dublin

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This audit aimed to evaluate adherence to key standards of care for Type 1 Diabetes Mellitus (T1DM) based on the Irish National Clinical Guidelines, published in May 2024. Data from patients with T1DM attending St James's Hospital diabetes clinic and being treated with multiple daily injections of insulin were included. Data was collected on parameters including clinic appointments, use of continuous glucose monitoring (CGM), most recent HbA1c, 14-day time in range (TIR), attendance at structured education, whether hybrid closed loop (HCL) insulin pump therapy had been offered, and use of carbohydrate counting (CC). Data from 488 patients was collected. Of these, 99% were offered at least two diabetes appointments annually. 93% of patients were offered CGM and 78% were using a CGM device. Enrolment to DAFNE (Dose Adjustment for Normal Eating), either virtual or in-person, was offered to 59%, with 31% of those completing the course. Patient's median HbA1c was 64 (56-74) mmol/mol. Only 10% of patients achieved a HbA1c $\leq$48 mmol/mol and 20% had HbA1c$\leq$53 mmol/mol. Median TIR was 47% (31-64%). Dietitian input was offered to 99% of patients, CC education to 82%, and 55% of patients were actively CC. HCL insulin pump therapy was offered to 48%, with 22% of those successfully transitioning to pump therapy. National guidelines provide a robust framework for delivering high-quality diabetes care. This audit highlights adherence to many aspects of these guidelines, however gaps remain in achieving glycaemic target, and the uptake of structured education programs, and increasing access to insulin pump therapy.

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P32

The use of GLP-1 receptor agonist therapy in patients with type 1 diabetes, a retrospective cohort study

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This retrospective cohort study evaluates the real-world efficacy and safety of GLP-1 receptor agonists in type 1 diabetes management. Data from 38 patients at Beaumont Hospital, Dublin, were analyzed for clinical outcomes and safety. Key outcomes included changes in HbA1c, weight, BMI, blood pressure and lipids. Safety data included episodes of diabetic keto-acidosis (DKA) or severe hypoglycaemia. Of the 38 patients 13 were male and 25 were female. The mean age was 47 years old (SD = 11.29). The mean duration of diabetes was 27 years (SD = 11.57). The mean HbA1c was 63.8 mmol/mol (SD = 12.13) with a reduction of 4.24mmol/mol (SD = 12.54). The average reduction in weight was 8.6kg (SD = 9.50). The mean BMI of the group was 34 (SD = 4.58) with a reduction of 2 (SD = 3.92). There was one episode of DKA (post-surgery), and no severe hypoglycaemia. The mean duration of therapy was 27 months (SD = 14.96). All patients were using semaglutide except one, using dulaglutide. Systolic BP reduced by 7.3mmHg (SD = 22.37), diastolic BP increased by 1.5mmHg (SD = 9.85). The was an average reduction in LDL of 0.35mmol/l (SD = 0.50). GLP-1 receptor agonists improved glycemic control, weight, and cardiovascular risk markers in type 1 diabetes; further large-scale studies are warranted.

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P33

Evaluating the effects of HCL insulin pumps on weight and glycaemic control in type 1 diabetes: a retrospective multi-centre study

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Hybrid Closed Loop (HCL) Insulin Pumps are increasingly standard in healthcare systems for managing Type 1 Diabetes (T1D), offering improved glucose control, safety, and patient satisfaction. We assessed the impact of HCL pumps on HbA1c, weight, Time-in-Range (TIR), and hypoglycaemia (<4 mmol/l) through a retrospective review of 317 T1D patients from two clinics in Dublin. Independent variables included age, gender, pump type, and prior pump use; dependent variables were analysed using non-parametric tests. The median age was 40 years; 53.6% were female. Median HbA1c improved from 62 mmol/mol [7.8%] pre-HCL to 54 mmol/mol [7.1%] post-HCL ($P < .001$, $r = 0.6$). No significant HbA1c differences were observed by pump type, gender, or prior pump use. Among those with baseline HbA1c 55–64 mmol/mol ($n = 91$), 49.5% reached $\leq$53 mmol/mol, and 20.9% saw a $\geq$20% reduction. Of those with HbA1c $\geq$65 mmol/mol ($n = 135$), 27.4% reached $\leq$53 mmol/mol, with 55.6% achieving $\geq$20% reduction. TIR increased from 57% to 67% ($P < .001$, $r = 0.45$), and there was a 62% reduction in patients spending $\geq$4% time in hypoglycaemia. Weight increased from 79.4 kg to 80.8 kg ($P < .001$, $r = 0.3$), with 30% experiencing a $\geq$5% gain and 12.7% a $\geq$5% loss. HCL pumps significantly improved glycaemic control across all subgroups. Nearly half of those with a HbA1c of 55–64 mmol/mol met target levels. Weight gain was observed in some but with unclear clinical relevance.

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P34

Bone health dynamics across a playing season : a longitudinal analysis of DXA and biomarkers in female GAA players

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Relative Energy Deficiency in Sport (REDS) is caused by low energy availability (LEA), where energy expenditure exceeds intake. Risks include low bone mineral density (BMD), alteration in bone turnover markers (BTM), and impaired bone microarchitecture leading to fragility fractures and osteoporosis. 44 female intercounty GAA players underwent DXA and blood-based assessments at three

time points across a playing season, including calcium metabolism markers (Calcium,Magnesium,phosphate,Vitamin D,PTH), BTMs, and hormones (IGF-1, GH,TFTs, insulin,leptin). 25 (57%) participants reported > 1 fracture in their playing career with 2 reporting fragility fractures. All assessed had normal BMD Z-scores(>-1). A significant association was noted between lower BMD Z-scores and higher LEAF-Q questionnaire scores (indicating risk of LEA). Using a Z-score of > 0, suggested by some studies due to the osteogenic benefits of high impact sports, 6 participants would be deemed at risk. Previously reported effects of LEA of increased CTX-1 and GH and decreased P1NP and IGF-1 were not evident in our study. Calcium levels throughout the study were normal. Vitamin D insufficiency ranged from 12- 27% across the study. Vitamin D supplementation was low ranging from 12% to 19% across the season. Low PTH was noted in 16% of participants at least once, potentially as an effect of chronic exercise and the resultant drop in basal PTH. Exercise, particularly weight- bearing activities, is generally considered beneficial for bone health and may be a factor protecting these female athletes from potential adverse consequences of LEA. This study was approved by CREC and supported by Research Ireland.

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P35

Targeting GPR 120 and GPR 40 with natural agonist flaxseed oil enhances beta cell function and reduces metabolic stress in an insulin-resistant high-fat-fed mouse model

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G-Protein-Coupled Receptors, GPR 120 and GPR 40, are potential avenues for treating type 2 diabetes. This study aimed to use natural GPR 120/GPR40 agonist flaxseed oil to investigate the mechanistic function of downstream signalling in islets and peripheral tissues. C57BL/6 mice, on a 12 week high-fat-fed (HFF) diet supplemented with streptozotocin (40mg/kg x 5) were treated with flaxseed oil for 21-days. After 21 days, islet and peripheral tissues assessed morphology, protein expression and proliferation (immunohistochemistry), tissue genes and intracellular signalling (qPCR). In HFF mice, β-cell proliferation increased (122%, $P < 0.001$), β-cell mass decreased (59%, $P < 0.01$), β-cell area increased (1%, $P < 0.01$) and α-cell mass decreased (89%, $P < 0.01$). HFF jejunal gene expression of GPR 120 (69%, $P < 0.05$), GPR 40 (116%, $P < 0.01$), CCK (58%, $P < 0.001$) and JNK 2 (141%, $P < 0.01$) increased with flaxseed oil administration. In flaxseed-treated HFF mice, ileum GPR 120 (150%, $P < 0.05$), GPR 40 (671%, $P < 0.01$), JNK 2 (133%, $P < 0.05$) and p 38 (75%, $P < 0.05$) gene expression augmented. Duodenum gene expression of GPR 120 (113%, $P < 0.01$), GPR 40 (233%, $P < 0.01$), ERK 2 (256%, $P < 0.01$), JNK 2 (89%, $P < 0.01$) and p 38 (400%, $P < 0.001$) upregulated. HFF colon gene expression was upregulated for GLP-1 (163%, $P < 0.01$), JNK 1 (145%, $P < 0.01$), ERK 1 (100%, $P < 0.05$), but downregulated for ERK 2 (75%, $P < 0.001$) and p 38 (67%, $P < 0.01$). In peripheral tissues, HFF adipose gene expression increased for GPR 120 (180%, $P < 0.01$), GPR 40 (431%, $P < 0.01$), ERK 1 (200%, $P < 0.01$), ERK 2 (74%, $P < 0.01$), but reduced for JNK 1 (82%, $P < 0.01$) and HFF liver p 38 gene expression (64%, $P < 0.05$). GPR 120 and GPR 40 are promising type 2 diabetes treatments, as omega-3 induced activation promotes β-cell proliferation, elicits anti-inflammatory effects, and modulates islet function.

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P36

Steroid-induced hyperglycaemia in haematological malignancy

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Steroids are routinely used in the treatment of haematological malignancies, particularly in lymphoid cancers such as lymphoma and myeloma. Steroid-induced hyperglycaemia (SIH) is a recognised complication, yet there are no national or international guidelines on SIH screening in this population. The primary objective of this study was to determine the incidence of Steroid induced hyperglycaemia in patients with haematological malignancies undergoing steroid-based regimens. This was a prospective observational study conducted over a six-month period. Non- diabetic adult patients with newly diagnosed or relapsed haematological malignancies who were due to start steroid-containing chemotherapy regimens were enrolled. During treatment, capillary blood glucose monitoring was performed routinely at each haematology day ward visit. Participants were observed for 6-month following commencement of treatment. Those with two random plasma glucose readings >11.1 mmol/lon separate occasions were referred to the Endocrinology service for assessment. 14 particpants were recruited – 4 participants had prediabetes at screening (HbA1c 39-47mmol/mol). During the follow-up period only 1 patient (7.1%) met the criteria for steroid-induced diabetes. No patients developed clinical symptoms or complications related to hyperglycaemia.The patient who experienced dysglycaemia did not have diabetes risk factors present at recruitment. The incidence rate of new diabetes in patients exposed to steroid containing chemotherapy in this cohort was 7.1%. These findings suggest that routine glucose monitoring in all patients receiving steroid therapy for haematological malignancies may not be necessary. Patients who were pre-diabetic at screening were not seen to develop steroid induced diabetes more frequently than those without pre-diabetes.

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P37

Prevalence and risk factors for radiotherapy-induced hypopituitarism in survivors of primary, non-pituitary brain tumours treated with intensity-modulated radiotherapy

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Cranial irradiation is a well described cause of hypopituitarism. However, there is limited evidence estimating the risk of hypopituitarism in non-pituitary brain tumour survivors treated with newer radiotherapy techniques including intensity-modulated radiotherapy (IMRT). We assessed the prevalence and risk factors associated with radiotherapy-induced hypopituitarism in adult survivors of brain tumours that were distant from the hypothalamic-pituitary-axis and treated with IMRT. Pituitary function was assessed in 140 brain tumour survivors between 2012-2022. Prospectively recruited survivors ($n = 54$) underwent a glucagon stimulation and baseline pituitary testing. Retrospective patients ($n = 86$) underwent annual synacthen testing and pituitary profile, with growth hormone (GH) assessments in selected survivors. Median age at radiotherapy was 39.7 years (IQR 30.5-49.8) and follow-up interval following radiotherapy was 60.5 months (IQR 36.0-83.0). Prevalence of hypopituitarism was 55% ($n = 51/93$). GH deficiency occurred in 54% ($n = 50/93$), gonadotropin deficiency in 11% ($n = 15/138$), adrenocorticotrophic hormone (ACTH) in 12% ($n = 17/138$), thyroid-stimulating hormone (TSH) deficiency in 9% ($n = 12/137$). A composite outcome of gonadotropin, ACTH or TSH deficiency occurred in 16% ($n = 22/134$). Multivariate logistic regression analysis revealed higher pituitary doses were significantly associated with developing deficits across all hormone axes. Longer follow-up interval was significantly associated with gonadotropin and TSH deficiency. The composite prevalence of gonadotropin, ACTH or TSH deficiency was significantly lower in this study compared to a previous study in our institution using older 2 and 3-dimensional radiotherapy (16 vs. 34%, $P < 0.01$). The prevalence of the most clinically significant pituitary hormone deficiencies (ACTH, TSH and gonadotropin) is relatively low, potentially occurring less frequently with modern radiotherapy techniques.

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P38

Predictors of the need for pharmacological treatment of hyperglycaemia in women newly diagnosed with gestational diabetes

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Gestational Diabetes Mellitus (GDM) affects approximately 1 in 7 pregnancies in Ireland. Whilst the mainstay of GDM treatment is lifestyle modification, a significant proportion of women require pharmacological therapy to achieve target blood glucose levels. This work examines if maternal characteristics at the time of GDM diagnosis can predict which women will require treatment

intensification. The EMERGE randomised controlled trial (NCT02980276) compared the efficacy of early metformin (vs placebo) in addition to lifestyle modification for the treatment of GDM. For the present work, anonymised data were extracted from the EMERGE database. The primary outcome of interest was insulin initiation. Candidate predictor variables known to be associated with insulin resistance were also extracted, as measured at the time of GDM diagnosis. Multivariate logistic regression analyses were performed in each treatment subgroup to identify which variables were independent predictors of insulin initiation. In the placebo group ($n = 262$), the independent predictors of requiring pharmacological treatment were: gestational age ($P = 0.001$), HbA1c ($P = 0.029$), and fasting glucose on the oral glucose tolerance test (OGTT) ($P = 0.000$). In the group who received metformin ($n = 259$), the independent predictors of requiring additional insulin treatment were: gestational age ($P = 0.002$), HbA1c ($P = 0.003$), fasting glucose ($P = 0.016$), 1-hour glucose ($P = 0.028$), and 2-hour glucose on OGTT ($P = 0.012$). This analysis shows that commonly measured parameters can be used at the time of GDM diagnosis to estimate the probability of subsequently requiring pharmacological treatment of hyperglycaemia, with moderate accuracy. Once externally validated, these models may allow a more personalised approach to GDM care in the Irish population.

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P39

Can imaging concordance in primary hyperparathyroidism predict the development of sequelae of hyperparathyroidism?

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Primary hyperparathyroidism (PHPT) is an endocrine disorder characterized by excess secretion of parathyroid hormone (PTH), resulting from the growth of one or more parathyroid adenomas. The biochemical hallmarks of PHPT are hypercalcemia and high/ inappropriately normal PTH. PHPT can lead to osteoporosis, chronic kidney disease and nephrocalcinosis. The aim of this audit was to assess whether imaging concordance would correlate with the development of PHPT complications. Patients attending the endocrinology outpatient clinic in Bantry General Hospital with PHPT from 12/8/2024 to 24/2/2025 were screened. Data collected included patient demographics, location of parathyroid adenoma based on ultrasound neck (US) and Technetium-99m sestamibi scan, serum calcium level on diagnosis, estimated glomerular filtration rate (eGFR), presence of nephrocalcinosis on renal imaging (US/CT), history of fragility fractures and osteoporosis. 31 patients were identified as having PHPT, 74.2% female. The mean age was 60.9 (range 30-82). 7/31 (23%) were under 50. 5/31 (16%) had concordant imaging. Of these, one demonstrated nephrocalcinosis, two had osteoporosis, and one had chronic kidney disease (CKD). 3/31 (10%) had discordant imaging - one had nephrocalcinosis, one had osteoporosis. 8/31 (26%) had a parathyroid adenoma shown only on one imaging modality - one had nephrocalcinosis, two had osteoporosis, two had fragility fractures, six had CKD. 4/31 (13%) had no abnormality seen on either imaging modality - two had nephrocalcinosis, two had osteoporosis, and two had CKD. 11/31 (35%) patients underwent only one imaging modality. Our audit did not identify any association between imaging concordance and presence of complications of PHPT.

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P40

Changes in lipid profile in non-obese pregnant adults living with type 1 diabetes and the impact on pregnancy outcomes

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Normal foetal development depends on endogenous lipid synthesis and maternal lipid transfer. Levels of low density lipoprotein (LDL), total cholesterol (TC), high density lipoprotein (HDL) and triglycerides (TG) all rise in pregnancy to meet the demands of the developing foetus. We aimed to evaluate (1)lipid changes throughout pregnancy (2)lipid changes in women with and without microvascular complications and (3)correlate lipid levels with pregnancy outcomes including large for gestational age infant (LGA),neonatal intensive care unit (NICU) admission and pre-eclampsia. We retrospectively analysed lipid levels from 40 Caucasian women with T1DM, 40 non-pregnant women (NP) and 124 women with normal glucose tolerance (healthy controls -HC). Women with T1DM had a median age of 33.75 years. Levels of TC, LDL and TG rose throughout pregnancy, peaking in the third trimester (6.9, 3.6, 2.95 mmol/lrespectively). When compared to a non-pregnant population, statistically significant differences appear in all lipid profiles in trimester 2 (TC 5.75 vs 4.1, HDL 2.2 vs 1.75, LDL 2.9 vs 2.1 and TG 1.55 vs 0.8 mmol/l, $P < 0.01$) and remained higher throughout trimester 3. When compared to normoglycaemic pregnant women, T1DM had higher HDL, LDL and TG levels in trimester 2 and 3 (2.1 vs 1.74, 3.6 vs 3.83 and 2.95 vs 2.44 mmol/lrespectively, $P < 0.01$). We did not find any association between elevated lipid levels and adverse outcomes. Significant changes in lipid levels are seen throughout pregnancy in women with T1DM. Elevated lipids levels did not contribute to adverse maternal or fetal outcomes.

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P41

Investigating the mechanism by which hepatitis C virus (HCV) causes insulin-resistance in type 2 diabetes mellitus (T2DM)

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T2DM can occur when our body becomes resistant to insulin. HCV infects hepatocytes and is associated with an increased incidence of T2DM. However, the mechanism by which HCV induces T2DM is poorly understood. Intracellular insulin signalling triggers the activation of the Insulin Receptor Substrate (IRS), leading to glucose transporter-mediated glucose uptake. Insulin signalling is tightly controlled by regulatory proteins called Suppressor Of Cytokine Signalling (SOCS), which bind IRS, thus blocking further signal transduction. We recently discovered the HCV ion channel protein, p 7, independently upregulates SOCS 3. Therefore, this study aimed to determine if HCV-p7 blocks insulin signalling via its upregulation of SOCS 3: a process that may be responsible for the development of T2DM. The Huh 7 hepatocyte cell line was transfected with SOCS 3 or HCV-p7 DNA plasmids, followed by insulin stimulation. Cell lysates were analysed by immunoblotting for pIRS 1, IRS 1, SOCS 3 and Beta-Actin. One-way ANOVA and unpaired t-tests were used to measure statistical differences. We found that both insulin treatment and HCV-p7 expression increased SOCS 3 protein levels, which correlated with reduction in insulin-mediated pIRS 1 ($n = 3$). Therefore, this study reveals a new mechanism by which HCV-p7 induces insulin resistance in liver hepatocytes and highlights SOCS 3 as a potential therapeutic target to improve insulin sensitivity and cure T2DM.

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P42

Routine radiological imaging in patients with SIAD and all-cause hyponatraemia reveals a high rate of pathology; a retrospective review

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Despite the high prevalence of hyponatraemia and it's clinical significance as a marker of underlying pathology, guidelines for imaging in patients with hyponatraemia are lacking. This retrospective review aims to evaluate the yield of radiological imaging specifically performed in the workup of hyponatraemia, and identify risk factors for underlying pathology. 134 patients out of a total 9194 patients undergoing CT in TUH between October 2021 and October 2023 were included in this study. 54% ($n = 72$) were female, mean age 71.9 years and nadir serum sodium concentration (pNa) 122 mmol/l. CT brain-thorax-abdomen-pelvis was performed in 44%, thorax only in 18% and CT thorax-abdomen-pelvis in 15%. 81% of CT imaging studies revealed abnormalities, with 60% having hyponatraemia-related findings. Non-malignant respiratory pathology was most common,61%, followed by malignancy,23%. 25% of patients with thoracic abnormalities on CT had a normal CXR. There were significantly higher rates of smoking (50% vs 8%,$P = 0.01$), alcohol excess (26% vs 4%,$P = 0.02$), lower BMI (23.7 vs. 27.5,$P = 0.01$), and lower serum albumin (39 vs. 43,$P = 0.003$) in patients with abnormal CTs compared with those with normal imaging, while pNa and age were not significantly different between the two groups. Rates of

malignancy were similar in those with SIAD and those with hypo- and hypervolemic hyponatraemia, 10% vs 21%,$P = 0.24$; 35% of those with malignancy had a UNa <20 mmol/l. This study underscores the need for a low threshold for CT imaging in patients with hyponatraemia, especially but perhaps not limited to those with SIAD. These findings advocate for prospective studies to refine imaging protocols.

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P43

Diabetes distress in adults with type 1 diabetes: the role of structured education, technology satisfaction, and hypoglycaemia fear

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Diabetes-related distress (DRD) is a significant psychological burden affecting outcomes in people with Type 1 Diabetes Mellitus (T1DM). Identifying modifiable predictors of distress may guide targeted interventions in clinical practice. Diabetes distress is a common but under-recognised psychological burden in people with type 1 diabetes mellitus (T1DM). We examined the relationship between structured education, technology satisfaction, and fear of hypoglycaemia with diabetes distress. A cross-sectional study of 62 adults with T1DM was conducted. Participants completed the 17-item Diabetes Distress Scale (DDS17) and surveys assessing technology satisfaction (1–5), fear of hypoglycaemia (1–5), and completion of structured education (e.g. DAFNE). Clinical data included HbA_1c, age, complications, insulin regimen, and monitoring method. Elevated distress was defined as DDS 17 ≥ 2. Independent-samples t-tests and Pearson correlations assessed associations. A decision tree model identified key predictors of elevated distress.Thirty-seven percent of patients reported elevated distress. Completion of structured education was associated with significantly lower mean DDS 17 scores compared to non-completers ($P = 0.029$). Technology satisfaction ($r = +0.06, P = 0.67$) and fear of hypoglycaemia ($r = -0.10, P = 0.42$) were not significantly associated with distress. The decision tree model achieved 68.8% accuracy, with HbA_1c, age, and structured education as the strongest predictors. Structured diabetes education appears protective against elevated distress in adults with T1DM. In this cohort, technology satisfaction and fear of hypoglycaemia did not independently predict distress. These findings support incorporating structured education and routine psychosocial screening into T1DM care. Larger studies are needed to refine predictive models of distress.

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P44

Audit of continuous glucose monitoring in older adults with diabetes attending an irish tertiary hospital

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Diabetes in the older person is challenging as it often in the context of frailty. In the frail individual the consequences of hypoglycaemia outweigh the benefits of avoiding hyperglycaemia. The American Diabetes Association (ADA) provides standards of care for older adults, including glycaemic targets prioritising safety and quality of life. This audit assessed adherence to ADA guidelines on glycaemic targets in older adults with diabetes using continuous glucose monitoring (CGM) devices. Older adults (aged >65 years) with diabetes using CGM devices attending our service were included. Clinical information, glycated haemoglobin (HbA1c), and CGM metrics were gathered retrospectively from medical records and the DEXCOM CLARITY online platform. Data collection occurred between January and March 2025. A total of 123 individuals were included. Median age was 72 years (IQR = 10), 64 (52%) were male, and 76 (61.8%) had type 1 diabetes. Mean duration of diabetes was 31.3 years ($\pm$15.4). Mean HbA1c was 67.4 mmol/mol ($\pm$13.7), with 55.7% achieving the ADA target of <64 mmol/mol. With regard to CGM metrics, 56 (45.5%) had time in range $>50\%$; 68 (55.25%) had time below range $<1\%$, 121 (98.4%) had time above range level 1 $<50\%$; and 31 (25.2%) had time above range level 2 $<10\%$. Although over half of older adults met ADA HbA1c targets, CGM data revealed ongoing exposure to hypo- and hyperglycaemia. These findings highlight the importance of CGM in individualising diabetes care in older adults and support broader access to CGM alongside multidisciplinary input to optimise safety and quality of life.

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P45

Thyroid autoantibody testing in practice: an audit of TPO antibody measurement requests in a tertiary hospital

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Thyroid peroxidase (TPO) antibodies are commonly present in individuals with Hashimoto's thyroiditis and, less frequently, in those with Graves' disease. The National Institute for Health and Care Excellence (NICE) recommends measuring TPO antibodies once in adults with elevated thyroid-stimulating hormone (TSH) levels and advises against repeat testing due to their limited diagnostic value. This audit was undertaken to evaluate TPO antibody testing practices in the Midwest region and assess compliance with established guidelines. A retrospective review was conducted of all TPO antibody tests performed in 2023 and 2024, including corresponding thyroid function tests. Individuals under 18 years were excluded. Laboratory-specific reference ranges were used to define normal TSH and TPO values. A total of 9,960 TPO antibody tests were performed on 7,425 individuals with 1,279 (17.2%) having repeat TPO testing. On average, TPO testing was repeated 2.6 times, with the frequency of duplicates ranging between 2 to 11 times. The majority (77%) were female, with a median age of 47 years. Most requests originated from primary care (76.3%), followed by obstetrics and gynaecology (13.8%) and secondary care (3.1%). Only 14.9% ($n = 1,482$) of tests were associated with a TSH above 4.2 mU/l, the threshold that justifies testing. Among these, 866 had subclinical hypothyroidism and 166 had overt hypothyroidism. While appropriate TPO testing can support the diagnosis of autoimmune thyroid disease, this audit highlights a high volume of potentially unnecessary testing. These findings support the need for improved adherence to clinical guidelines to ensure appropriate and cost-effective use of thyroid antibody testing.

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P46

Audit of amount and management of diabetes distress using a type one consultation tool developed by the health innovation network south london and kings college London

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Diabetes is a chronic condition that is known to cause condition specific distress. Irish guidelines advise clinicians should be able to recognise distress and provide pathways for management. We audited the piloting of a Type 1 Diabetes Consultation Tool (T1C) which includes an assessment of diabetes distress (DDS) levels in the young adult clinic in St Vincent's University Hospital, from January 2024 to March 2025 ($n = 124$). The diabetes distress score (DDS2) section of the T1c is a two part question, which is scored out of 6, with 1 being low distress and 6 being high distress. This section was completed independently by the patients. 73 were female and 50 were male. 122 had type one diabetes. 45 had pumps. The mean DDS was 2.8. 30% had high distress (DDS >/= 3.5, $n = 27$), in keeping with reporting from other centres. Elevated HbA1c was found to be correlated with higher DDS ($P = <.001$) 79 attenders had finished or had accepted a referral to DAFNE. Where elevated DDS was identified the main approach was to arrange a close follow up with the MDT ($n = 10$). Four patients were reviewed by the consultant at time of appointment. Other interventions included referral to: community mental health services ($n = 5$), general mental health services ($n = 4$) and eating disorder services ($n = 1$). One was referred to the pump start pathway. Referral to mental health supports was common but underused, indicating a role for a diabetes specific psychology service.

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P47

Audit of documentation of contraceptive advice and pregnancy avoidance counselling to patients starting glucagon-like peptide-1 receptor agonists at a hospital obesity clinic

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Glucagon-like peptide-1 receptor agonist (GLP-1 RA) use is contraindicated during pregnancy, because of teratogenicity concerns and observations of foetal adverse effects in animal studies. The National Institute for Health and Care Excellence recommends avoidance in pregnancy and contraception use in women of childbearing potential. Thus, providing and documenting appropriate counselling on contraception use and pregnancy avoidance for females of childbearing age, prior to initiating therapy is crucial. We sought to evaluate the documentation of contraceptive advice and pregnancy avoidance counselling in dictated clinic letters regarding women aged 15 to 55 years, prior to GLP-1 RA initiation. Dictated letters between 28th October to 10th November 2024 from the obesity new referral clinics in Galway University Hospital were audited. Data was collected and analyzed using Microsoft Excel. Of 33 patients who attended, 19 were female and 16 (84.2%) of these were of childbearing age. Eight (50%) of these patients were prescribed GLP-1 RA, five (31.2%) were already on them, and three (18.8%) declined pharmacotherapy. Documentation of contraceptive advice was found in two (12.5%) dictated letters, and pregnancy avoidance counselling in five (31.3%). This audit provides evidence of inadequate documentation of essential reproductive counselling to patients with obesity prior to GLP-1 RA initiation. Whether appropriate counselling was provided but not documented, or patients are not adequately counselled remains to be determined. Strategies to mitigate this potential risk, including educational sessions for doctors and emphasizing the importance of complete documentation may help. A re-audit is planned to assess the impact of these interventions.

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P48

Impact of gestational diabetes screening method on maternal and neonatal outcomes: a retrospective analysis at our lady of lourdes hospital

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Gestational diabetes mellitus (GDM) is usually diagnosed using the oral glucose tolerance test (OGTT), sometimes following a glucose challenge test (GCT) in women with risk factors for GDM. Since the COVID-19 pandemic, Our Lady of Lourdes Hospital (OLOL) has been using the GCT alone to screen for GDM. However, national guidelines recommend using the OGTT. We audited our practice to compare outcomes between using OGTT and GCT. We reviewed data from all women who gave birth at OLOL in 2019 and 2022 ($n = 5804$), when OGTT and GCT were used, respectively, to diagnose GDM. We compared maternal outcomes such as delivery methods, induction rates and treatment of GDM, as well as neonatal outcomes such as birth weight and admission to neonatal intensive care (NICU). More women were diagnosed with GDM in 2022 using GCT than in 2019 with OGTT (18.3% vs 12.5%, $P < 0.001$). Induction of labour was higher in 2022 (36.9% vs 31.7%, $P < 0.001$), but delivery methods were largely unchanged. Treatment was similar both years with just under 2/3 using insulin. Gestational age at delivery showed no difference (36.7 ± 2.7 vs 35.9 ± 2.74 weeks, $P = 0.16$). There was no statistically significant difference in Caesarean section rates. Rates of macrosomia, preterm births, and NICU admissions were similar in both years. Using the GCT alone leads to more women being diagnosed with GDM but does not improve outcomes for mothers or babies. This supports returning to the OGTT as the main test for GDM, following national recommendations.

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P49

Poor awareness of sick day rules with SGLT2i in cardiology, chronic kidney & diabetic clinics

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The introduction of sodium-glucose co-transporter 2 inhibitors (SGLT2i) has significantly transformed the management of several chronic conditions, including heart failure (HF), chronic kidney disease (CKD), and type 2 diabetes mellitus (T2DM). Despite their well-documented benefits, the use of SGLT 2 inhibitors is associated with specific risks, particularly during episodes of acute intercurrent illness. These risks necessitate careful management through the implementation of 'sick day rules'—guidance for temporarily discontinuing SGLT2i during acute illnesses to prevent complications such as dehydration, acute kidney injury (AKI), and euglycemic diabetic ketoacidosis (DKA). According to the Health Service Executive (HSE) guidelines, SGLT2i should be temporarily withheld during such illnesses. At Sligo University Hospital, we assessed patient awareness of sick day rules among individuals prescribed SGLT 2 inhibitors. We conducted a face-to-face survey involving patients and caregivers between1st May 2025 and 10th July 2025. Eighty patients (mean age 68.2 ± 13.14 years; range 39–94; 52.5% female) were included. Indications: T2DM (73.75%), HF (43.75%), CKD (30%). Agents prescribed were dapagliflozin (71.25%), empagliflozin (25%), canagliflozin (3.75%). Most (71.25%) had used SGLT2i for between one to five years. Awareness of sick day rules was as follows: 35% fully aware, 3.75% partially aware (vomiting/diarrhoea only), and 61.25% unaware. Awareness rates were 39% in diabetic patients, 33% in CKD, and only 20% HF. Improved patient education strategies are necessary to mitigate avoidable adverse events and to enhance the safety of SGLT2i therapy during episodes of acute illness.

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P50

Outcomes from a multidisciplinary diabetes foot disease (DFD) service

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Multidisciplinary team (MDT) approaches reduce the amputation rates among individuals with DFD. A MDT clinic was formally introduced in January 2025 in University Hospital Limerick. Criteria for the MDT clinic included patients requiring input from two or more of the following services, endocrinology, vascular surgery or infectious diseases (ID). Those not fulfilling this criteria underwent usual care. We report the outcomes of our diabetes foot MDT for those with the complex care needs. A total 22 diabetes patients were assessed by the MDT over 5 months. Those using the service had an average age (SD) of 70.5 ± 15.57 years and 68.18% were male. At the time of review median HBA1c of 65 mmol/mol (range 37-85) among the cohort. All patients were reviewed by podiatry and endocrinology teams, with vascular surgery, vascular nurse specialist and ID assessing 81%, 50% and 31.8% respectively. MDT interventions were as follows; 50% were managed conservatively, 36% received antibiotic therapy, 13% required nail avulsion surgery, Only 1 patient needed urgent admission from MDT clinic. Outcomes were as follows; 40% required follow up within MDT service, 27% followed in the acute podiatry clinic, 13% in the vascular clinic and 20% of the patients followed with community podiatry. The 30-day admission rate for this cohort was 13%, the amputation rate was 13% and mortality was recorded at 0%. Further data collection is required to determine the number of patients "alive and ulcer free" at 12 weeks to enable comparison to the NHS national diabetes foot audit.

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P51

An audit of inpatient hypoglycaemia management in a model 4 hospital

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Hypoglycaemia is a common complication in patients with diabetes. Within the hospital, it is associated with longer admissions and increased morbidity and mortality. This audit evaluated whether hypoglycaemic episodes in diabetic inpatients were compliant to the Galway University Hospital (GUH) protocol "Hypoglycaemia in Adult Patients". A retrospective review was conducted on the management of hypoglycaemic episodes for inpatients with diabetes over a two-week period in GUH in medical and surgical wards (excluding ICU, HDU, ED, Obstetrics, Gynaecology, and Psychiatry wards). The audit is GDPR compliant and approved by the GUH Audit Committee.

Results

- 70 hypoglycaemia episodes in 28 patients over two weeks.
- 61% were admitted under medical specialties.
- 79% were on insulin; 11% on oral hypoglycaemics (OHAs); 11% on no therapy.

• 81% of events and rechecks were recorded on insulin charts, 60% in nursing notes, 51% recorded in both.
• 10% of hypoglycaemic events were not re-checked.
• Only 10% had blood glucose rechecked within 15 minutes.
• 44% of blood glucose readings were checked within 30 minutes.
• 93% of events had treatment documented; 95% used oral solutions, 3% IV dextrose and 2% glucagon. All treatments were guideline compliant.
• Long-acting carbohydrate was recorded in just 29% of cases.

Compliance with GUH hypoglycaemia guidelines is suboptimal regarding time to re-check. Overall documentation of event was good at 90%. It is evident that re-checking blood glucose within the recommended time is difficult for ward staff. The outcome was to increase education of the 15 minutes recheck after hypoglycaemic event. Re-audit in 12 months.

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P52

Review of a serum thyroglobulin laboratory service using a high-sensitivity brahms kryptor® immunoassay in an irish academic teaching hospital

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Expert consensus guidelines recommend the use of high-sensitivity assays for thyroglobulin measurement and the concomitant analysis of thyroglobulin antibody (TgAb) levels to gauge potential Tg assay interference. We provide a review of the service operated by St James's Hospital, Dublin using the Brahm's Kryptor assay (limit of quantitation <0.15µg/l), which also measures Tg recovery (Tg-mRec). Data for patients >16 years of age covering 01.01.22 to 22.07.2025 was collated and analysed using Excel. A total of 8,669 samples had both Tg and TgAb assayed, which represented 3,102 patients (75.2% female), with an average repeat rate of 2.6/patient (range 1-37). Overall, 43.3% of samples had Tg < 0.15µg/l, with a Tg range (<0.15 –160,439), while 31.1% of samples were TgAb-positive (range 27–39,444U/mL). Of note 27% of all samples had Tg <0.15 and were TgAb positive, which could potentially contribute to falsely low Tg results. To assess the impact of TgAb status on Tg-mRec, a subset of data covering a 6-month period was analysed ($n = 1{,}237$ samples, $n = 943$ patients). In this subset, 2.5% ($n = 29$) of all samples failed Tg-mRec, while in 29% of TgAb-positive samples ($n = 362$) only 7.5% ($n = 27$) failed. Notably, 0.2% ($n = 2$) of TgAb-negative samples ($n = 870$) were assigned as failing Tg-mRec. Moreover, 0.4% of all samples had an elevated Tg-mRec ($>120\%$), suggestive of heterophile antibody interference. This service review indicates that serum Tg levels and TgAb-positive rates are consonant with other reported series. The Tg-mRec data suggest that marked assay interference may only manifest in a very small subset of samples. doi.org/10.1093/ejendo/lvad109

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P53

A study of blood glucose testing modalities in people with type 2 diabetes attending diabetes clinics at an acute hospital

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For many patients with Type 2 Diabetes (T2D), effective management requires regular blood glucose monitoring. While traditionally, this has relied on self-monitoring of blood glucose (SMBG), Continuous Glucose Monitoring (CGM) has emerged as an alternative that can reduce risk of hypoglycemia, lower HbA1c and reduce hospital admissions for patients with T2D on insulin. CGM is not currently reimbursed for T2D patients in Ireland. This study was approved by the local ethics committee. Our goal was to determine the scale of the resulting lack of access to CGM in people with T2D in Ireland. We recorded the blood glucose monitoring modalities of patients attending outpatient diabetes clinics in secondary care. The proportion of patients using SMBG and CGM and their medical therapies were recorded. Data were collected through a self-administered survey from participants attending outpatient diabetes clinics. We found that, of 137 patients surveyed, only 17 (12%) were using CGM for blood glucose monitoring, while 102 (74%) were using SMBG; the remainder were not testing glucose. Amongst 45 patients on insulin therapy, 15 (33%) were using a CGM, and 29 (64%) were using SMBG. This study highlights that a preponderance of patients with T2D in a representative Irish secondary care cohort do not use CGM for blood glucose monitoring, even amongst those on insulin therapy. These findings underscore the lack of access to CGM amongst patients with T2D on insulin in Ireland, which is potentially compromising their level of care and quality of life.

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P54

Mapping the endocrine impact of immunotherapy: a retrospective audit and future service implications

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Immune checkpoint inhibitors (ICIs) have transformed cancer therapy across a broad range of malignancies. However, by enhacing T-cell-mediated immune responses, they may induce immune-related adverse events (IRAEs), with thyroid dysfunction being the most common endocrine toxicity. This audit aimed to assess the incidence, timing and management of thyroid dysfunction following immunotherapy, and to evaluate implications for future endocrine service provision. A retrospective review was conducted of all patients who received ICIs at St. James's Hospital between July and December 2022. Data collected included cancer and immunotherapy type, thyroid function test (TFT) abnormalities, dates of onset and resolution, and whether levothyroxine was initiated. Management was assessed against European Society of Endocrinology guidelines. Q 4 2024 prescribing data was then used to more accurately estimate future impact, given the exponential growth of ICI use since 2022. Among 96 patients audited, 10.4% developed thyroiditis (median onset 31 days, resolution 35 days), 9.4% developed hypothyroidism without preceding thyroiditis (median onset 105 days), and 47.9% had other TFT derangements. 81.8% of patients commenced on levothyroxine were managed in accordance with the guidelines. Based on recent prescribing data, approximately 412 patients are expected to receive immunotherapy between July and December 2025. Applying audit rates, an estimated 43 would develop thyroiditis, 39 hypothyroidism, and 197 would have TFT derangements requiring clinical interpretation. These findings highlight the need for proactive monitoring and enhanced endocrine-oncology collaboration to ensure appropriate management and follow-up of affected patients.

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P55

Blood glucose and ketone testing practices in acute admissions of patients with diabetes mellitus

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Background
Diabetes mellitus (DM) accounts for around 20% of hospital admissions. Early measurement of blood glucose and ketone levels is crucial to detect metabolic complications. This study evaluated adherence to Joint British Diabetes Societies for Inpatient Care (JBDS-IP) and American Diabetes Association (ADA) guidelines, which recommend universal glucose and ketone testing at initial presentation in hospitalised diabetic patients.
Methods
We retrospectively reviewed 100 diabetic patients admitted over three months via the emergency department. Inclusion criteria were age ≥ 16 years and hospital stay >24 hours. Patients with advanced renal failure, pregnancy, severe anaemia, major blood loss, or haemoglobinopathies were excluded. Data were collected from electronic medical records. Statistical analysis (SPSS v 22) included descriptive statistics, Mann-Whitney U, chi-square, and t-tests. Multiple linear regression assessed predictors of log-transformed length of stay (LOS), and logistic regression evaluated factors influencing glucose testing.
Results
Among 100 patients (median age 59.5 years; 46% female), 28% had type 1 and 72% type 2 DM. Blood glucose was measured in 74% and ketones in 62%. Four patients (4%) missed both tests and developed metabolic acidosis. Type 2 DM patients were older than those with type 1 (median 67 vs 42 years, $P < 0.001$). Median LOS was 8 days, with no significant differences by DM type ($P = 0.86$)

or sex ($P = 0.85$). Regression models for LOS ($P = 0.50$) and glucose testing ($P = 0.26$) were non-significant.
Conclusion
Adherence to JBDS-IP and ADA testing guidelines was suboptimal, with missed testing potentially contributing to preventable complications. Educational interventions are planned, with re-audit scheduled to assess impact.
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P56

Immuno-oncology and new onset type 1 diabetes
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Immunotherapies have been added to the arsenal for oncology treatment. They are useful in cancers which have metastasised including malignant melanoma, breast, lung and renal cancers. The endocrine consequences of checkpoint inhibitors include: Hypothyroidism; Graves' disease; Hypophysitis; isolated ACTH deficiency; Type 1 diabetes (TID); and Primary Adrenal Insufficiency. The age of onset is approx. 61-66 yr and speed of onset is rapid. There is DKA at diagnosis in 50-76% of cases. There is undetectable C-peptide at diagnosis in 85% of cases. Positive antibody status at diagnosis is seen in 20-71% of patients. The three checkpoint inhibitors responsible for the development of diabetes are CTLA-4/PD-1/PI3K inhibitors. CTLA-4 (Cytotoxic T-lymphocyte associated protein 4) inhibitor: Ipilimumab (Yervoy). PD-1 (Programmed cell death protein 1) inhibitors: Pembrolizumab (Keytruda) and Nivolumab (Opdivo). P13K inhibitor Piqray (Alpelisib). It is the first approved for breast cancer treatment. We report 4 cases of T1D seen in 2019: 2 with DKA and two cases of diabetic ketosis without acidosis. PD-1 inhibitors compared to CTLA-4 inhibitors have higher prevalence of T1D. P13k inhibitor cause less endocrinopathies than both CTLA-4 and PD-1 inhibitors, but the prevalence of hyperglycaemia is about 51-64%. As a result of the cases above, we presented our findings to MDT, Day Care Oncology, Oncology ward, Pharmacy and Lunch and learn. A policy has been developed and all patients on these agents have lab glucose on each cycle, 3/12 HbA1c and are informed of the symptoms of hyperglycaemia: the 4 T's. No acute episodes have arisen since.
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E-Posters

EP1

Diabetic foot disease patterns and use of walking aid: a retrospective, single center, observational descriptive study from a tertiary hospital
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Introduction
Diabetic foot affects up to 25% of people with diabetes, often resulting from neuropathy and impaired circulation. It significantly increases the risk of ulceration and amputation. Walking aids, such as canes, frames, or wheelchairs, can reduce plantar pressure, improve mobility, and support healing. Limited research exists on whether these aids influence ulcer pattern or severity.
Method
This observational study included all outpatients attending a tertiary hospital podiatry service from January to June 2024. Demographics, diabetes duration, ulcer characteristics, and walking aid use were recorded.
Results
A total of 156 patients (468 appointments) were reviewed; mean age was 70.66 years, with 72.4% ($n = 133$) aged $\geq$65 years. Forty-two were female, and 31.8% ($n = 50$) had diabetes for $>$20 years; 21 had type 1 diabetes. Active ulcers were present in 103 patients, mostly on the forefoot ($n = 85$). Thirty-five were in remission, and 16 attended for nail or callus care. Among ulcer cases, 84 were superficial and 19 deep; 57 were cultured. In older patients ($n = 133$), 51.9% ($n = 60$) used no aid, 17.3% ($n = 23$) used a stick, 6% ($n = 8$) a zimmer frame, and 8.3% ($n = 11$) a wheelchair. Walking aid use showed no statistical association with ulcer location ($P = 0.45$) or depth ($P = 0.30$).
Conclusion
While walking aids redistribute weight and enhance stability, this study found no significant relationship between their use and ulcer site or severity. Nonetheless, aids remain valuable for preventing injury, aiding healing, improving balance, and maintaining quality of life. Early assessment and tailored prescription should be integral to diabetic foot care.
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EP2

Thyroid malignancy rate in various subtypes of thyroid nodules
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Introduction
Thyroid nodules are common, with a prevalence of around 50% in the general population. Ultrasound characterisation using the British Thyroid Association (BTA) U classification system is widely used in the UK and Ireland. Limited data exist on malignancy rates in thyroid nodules, particularly those with an indeterminate appearance (U3). Moreover, significant interobserver variability in reporting classification highlights the need for locally generated data.
Methodology
We assessed malignancy rates among U-classified thyroid nodules that underwent fine needle aspiration cytology (FNAc), reported using the Royal College of Pathologists Thy classification (Thy1-Thy5)
Results
Of 200 nodules assessed (median size 2.8 cm, range 0.8–10.6 cm), 84% were U 3 (indeterminate malignancy risk); 17 of these (8.5%) were malignant. Papillary thyroid carcinoma was the most common malignancy. Two nodules were metastatic from non-thyroidal primaries. Among 19 Thy 1 (inadequate sample) nodules, one was subsequently confirmed malignant. Of 139 Thy 2 (benign) nodules, three (1.5%) were malignant on repeat FNAc. All Thy 5 nodules were confirmed malignant. Among 17 U 4 nodules, four (24%) were diagnosed as malignant. Overall, 24 of 200 nodules (12%) were malignant.
Conclusion
Malignancy rates in thyroid nodules, including 8.5% in indeterminate U 3 cases, are consistent with those reported in other specialised centres and classification systems.
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EP3

The impact of user engagement on glycaemic control in young adults using hybrid closed-loop systems
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Hybrid closed-loop (HCL) systems combine continuous glucose monitoring (CGM) with automated insulin delivery to support glycaemic control in type 1 diabetes. This study evaluated glycaemic outcomes and behavioural factors influencing control in young adults using HCL systems at TUH and NGH. We analysed 30-day HCL data from young adults using Medtronic 780G or Tandem Control-IQ via CareLink™ and Glooko™. Metrics included CGM wear, auto mode use (AID), manual bolus frequency, and active insulin time (AIT). Glycaemic outcomes were time-in-range (TIR: 3.9-10.0 mmol/l/l/l), time-below-range (TBR $<$3.9 mmol/l/l), and time-above-range (TAR $>$10.0 mmol/l/l). An engagement score (0-4) was calculated using thresholds for AID $>$80%, sensor wear $>$80%, manual bolusing $>$median, and AIT $<$2.5 hours. Linear regression assessed associations between engagement, behaviours, and TIR. Among 61 young adults (mean age 21.3 $\pm$ 1.8 years), mean TIR was 62.8% $\pm$ 11.9%, with TBR 1.6% $\pm$ 1.6%; 90% maintained TBR $<$4%. Fully engaged 780G users (score = 4) achieved 70.3% TIR vs. 52.5% in the least engaged. Each 1-point increase in engagement score was associated with a 4.3% rise in TIR ($P < 0.05$). AID use ($P = 0.003$), shorter AIT ($P = 0.027$), and use of exercise mode ($P < 0.05$) were independently linked to higher TIR without increasing hypoglycaemia. Young adults using HCL pumps often fall short of glycaemic targets. However, greater engagement with pump features is strongly associated with improved glycaemic control.
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EP4

A Retrospective cohort study assessing the impact of the diabetes exercise and lifestyle programme (DELP) on individuals living with type 2 diabetes within the chronic disease hub

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Structured, exercise-based lifestyle programmes offer potential to improve glycaemic control and address psychosocial challenges for people living with type 2 diabetes. This retrospective cohort study assessed the impact of a 10-week evidence based diabetes exercise and lifestyle programme (DELP) on metabolic, functional, and psychological outcomes in individuals with type 2 diabetes mellitus (T2DM). Thirty-five participants attended DELP in a community-based chronic disease hub in Galway. Pre- and post-programme measurements were collected for glycated haemoglobin (HbA1c), blood pressure, waist circumference, hand grip strength, incremental shuttle walk (ISWT) and sit-to-stand test. Psychological wellbeing was evaluated using the Hospital Anxiety and Depression Scale (HADS) and Problem Areas in Diabetes (PAID) scale. Statistical analyses were performed using IBM SPSS Statistics, including paired t-tests, Wilcoxon signed-rank tests, independent t-tests, Mann–Whitney U tests, McNemar's test, and chi-square tests, with p-values <0.05 considered statistically significant. Results demonstrated significant improvements in mean HbA1c, (-9 [95%CI -5,-14] mmol/l/mol; $P < 0.001$), systolic blood pressure (–5 [95%CI -1,-9] mmHg; $P = 0.025$), and waist circumference (–3 [95%CI -2, -4] cm; $P < 0.001$). Hand grip strength increased (5 [95%CI 4, 6] kg ($P < 0.001$). Functional capacity improved with greater ISWT distances ($P < 0.001$) and sit-to-stand scores ($P < 0.001$). Reductions were observed in depressive symptoms and diabetes-related distress. These findings support the effectiveness of the DELP as a community-delivered intervention to improve metabolic control, physical function, and psychological wellbeing in patients with T2DM. DELP can be used in conjunction with pharmacological interventions, offering an exercise-specific, holistic approach to diabetes management in primary care settings.

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EP5

Patients with type 1 diabetes of over 25 years' duration in one clinic in Ireland- a retrospective chart review of patient characteristics and diabetes complications

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People living with type 1 diabetes (T1DM) for decades remain at risk for chronic complications despite advances in management. Identifying clinical and treatment-related factors associated with these complications can help guide prevention and management. We conducted a retrospective chart review of adults with T1DM of $\geq$25 years' duration attending a single clinic. Data included demographics, duration, glycated haemoglobin (HbA1c), body mass index (BMI), smoking status, insulin pump use, continuous glucose monitoring, antihypertensives, lipid-lowering agents, aspirin and glucagon-like peptide-1 (GLP-1) receptor agonists. Complications were defined as any microvascular or macrovascular condition. Statistical analysis included chi-square, Mann-Whitney U, Spearman's correlations and Kruskal-Wallis tests. Variables with $P < 0.10$ entered multivariable logistic regression. A total of 132 patients (50.8% male, median age 53 years [IQR 35-62], median duration 32 years [IQR 28-41]) were included. Current smoking ($P < 0.001$), use of antihypertensives ($P = 0.003$), and aspirin ($P = 0.031$) were significantly associated with the presence of complications. Later age of onset ($>$ 18 years) was linked to a higher number of all complications ($P = 0.018$), including greater prevalence of nephropathy ($P = 0.045$), peripheral neuropathy ($P = 0.013$) and cardiovascular disease ($P < 0.001$). Logistic regression (Nagelkerke R 2=0.305; $P = 0.004$; 78.8% correctly classified) identified smoking as the sole independent predictor (OR 19.96, 95% CI 2.85-140.01, $P = 0.003$), with pump use showing a non-significant protective trend ($P = 0.076$). In this cohort, later age at diagnosis and smoking were associated with greater complication burden, though only smoking remained significant after adjustment. These findings highlight smoking cessation as a key modifiable target and underscore the importance of prioritising preventive strategies in this population.

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EP6

Prevalence of biochemical nutritional deficiencies in adults attending a level 3 obesity service in ireland

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Common nutritional deficiencies in people living with obesity include vitamins A, C, D, calcium, folate and iron[1]. This audit aimed to estimate the prevalence of biochemical nutritional deficiencies in a convenience sample of 100 patients attending a Level 3 obesity service. Baseline data were gathered January - December 2023 from routine clinical databases, which included baseline anthropometry and biochemistry measures on 100 sequential patients. Data were analysed using Microsoft Excel and are presented as mean $\pm$ standard deviation. Seasonal Vitamin D variation was considered by purposefully including 25 patients in each season. Among the sample (64% female; age 48 ± 12.99 years, BMI 54 ± 12.09kg/m^2), Vitamin D inadequacy affected 61% of patients (47 ± 23.57 nmol/l). Vitamin D levels showed seasonal variation ($P < 0.01$). Folate deficiency was found in 26% of patients (7.81 ± 6.70 nmol/l). Iron levels were low in 55% of patients (12.82 ± 5.13µmol/l), while 17% had low ferritin and 4% had low haemoglobin (14.01 ± 1.30g/dL) indicating iron deficiency anaemia. Vitamin B 12 deficiency was found in 8% (392.44-± 229.67ng/l). The prevalence of vitamin D, folate, iron, and vitamin B 12 deficiencies in this cohort are consistent with the literature. Due to sequestration in adipose tissue, this cohort may have higher vitamin D requirements. Two-thirds of patients had at least one nutritional deficiency, emphasising the importance of routine screening to facilitate early medical nutrition therapy intervention. Future research will assess adherence to nutritional supplementation.

Reference

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EP7

Causes and outcomes of severe hyperglycaemia in adult hospitalised patients: a retrospective observational study at tallaght university hospital

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Severe inpatient hyperglycaemia is associated with poor patient outcomes. However, its causes, and effects in the general inpatient population remain understudied. We aimed to investigate the causes and consequences of severe hyperglycaemia (blood glucose concentration [BGC] $\geq$ 20 mmol/l/l) in adult hospitalised patients. We conducted a retrospective observational study comparing 771 admissions with BGC $\geq$ 20 mmol/l/lto 2,334 admissions with BGC $<$ 20 mmol/l/lbetween July 2024 and May 2025 at Tallaght University Hospital. We analysed patients' diabetes history, primary causes, and HbA1c and ketone levels. The outcomes included length of stay (LOS), mortality, and intensive care unit (ICU) admission. LOS was significantly longer in severely hyperglycaemic patients (mean +3.4 days, $P = 0.022$), with findings persisting after adjustment using ordinary least squares regression ($\beta = 0.26$, $P < 0.001$). Mortality did not differ significantly after adjustment. Severe hyperglycaemia was not significantly associated with ICU admission ($P = 0.073$). Ketonaemia was associated with ICU admission ($P = 0.0002$). The distribution of causes differed significantly by diabetes type ($P < 0.001$): diabetic ketoacidosis predominated in type 1 diabetes mellitus (T1DM), infection and steroid use were more common in T2DM and non-diabetic patients, and pancreatic malignancy predominated in T3cDM. HbA1c differed by diabetes status ($P = 0.039$) but not mortality. Severe hyperglycaemia is associated with markedly prolonged hospitalisation. While high HbA1c and ketone levels can help predict the relative risk of requiring a higher level of care, they are not good predictors of mortality.

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EP8

Dietetic management of women with gestational diabetes mellitus attending the national maternity hospital in 2024

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The primary intervention of Gestational Diabetes Mellitus (GDM) includes dietary advice, physical activity and self-monitoring of blood glucose. Adequate management using these interventions supports the avoidance of requiring pharmacological therapy in two thirds of the GDM population. We reviewed patients with GDM who were referred to the diabetes dietetic service from January-December 2024 from our electronic records. Of the 505 women diagnosed with GDM, 64% ($n = 328$) received individual dietetic consultations. Pharmacological therapy was required for 38% ($n = 195$), 95% ($n = 186$) of whom received individual dietetic intervention. For those on pharmacological therapy (51% insulin, 49% metformin) 93% ($n = 181$) were reviewed by a dietitian within two weeks of treatment initiation. Of these, 25% ($n = 48$) had two dietetic consultations, 54% ($n = 108$) had three or more consultations. Body Mass Index (BMI) at booking was collected for the total population who were reviewed by the dietitian. 52% of those on pharmacological treatment had BMI greater than 30kg/m2 compared to 19% of those on diet alone. A large number of women with GDM in our population required pharmacological treatment in addition to dietary adaptation, and extensive dietetic support. A higher prevalence of BMI >30 is a likely contributory factor for pharmacological therapy intervention with dietary intervention.

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EP9

Exaggerated GLP-1 secretion and satiety response following gastrectomy: endocrine implications for satiety and metabolic adaptation

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Gastrectomy is associated with profound metabolic changes, yet the endocrine adaptations underlying post-surgical weight loss remain poorly understood. This prospective observational study characterised postprandial GLP-1 responses and their relationship to satiety, weight loss, and nutritional status following gastrectomy. Patients undergoing elective gastrectomy for gastric cancer were assessed preoperatively and at 10 days, 6 weeks, and 3 months postoperatively using mixed-meal tolerance testing and symptom questionnaires. Significant weight loss was observed at 3 months (mean %BWL 14.4 $\pm$ 2.1, $P < 0.0001$). Postprandial GLP-1 secretion increased from day 10, with a near tripling of GLP-1 AUC ($P = 0.007$) and a four-fold rise in peak concentrations ($P < 0.05$). The GLP-1 response curve maintained its shape ($P = 0.14$), indicating increased magnitude but unchanged secretion dynamics. Fasting GLP-1 levels did not change. Satiety scores increased significantly at 6 weeks (mean 50.0 vs 4.8 pre-op, $P = 0.008$) but were not sustained at 3 months. Lack of appetite scores rose transiently but were not significant ($P = 0.06$). Eating symptoms increased at 6 weeks and 3 months ($P = 0.038$). Biochemical changes included reductions in vitamin E ($P = 0.04$), albumin ($P = 0.02$), and total protein ($P = 0.007$). These findings highlight early, sustained exaggerated postprandial GLP-1 secretion following gastrectomy, with a transient rise in satiety. The results provide insight into incretin-mediated endocrine adaptations post-gastrectomy, relevant to metabolic changes observed after upper gastrointestinal surgery.

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EP10

Investigating the prevalence and characteristics of short- and long-term complications in type; 3c diabetes secondary to chronic pancreatitis: a systematic review

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Background and Aims
Type 3c diabetes mellitus (T3cDM) is a secondary form of diabetes commonly associated with chronic pancreatitis (CP). Unlike Type 1 (T1DM) and Type 2 diabetes (T2DM), T3cDM results in exocrine as well as endocrine dysfunction, leading to complex management challenges. There has been limited research on diabetes-related complications in patients with CP-associated T3cDM, although guidelines state that cardiovascular complications are less likely. We aimed to conduct the first systematic review of the prevalence of short- and long-term complications in T3cDM secondary to CP, and to compare prevalence to expected levels for other diabetes subgroups.
Materials and Methods
Studies were identified through database searches (EMBASE, Scopus, MEDLINE, WoSCC) and screened for eligibility based on defined eligibility criteria. Data were extracted and studies assessed for quality with the JBI Critical Appraisal Tool. Extracted data were synthesised narratively, and outcomes tabularised.
Results
Thirteen studies were eligible for inclusion. Reported prevalence for retinopathy, neuropathy, and nephropathy was 0-47.5%, 0-50%, and 2.37-28.6%, respectively. The prevalence of macrovascular disease ranged from 0-42.9%. In terms of short-term complications, cumulative hyperosmolar hyperglycaemic syndrome prevalence was 1.2-7.1% over; 10y, and there were few data on hypoglycaemia and ketoacidosis. Whilst variable, prevalence was comparable to levels reported for T1DM/T2DM, particularly for retinopathy, neuropathy, and cardiovascular complications.
Conclusion
Diabetes-related complications, including cardiovascular events, are common in T3cDM-CP patients, and prevalence is comparable to rates for T1DM and T2DM, there is a clear paucity of research on this topic.

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EP11

A study of thyroid ultrasound referrals from primary care to a tertiary centre

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Referrals for thyroid ultrasound (US) from primary care are made for variable clinical presentations resulting in the incidental identification of asymptomatic thyroid nodules. We assessed primary care thyroid US referrals and follow-up investigations between January 2022 and July 2023. 424 referrals were received, 87% female ($n = 368$), median age was 45 years. 20% ($n = 84$) were appropriate referrals as per local policy: palpable nodules (10.3%; $n = 44$), thyroid nodule on alternative imaging (7.1%; $n = 30$), surveillance of known thyroid malignancy (2.4%; $n = 10$). 80% ($n = 340$) were not indicated: hypothyroidism (10.4%; $n = 44$), hyperthyroidism (5.9%; $n = 25$), subjective neck symptoms only (37%; $n = 158$), known thyroid nodules previously discharged (18.6%; $n = 79$), euthyroidism with TPO positivity (4.2%; $n = 10$), patient request (0.9%; $n = 4$), other (4.7%; $n = 20$). Follow-up US was recommended by radiology in 5.9% ($n = 25$). Repeat US was arranged from primary care for 17 patients, 4 of which were indicated. FNA was recommended in 2.4% ($n = 10$), one of whom had FNA organised from primary care. 9 further patients had unnecessary FNA performed. Referral to specialty services was recommended in 6.8% ($n = 29$). However, 34.4% ($n = 146$) were referred. 7.3% ($n = 31$) with further investigations recommended did not have these requested in our centre. From secondary care, 17 patients (4.0%) had repeat US only; 37 (8.7%) had FNA; 5 (1.2%) had surgery, 2 of whom (0.5%) had new malignancy identified, - one with medullary thyroid cancer (family history of MEN 2), and another, papillary cancer. A considerable proportion of thyroid US referrals from primary care were not indicated, with an impact on subspecialty services. Clear guidelines for practitioners outlining clinical indications for ultrasound are warranted.

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EP12

CRISPR-mediated activation of FKBPL in; 3t3-l1 cells via plasmid DNA and mRNA delivery of dcas 9-VPR

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FK506-binding protein-like (FKBPL) is a member of the immunophilin protein family, implicated in key biological processes including inflammation, angiogenesis, and metabolic regulation. Recent findings have unveiled a novel role for FKBPL in adipose tissue function and the pathophysiology of obesity. To explore its transcriptional upregulation, five single guide RNAs (sgRNAs) were designed to target the FKBPL promoter using a CRISPR activation (CRISPRa) system based on a nuclease-inactive Cas 9 fused to the VPR transcriptional activator (dCas9-VPR). This system was delivered to 3T3-L1 pre-adipocytes and mature adipocytes via either plasmid DNA (pDNA) or in vitro–transcribed mRNA using Lipofectamine-mediated transfection. Quantitative PCR (qPCR) was employed to assess FKBPL mRNA levels, while protein expression was evaluated through Western blotting, flow cytometry, and ELISA. In pre-adipocytes, mRNA-based CRISPRa induced robust transcriptional activation, with the most effective sgRNA yielding a greater than 200% increase in FKBPL mRNA expression, accompanied by a corresponding elevation in protein levels. Intracellular FKBPL was markedly upregulated, as confirmed by flow cytometry, and secreted protein levels peaked at 24 hours post-transfection before declining. Although pDNA-based delivery also enhanced FKBPL expression, its efficacy was comparatively limited. In differentiated adipocytes, transfection efficiency was substantially reduced, likely due to lipid droplet accumulation restricting cytoplasmic uptake. This study constitutes the first successful demonstration of CRISPRa-mediated upregulation of FKBPL in vitro, providing a foundational platform for future in vivo studies aimed at evaluating FKBPL as a potential therapeutic target in metabolic diseases such as obesity.

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EP13

High user satisfaction rates with DEXCOM™ continuous glucose monitoring device in people with type 1 diabetes – a pilot cross-sectional study

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DEXCOM™ continuous glucose monitoring devices (DCGM) have been shown to improve glycaemic control and complication rates in people with Type 1 diabetes (T1DM). This study aimed to assess DCGM users satisfaction rates and experiences with device features in patients with T1DM in Ireland. A questionnaire consisting of open and closed ended questions together with a glucose monitoring satisfaction survey (GMSS) was offered to all patients attending Sligo University Hospital diabetes clinic who used a DCGM for at least six months. Data was analysed on 73 participants. Self-reported QOL improved in 88% of participants and 52% of participants reported fewer hypoglycaemic events. The features most liked by participants were alerts given when glycaemic target was not in range, improved quality of life, improved hypoglycaemia awareness and the need for reduced finger pricking. Concerns were also identified about redundant alarms and sensor failures, phone incompatibility and skin reactions. DCGM was associated with good levels of glucose monitoring satisfaction with an overall satisfaction score of 3.67 ± 1.24 out of 5. Participants reported high openness (4.01 ± 0.91), increased trust (3.77 ± 1.16) and low emotional (1.70 ± 0.97) and behavioural burden (2.38 ± 1.10) with DCGM usage. Male participants who had diabetes for a mean duration of 20.06 ± 0.89 years and used DEXCOM™ for approximately 2 years demonstrated significantly higher levels of satisfaction ($P < 0.05$). The findings of this study provide first exploration of patients' perspectives on DCGM devices in an Irish setting. Results suggest that DCGM users are highly satisfied with the device with increased self-reported QOL.

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EP14

A survey of staff availability and infrastructure within community diabetes teams in Ireland

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The "Integrated Model of Care (MOC) for people with Type 2 Diabetes Mellitus (T2DM) 2024" promotes integrated, community-based services for patients living with T2DM. The first community diabetes hub commenced clinics in February 2023. The goals of the present study were to conduct a nationwide survey of current staffing levels and IT infrastructure across diabetes hubs, comparing them to the MOC recommendations. A structured online survey was distributed in April 2025 to consultants in community diabetes posts, with responses from 23/28 (82%) hubs. The 5/28 (18%) non-responding hubs had no consultant in post at that time. In total, 5/23 (22%) hubs lacked an operations lead and 6/23 (26%) lacked dedicated diabetes administrative support. The average whole-time equivalent (WTE) diabetes nurse specialist in post was 1.5 (MOC recommendation 3.0 per hub). Advanced nurse practitioner (ANP) staffing averaged 0.7 WTE and 9/23 (39%) hubs had no ANP in post. Podiatry staffing averaged 1.4 WTE per hub, below the recommended 3.0 WTE, while dietetics staffing averaged 2.4 WTE, below the recommended 6.0 WTE for diabetes and obesity care. Consultant led clinics were running in 18/23 (78%) hubs. Only 7/23 (30%) hubs reported access to electronic health records. While 15/23 (65%) hubs used computerised patient administration systems, 8/23 (35%) used Microsoft Excel or calendar tools. While significant progress has been made, IT infrastructure and staffing levels remain below target, highlighting areas for continued improvement.

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EP15

'The HbA1c of a hospital' – a year of inpatient glucose control in an acute hospital setting

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Good glycaemic control is critical for optimising inpatient outcomes. The goal of this study was to analyse point-of-care (POC) glucose data to assess inpatient glucose control in a Dublin teaching hospital. This retrospective, observational study analysed all POC glucose readings on inpatients in Connolly Hospital from 13/09/2023–12/09/2024. Each POC result was linked to a patient, location, and timestamp. Diabetes status was unavailable. Data were anonymised and analysed with Welch's t-test and 80,647 glucose measurements were collected from 3,954 patients. The mean capillary blood glucose (CBG) was 9.2 ± 4.5 mmol/l/l, equating to an estimated HbA1c of 58 mmol/l/mol. Overall, 66% were in range (3.9–10 mmol/l/l) while, 31.6% were above and 2.4% were below range. Mean CBG was lower during June-August when compared to all months (9.1 ± 4.4 vs 9.2 ± 4.5 mmol/l/l; $P < 0.001$) and higher during November-January compared to all months (9.6 ± 4.7 vs 9.2 ± 4.5 mmol/l/l; $P < 0.001$). Mean CBG was lower on weekdays (Monday to Friday) compared to weekends (Saturday and Sunday) (9.2 ± 4.5 vs 9.4 ± 4.5 mmol/l/l; $P < 0.001$). Surgical wards recorded lower mean CBG than medical wards (9.1 ± 4.3 vs 9.4 ± 4.6 mmol/l/l; $P < 0.001$). Hypoglycaemic readings increased from 34 in 10 patients (1.9%) the week before to 97 in 27 patients (5.1%) the week after the summer hospital doctor changeover ($P < 0.001$). This study reveals that one third of inpatient POC readings are out of range with evidence of variation between seasons and day of the week. These POC glucose datasets offer valuable insights into trends and targets for quality improvement.

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EP16

A single centre audit on the management of diabetic ketoacidosis

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The local Diabetic Ketoacidosis (DKA) Management Protocol in use at Regional Hospital Mullingar (RHM) is adapted from the 2013 Joint British Diabetes Society (JBDS) guidelines. The JBDS guidelines were updated in 2023. In advance of updating our local protocol, we undertook an audit of all DKA cases managed at RHM in 2024. We created an audit tool with 75 pre-specified

questions adapted from the JBDS guidelines. Forty (40) patients with a primary or secondary diagnosis of DKA in 2024 were identified through Hospital In-Patient Enquiry (HIPE). Data was collected from the medical records, including laboratory records. Data was maintained in an anonymised excel database. Thirty-one (31/40,77.5%) patients were commenced on the DKA protocol. However, only twenty-seven (27/40, 67.5%) patients met criteria for DKA. Common precipitating factors included infection (16/31, 52%) and missed insulin doses (11/31, 35%). Most patients commenced on intravenous fluids (28/31, 90%) and insulin (24/31, 77%) within 1 hour of diagnosis. All patients (31/31, 100%) were reviewed by Clinical Endocrinology service prior to discharge. However, measurement and documentation of capillary blood glucose 20/31, 64%), capillary ketones (23/31, 74%), serum potassium (8/31, 27%), and urine output (7/31, 23%) was suboptimal. Hypoglycaemia was common (4/31, 14.3%). Additional areas identified for improvement include timely conversion to Variable Rate Insulin Infusion upon resolution of DKA (18/31, 59%), and early referral to the Diabetes Clinical Nurse Specialists service (17/31, 56%). These data will provide a baseline for re-audit following the introduction of the updated DKA protocol, and associated educational drive, in Autumn 2025.

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EP17

Antibody testing in type 1 diabetes

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Introduction
The American Diabetes Association recommends islet antibody testing for classification of diabetes in adults who have phenotypic risk factors that overlap with those for Type 1 diabetes (T1DM). We were keen to examine the prevalence of islet antibody testing in our T1DM population.
Methods
We reviewed the Beaumont Hospital electronic patient record Cellma for patients with Type 1 diabetes and identified those who had at least one islet autoantibody measured, including anti-glutamic acid decarboxylase (anti-GAD), anti-islet cell, anti-IA2A, anti-ZNT8, and anti-insulin antibodies.
Results
Of the 1,476 T1DM patients attending our diabetes service, only 407 (27.6%) had at least one islet antibody previously tested for. The most commonly measured antibody was GAD antibody; measured in 395 patients (26.8%), with 69.1% positivity. Islet cell antibody was measured in 273 (18.5%), with 29.3% positivity; anti-IA2A in 170 (11.5%), with 40.0% positivity; anti-ZNT8 in 157 (10.6%), with 47.8% positivity; and anti-insulin antibodies in 39 (2.6%), with 17.9% positivity. Among those tested, 44.5% had antibodies measured at diagnosis (12% of the total cohort) and 55.5% later in the disease course.
Conclusion
In this large tertiary hospital cohort, fewer than one-third of patients with T1DM had undergone islet autoantibody testing, with anti-GAD being the most frequently measured antibody. Testing occurred more often after diagnosis than at time of diagnosis.

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EP18

An audit on the diabetes management in patients with diabetes on peritoneal dialysis in university hospital waterford

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Diabetic nephropathy is the most common cause of end-stage kidney disease (ESKD) among patients undergoing peritoneal dialysis (PD). This audit aimed to evaluate diabetes management among patients with diabetes on PD in University Hospital Waterford, based on guidelines from the Joint British Diabetes Societies (JBDS) for Inpatient Care Group. We conducted a retrospective review of 42 patients established on PD in April 2025. Data were collected from the renal electronic health record (eMed). Of 42 patients on PD, 36% have a history of diabetes. 67% had type two diabetes mellitus (T2DM) while 33% had type one diabetes mellitus (T1DM). All had DM for more than 5 years. The median age was 67 years (IQR = 29). 87% had ESKD attributed to diabetic nephropathy. 47% had dual aetiology, namely hypertensive disease, ischaemic nephropathy or multiple myeloma. The median time on PD was 25 months. The mean HbA1c was 57 mmol/l/mol. 93% had HbA1c check within the prior 3 months. 47% had urine albumin:creatinine ratio checked within the past year. 80% of patients with T2DM were on linagliptin. One patient was on SGLT-2 inhibitor and two patients were on gliclazide. Five patients were on insulin therapy. Gliptins and insulin are the recommended therapies for patients with DM on dialysis and this audit found that SGLT-2 inhibitors and gliclazide were also used. This audit highlights the need to review diabetes-related medications and appropriate monitoring strategies in patients on PD, with additional consideration of glycaemic variability related to differing dialysate strengths to optimize outcomes.

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EP19

Diabetes and ischemic stroke at tipperary university hospital: a one year review

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Ischaemic stroke is a debilitating process. Diabetes is a highly prevalent comorbidity and is associated with poorer stroke outcomes. Glucose monitoring is recommended for all patients with acute stroke. GLP 1-agonists (GLP1-RA) and SGLT 2 inhibitors (SGLT2i) medications are associated with reduced major adverse cardiovascular events post ischaemic stroke. We analysed ischemic stroke admissions to Tipperary University Hospital over a one year period by performing a retrospective chart review. We extracted data on stroke management, general and diabetic demographics, HbA1c levels, post-stroke outcomes, medication and discharge information. 86 ischemic strokes were analysed. 16 (19%) patients had pre-existing diabetes. Two were newly diagnosed with diabetes during admission. 72 (83%) patients had their stroke treated medically, eight were thrombolysed with five undergoing thrombectomy. No significant difference in treatment was observed among those with diabetes. HbA1c levels were checked in 95% with a mean HbA1c of 61.3 mmol/l/mol among those with diabetes. Blood glucose monitoring was performed on all patients. 16 patients had a poor outcome, defined as death, nursing home admission, or disability. Only one of the 16 had diabetes. Four patients were discharged on GLP 1-RA and 14 on SGLT2i. Prevalence of diabetes of 19% in our stroke cohort is lower than described in previous studies. Treatments and outcomes were similar to those without diabetes. High rates of glucose monitoring and HbA1c testing were achieved. Glycaemic control in the diabetes cohort was reasonable, which may have contributed to the similar outcomes observed. SGLT2i use was high but GLP 1-RA use was low.

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EP20

Transforming type 2 diabetes care through rapid improvement event in carlow/kilkenny (award winning)

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Background
Sláintecare's Enhanced Community Care (ECC) programme promotes the right care in the right place. In Carlow/Kilkenny, many people with type 2 diabetes were still attending acute hospital clinics despite being suitable for community management. A Rapid Improvement Event (RIE) was initiated to address this.
Objective
To implement clear integrated care pathways for type 2 diabetes and measure transfer of suitable patients from acute hospital to community care within 120 days.
Methods
The RIE involved multidisciplinary hospital and community stakeholders over five days, preceded by four to six weeks' preparation. Processes for referral and transfer were mapped, gaps identified, and solutions co-designed. Tools implemented included agreed referral criteria, updated prompt sheets, IPMS/Cellma transfer functions, and standardised GP/patient letters. Progress was reviewed at 30, 60, 90, and 120 days.

Results
At 120 days, 38% of type 2 diabetes patients in Carlow and 40% in Kilkenny were successfully transferred from acute to community specialist care. Clinic capacity improved, review intervals shortened from 14 to 11 months, and rapid access reduced from 9–10 weeks to 3–4 weeks.
Conclusions
A structured RIE can rapidly transform service delivery, reducing acute workload and enabling more timely, person-centred community care. Sustained monitoring and stakeholder engagement are essential to maintain gains.

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EP21

Patient reported experience survey of care delivered in enhanced community care in carlow/kilkenny

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Background
Slaintecare aims to deliver chronic disease management in the right place through Enhanced Community Care (ECC), supporting transfer of people with type 2 diabetes from acute hospital outpatient departments (OPD) to Community Specialist Diabetes Teams. Person-centred care is personalised, enabling, and responsive to people's needs, wishes, and preferences.
Objective
To assess patient experience of diabetes care delivered by the Community Specialist Diabetes Team after transfer from acute hospital OPD to the chronic disease hub.
Methods
A Patient-Reported Experience Measure (PREM) was developed using validated tools and co-designed with service users. Surveys were posted to 100 randomly selected patients (50 Carlow, 50 Kilkenny) with stamped return envelopes, and 19 face-to-face surveys were conducted with randomly selected attendees.
Results
Fifty-nine surveys were completed (40 postal, 19 face-to-face). All respondents reported being treated with dignity and respect and receiving timely answers to important questions. Ninety-eight percent received advice that was easy to understand. Ninety-five percent were involved in decisions about their care as much as they wished. Over 90% felt listened to and had their concerns addressed. All respondents reported their healthcare professional introduced themselves or was known to them from previous visits, reflecting HSE core values of care and compassion.
Conclusions
Diabetes care delivered by the Community Specialist Diabetes Team in Carlow/Kilkenny was high-quality and person-centred. Such care fosters motivation, autonomy, and self-management, improving outcomes, enhancing experiences, and potentially reducing healthcare costs.

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EP22

Inpatient diabetes care in a regional centre: ongoing challenges in 2025

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Effective inpatient diabetes care has significant impact on patient safety and early patient recovery. This audit was conducted as a snapshot study on 19th June 2025, as part of our ongoing annual review to determine the proportion of admitted patients with diabetes and to assess their diabetes care needs. We found that 23 of 73 patients (32%) who were admitted under medical and surgical teams, had diabetes – an increase from 20 to 25% in the previous years' audits. 28% of inpatients had type 2 diabetes and 4% had type 1 diabetes. Hyperglycaemia (capillary blood glucose >10 mmol/l/l) was recorded in 44% of inpatients with diabetes, and hypoglycaemia (capillary blood glucose <4 mmol/l/l) was recorded in 13%. Only 23% of inpatients with diabetes were consulted with Diabetes Team at the time of the audit, compared to 50-60% in the previous years' audits. There were no diabetes medication errors identified. There was one incidence of hospital-acquired diabetic ketoacidosis and no incidence of hospital-acquired hyperglycaemia hyperosmolar syndrome noted. HbA1c values over the last 3 months were available for 48% of inpatients with diabetes. Our study identified that on an average day, approximately one in three inpatients in our acute hospital have diabetes, and approximately half of them required input from the Diabetes Team. Thus, we conclude that the burden on inpatient diabetes services at our hospital remains high, and there is a clear need for admitting teams to involve Diabetes Team early in the admission process to optimize glycaemic parameters and expedite patient recovery.

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EP23

Thyroid dysfunction is frequently screened for but rarely identified in rapid access cardiology services

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Symptoms of thyroid disease (TD) can overlap with those of cardiac disease. Clinics offering rapid assessment of cardiac symptoms are expanding nationwide. We sought to determine: (i) the frequency of TFT measurements and (ii) prevalence of TD in patients presenting to a rapid access cardiology clinic (RACC). A retrospective review was conducted of all patients presenting to the RACC over one week. Seventy-six patients attended, median age 55 years, 53% male. The majority (65%) were GP referrals. Common presenting symptoms were chest pain (50%), palpitations (30%), and dyspnoea (30%). Pre-existing TD, exclusively hypothyroidism, was documented in 4% of patients. TFTs (TSH, FT 4) were performed in 95% (72/76). 5% (4/72) were abnormal, as follows; hypothyroidism (n1; TSH 8.68mU/l, FT 4 12.6 pmol/l), isolated hypothyroxinaemia (n2; TSH 2.52mU/l, FT 4 11.6 pmol/l; TSH 0.77 mU/l, FT 4 11.0 pmol/l), and isolated hyperthyroxinaemia in 1 (TSH 1.12mU/l, FT 4 21.8 pmol/l). Reference ranges: TSH 0.27-4.2mU/l, FT 4 11.9-21.6. Despite the high rate of TFT testing in this cohort, abnormal results were uncommon. When present, these did not prompt specific follow-up actions. Our findings suggest that routine TFT screening in RACC patients may be unnecessary, and that testing could be reserved for those with known TD or clinical suspicion. Improved communication pathways between endocrinology and cardiology are needed to ensure appropriate follow-up for the subset of patients who require further endocrine evaluation.

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EP24

An audit of HbA1c and GMI correlation

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Background
Glycated haemoglobin (HbA1c) remains the gold standard for assessing long-term glycaemic control. Continuous glucose monitoring (CGM) offers real-time insights, with the glucose management indicator (GMI) as a complementary metric. Discrepancies between HbA1c and GMI arise from physiological variation, glucose variability or sensor accuracy. This audit examined the relationship between HbA1c, GMI and the influence of time in range (TIR), insulin regimen and glycaemic variability as measured by coefficient of variation (CV).
Methods
Retrospective data collection was performed on 30 individuals with Type 1 ($n = 27$) or cystic fibrosis-related diabetes ($n = 3$) who had recent HbA1c values and ≥ 14 consecutive days of CGM data. Data included age, diabetes duration, TIR, CV and insulin regimen. The absolute HbA1c-GMI difference was calculated and Pearson correlation assessed associations with secondary variables.
Results
Mean HbA1c was 7.8%, mean GMI was 7.74%. HbA1c exceeded GMI in 60% of cases, while 40% had a higher GMI. Continuous subcutaneous insulin infusion (CSII) users had lower CV (35.2% vs 40.4%) and higher TIR (64.5% vs 42.6%) than multiple daily injection (MDI) users. Mean HbA1c–GMI difference was $+0.26\%$ for CSII and -0.03% for MDI. Lower TIR was linked to greater

HbA1c–GMI differences. As TIR increased, there was less discordance between HbA1c and GMI and HbA1c was higher than GMI in this group ($r = 0.381$, $P = 0.038$). No significant association was found with CV, diabetes duration, or age.
Conclusion
HbA1c and GMI generally align but discrepancies are influenced by TIR and insulin regimen. Incorporating CGM-derived metrics may enhance personalised diabetes care.

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EP25

Enhancing DKA management through key performance indicator monitoring: a one-year clinical audit

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Diabetic ketoacidosis is a frequent and potentially life-threatening complication of diabetes. National and NICE guidelines recommend regular audit of diabetic ketoacidosis management, with emphasis on identifying and addressing precipitating factors to improve clinical outcomes and reduce recurrence. This study retrospectively reviewed all adult diabetic ketoacidosis admissions at Our Lady of Lourdes Hospital from April 2024 to April 2025. Data were collected from electronic health records, HIPE data, laboratory reports, and admission and discharge documentation. 34 patients were admitted, with an average age of 43.3 years. 70% were male. Most patients had type 1 diabetes (79%), with type 2 diabetes in 18% and Flatbush diabetes in 3%. Severity distribution was 29% severe, 44% mild, and 27% moderate diabetic ketoacidosis. Identified precipitating factors included infection (24%), missed insulin (9%), both (6%), new diabetes diagnosis (21%), and unknown causes (29%). Mean time to intravenous fluids was 69.7 minutes and to intravenous insulin was 70.3 minutes. The average length of hospital stay was 3.9 days and mean glycated haemoglobin at admission was 92 mmol/l/mol. Most patients (82%) were under endocrinology care. Diabetic ketoacidosis resolved in 94% of cases; in-hospital mortality was 6%, with all deaths unrelated to diabetic ketoacidosis. Readmission occurred in 9%. Documented outpatient compliance was 29%, with noncompliance in 44%. In conclusion, diabetic ketoacidosis most commonly affected young adults with type 1 diabetes, with infection and new diabetes diagnosis as major precipitating factors. Timely treatment achieved good outcomes, but enhanced identification of underlying causes and improved outpatient follow-up may reduce future recurrence.

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EP26

High incidence of thyroid nodules with low usage of EU-TIRADS classification

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A thyroid nodule (TN) is a distinct lesion within the thyroid gland, ultrasonographically separate from surrounding tissue. Up to 60% of adults may have one or more nodules, but the malignancy risk on ultrasound is 4-7%. Current ETA and BTA guidelines recommend thyroid ultrasound(TUS) evaluation using the European Thyroid Imaging Reporting and Data System(EU-TIRADS) or U-score classification. The aim of this study was to assess thyroid nodule classification by EU-TIRADS or U-score at our centre.
Method
A retrospective study was conducted of all TUS performed at Sligo University Hospital from 1 January to 31 December 2024. Data were collected from RIS-PACE.
Results
Of 152 TUS, 144 were included(8 excluded due to age <14 years). The mean age was 53.47 years (range 14–88); predominately were female (84%). 62 scans (43%) showed no nodule, while 82 (57%) showed at least one. Among these, 41.5% were right-sided, 37.8% left-sided, and 20.7% bilateral. 73% had one nodule, 19.5% - two, 6.3% - three, and 1.21% - four nodules. EU-TIRADS classification was used in 14 cases(17%); U-score in one(1.2%, U 2 benign). No classification was applied in 67 cases(81.7%). Those US reported with EU-TIRADS classification further sub categorized: Four(28.5%) were EU-TIRADS 2, Five(35.7%) were EU-TIRADS 3, Three(21.4%) were EU-TIRADS 4, non-scan had reported EU-TIRADS 5.Two(14.2%) were both TIRADS 2 and 4 .
Conclusion
Over half of patients had thyroid nodules, predominantly solitary and unilateral. Risk stratification was applied in $<20\%$ of cases. Findings indicate underuse of standardized classification systems, highlighting the need for improved guideline adherence.

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EP27

Service expansion of nurse-led dynamic endocrine testing service from 2023-2025: The St James's Experience

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Nurse-led clinics are playing an increasingly important role in modern healthcare systems, especially as demand for clinical services continues to rise. In 2023, a new Clinical Nurse Specialist position was created in response to rising patient numbers and growing demand for dynamic testing. This role has enabled the service to expand its capacity and offer a wider range of specialised dynamic endocrine tests. A retrospective audit was conducted of all dynamic endocrine tests performed in SJH between June 2023 and June 2025, recording test type, indication, frequency, and outcomes. The expanded service now offers Short Synacthen Test (SST), Saline Suppression Testing, Adrenal Venous Sampling (AVS), Oral Glucose Tolerance Testing (OGTT), OGTT with growth hormone, Insulin Tolerance Testing, Plasma Metanephrines, Genetic Testing, Cannulated Prolactin, and Mixed Meal Testing. The total number of tests performed increased from 39 in 2023 to 163 in 2024, with 107 performed in the first half of 2025. SST was most frequently performed (72/163 in 2024; 31/107 in 2025), followed by plasma metanephrines (39/163; 37/107) and genetic testing (33/163; 21/107). In 2025, 4 AVS took place so far this year, compared to 2 the year prior. There was an increase in all other testing also from 2023 to 2025. Median waiting time from referral to testing was two weeks. The expansion of a nurse-led dynamic testing service at SJH has significantly improved efficiency, shortened waiting times, and broadened access to specialized endocrine investigations, ensuring high-quality care in line with best practice protocols.

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EP28

Audit of screening and risk management of chronic kidney disease in type 2 diabetes outpatient clinics

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Chronic kidney disease (CKD) occurs in approximately 48% of our patient cohort living with type 2 diabetes (T2DM), and leads to an increase in cardiovascular morbidity, mortality and healthcare costs. Several risk management strategies can be used to improve outcomes in people with diabetes and CKD, primarily through the use of renin-angiotensin system (RAS) inhibitors, and selective glucose-lowering medications, namely sodium-glucose cotransport 2 inhibitors (SGLT2i) and glucagon-like peptide 1 receptor agonist (GLP1RA), in T2DM. We conducted an audit to capture our adherence to screening and risk management of CKD in patients attending our service with T2DM, as per the American Diabetes Association Standards of Care. A retrospective review of all patients with T2DM who attended our outpatient clinic over a 2-week period in November 2024 was performed. In total, 49 patients were included (57% male, mean age 65.78 (+/- 11.55) years, Mean duration of diabetes 13.88 (+/- 9.05) years, mean HbA1C 63 (+/- 10) mmol/l/mol. Screening for CKD was performed in 47/96% of patients by measurement of both urine albumin-to-creatinine ratio (UACR) and eGFR at least once in the last year. A RAS inhibitor was prescribed for 92% of suitable patients. Only 76% and 57% of appropriate patients were on an SGTL2i and GLP1RA, respectively. 88% of patients who met criterial for referral to nephrology were referred. Screening for CKD in T2DM is optimal in our practice. There is a valuable opportunity to optimise the use of SGLT2is and GLP-1 receptor agonists with reno-protective benefits in this patient cohort.

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EP29

Early experience with macimorelin stimulation testing for adult growth hormone deficiency in Northern Ireland

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Macimorelin is an oral ghrelin receptor agonist that stimulates growth hormone (GH) release from the anterior pituitary. It has excellent accuracy comparable to the insulin tolerance test (ITT) or arginine and growth hormone-releasing hormone test for diagnosing adult growth hormone deficiency (AGHD). This audit evaluated safety and diagnostic outcomes of patients undergoing macimorelin testing in a tertiary endocrinology centre. A retrospective review was conducted on 17 patients evaluated between June 2023-May 2025 with 0.5mg/kg of macimorelin ingested in the morning while fasted. Median age was 52 years (range 23 to 67); four patients were female. Hypopituitarism secondary to pituitary tumour and pituitary surgery accounted for 9/17 (53%) of patients, while other aetiologies included radiotherapy ($n = 2$, 12%) and idiopathic hypopituitarism ($n = 2$, 12%). All patients reported dysgeusia, but no other adverse events occurred. Six patients (35%) maximally stimulated to 2.8 ng/mL GH threshold while 4/17 (24%) stimulated to 5.1 ng/mL. The 5.1ng/mL threshold was applied for therapeutic decision-making as previous studies comparing ITT results demonstrated higher sensitivity and similar specificity using this threshold compared to 2.8ng/mL. Eleven patients commenced GH therapy (one patient deferred as AGHDA score was low (5/25) and one disengaged). Low pre-test IGF-I had a sensitivity/specificity of 0.60/0.50 respectively with $<$2.8ng/mL threshold and 0.67/0.75 sensitivity/specificity with $<$5.1ng/mL threshold. Macimorelin testing was well tolerated, is a shorter test than alternatives and appears to be a safe and effective alternative to ITT. Pre-test IGF-I had low sensitivity and specificity in predicting AGHD diagnosed using macimorelin stimulation testing.

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EP30

Clinical impact of a Diabetes Community Specialist MDT clinic: A review of outcomes

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Community specialist diabetes teams were established to provide timely access to clinical care for people with type 2 diabetes. Our team established an MDT clinic run by a Consultant Endocrinologist, Diabetes Nurse Specialist and Senior Diabetes Dietitian. Patients attending see all three team members who discuss each individual case. A treatment plan is agreed with the patient and appropriate follow up is arranged. We evaluated clinical outcomes from this service through review of discharged patients from July 2024 to June 2025. 111 patients were discharged from the service over the one year period. Average age was 60 years and 59% were male. 93% were referred by their GP. 44 patients were discharged after one clinic, with 67 requiring multiple attendances. For those requiring repeat visits the average HbA1c at first clinic was 71 mmol/l/mol and at discharge was 53.8 mmol/l/mol, an average reduction of 17.2 mmol/l/mol. Average weight was 97.6 kg at first visit and 95.2kg on discharge. An average of 3 visits over 6.4 months was required to achieve these outcomes. 91% of patients were discharged to GP care. 10 patients (9%) were discharged to the Hospital OPD. Five were commenced on Insulin, one of whom was diagnosed with Type 1 diabetes. The remaining five had complications of diabetes requiring long term follow up. The MDT clinic is achieving the goal of providing effective, episodic care for people with type 2 diabetes. A significant reduction in HbA1c is seen at time of discharge and over 90% are discharged back to GP care.

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EP31

Detection of endocrine disrupting microplastics in the human body: a scoping review of distribution, detection methods and sample integrity

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Microplastics are increasingly being found in the human body and are an emerging global issue including concerns about their potential endocrine disrupting effects. As research in this area expands, more studies are reporting the presence, characteristics, and detection methods of microplastics in several human tissues (e.g., thyroid and pancreas) and biological fluids (e.g., blood and urine). This scoping review aims to identify the studies reporting the presence of microplastics in human organs and biological samples, discussing their characteristics as well as the detection methods of microplastics. Following the PRISMA-ScR guidelines, a systematic search of three different databases (PubMed, Scopus, and Web of Science) was conducted for English-language and in-vivo human studies. Duplicate removal, title/abstract and full-text screening were done using Covidence based on eligibility criteria. Data extraction focused on sample type, organ system, biological sample, characteristic of microplastics such as size, shape, colour and polymer type. Methods of detection and contamination protocols were also included. Microplastics continue to be detected in diverse human tissues with advancing detection techniques. However, key gaps remain in contamination control, health impact assessment, and protocol standardization. Research gaps also remain in understanding whether microplastics localize within specific cellular compartment like the cytoplasm or mitochondria. Addressing these gaps is essential to assess the long-term effect of microplastic exposure.

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EP32

Clinical outcomes of people with type 2 diabetes mellitus attending the dublin north west diabetes hub

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Enhanced Community Care (ECC) for type 2 diabetes mellitus (T2DM) is a new initiative in Ireland. The goals of this study were to evaluate changes in clinical parameters amongst patients attending the Dublin North West (DNW) Diabetes hub, Ireland's first fully-operational ECC hub. This was a retrospective observational study of consecutive new patients attending the DNW hub for consultant-led T2DM care between March 2023-2024. The study assessed changes in biochemical markers and T2DM medications from first presentation to time of discharge from the hub or the most recent clinic visit. In total, 146 patients with T2DM attended the hub service and provided data at first presentation along with data from at least one subsequent follow-up visit. Mean age of the participants was 55.6 ± 12 years, 79 (54%) male. Mean duration of follow-up was 13.9 ± 5.5 months. While attending the hub, mean HbA1c decreased from 62.4 ± 19.7 to 50 ± 11.8 mmol/l/mol ($P < 0.01$), mean total cholesterol decreased from 4.5 ± 1.1 to 4.0 ± 0.9 mmol/l/l($P < 0.01$) and mean LDL decreased from 2.5 ± 0.9 to 2.0 ± 0.8 mmol/l/l($P < 0.01$). Use of GLP-1 receptor agonists increased from 12.1% ($n = 17$) at first visit to 42.9% ($n = 60$) at discharge/most recent visit, while SGLT 2 inhibitor use increased from 26.4% ($n = 37$) to 60.0% ($n = 84$). Significant improvements in HbA1c and lipids were observed following attendance at the hub T2DM services. These preliminary findings suggest that community-based T2DM services may help to optimise diabetes care.

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EP33

Use of GLP1-RAs as an adjunct in patients with T1DM on closed-loop continuous subcutaneous insulin infusion

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Obesity is increasingly prevalent amongst individuals with Type 1 Diabetes Mellitus (T1DM), contributing to insulin resistance, poor glycaemic control and increased cardiovascular complications. Glucagon-like peptide-1 receptor agonists (GLP1-RAs) are not currently licensed in T1DM but have been shown to be both efficacious with regard to weight loss, glycaemic control, and cardiovascular health, and safe in patients on continuous subcutaneous insulin infusion (CSII). We performed a retrospective chart review of 12 patients attending St. James's Hospital with a background of T1DM managed by closed-loop CSII, with addition of GLP 1-RA therapy for at least 6 months between May 2022 and July 2025. Parameters assessed were change in weight, HbA1c, total daily dose (TDD) of insulin, time in range (TIR), and hypoglycaemic events before and after GLP 1-RA commencement. Patient age ranged from 26-57 years

old, with 5 men and 8 women included. Median weight loss observed was 12 kg, with a range of 5.5-24.6kg. Median reduction in HbA1c was 6.5 mmol/l/mol, with a range of 3-20 mmol/l/mol. Median reduction in TDD was 13 units, with a range of 2-80.9 units. Median increase in TIR was 13.5%, with a range of 6-32%. 10 of 12 patients saw no change in frequency of hypoglycaemia. Of the remaining 2, increase in frequency of hypoglycaemia was less than 4%. Based on this observational analysis, GLP1-RA therapy as an adjunct in patients with T1DM on CSII appears to have beneficial effects on weight and glycaemic control without a significant increase in hypoglycaemia.

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EP34

Cost analysis of screening for gestational diabetes

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Universal screening for gestational diabetes mellitus (GDM) has recently been recommended as part of the national model of care. The resultant expected increase in incidence of the condition will have implications for healthcare expenditure. We wished to evaluate the costs associated with both one-step and two-step methods of GDM screening. We performed a time-driven activity-based costing (TDABC) method of cost analysis in two centres using differing screening methods and analysed the associated cost of each step in the GDM screening process. The screening process for three participants in both sites was followed to calculate the average cost of a one-step and two-step GDM screen. We estimated annual expenditure on GDM screening using the birth rates from the hospital annual reports. Estimated numbers (28%) proceeding to the second step of two-step screening were calculated using data from our previous work. The estimated costs of a 75g glucose tolerance test, 50g glucose challenge test and 100g glucose tolerance test were € 26.64, € 19.21, and € 34.09 per test, respectively. Estimated annual costs of screening were € 186,480 and € 201,286 for the one and two-step methods, with cost per case screened € 26.64 and € 28.76. Higher numbers of patients being screened for GDM will equate to a higher expenditure on GDM, both in terms of screening for and treatment of the condition, though longer term benefits may be seen and should be studied. Due provision to the higher workload with increased hospital staffing is recommended for the increased volume of testing and treatment.

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EP35

Subgroup analysis of pregnancy outcomes in those diagnosed with and without gestational diabetes using one-step and two-step methods

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Gestational diabetes mellitus (GDM) is a common condition of pregnancy, with significant associated adverse maternal and fetal outcomes. Differing screening methods result in differing incidences of the condition, with more cases being diagnosed using the one-step vs the two-step method. Previously, we conducted a prospective cohort study comparing pregnancy outcomes of 961 participants across two centres using two differing screening methods and found similar pregnancy outcomes in the whole group, with a higher incidence of GDM in the one-step group (19.3 vs 14.1%). The aim of this study was to identify if any differences in outcomes existed in selected subgroups studied. We divided the cohort into 4 groups, as follows: group 1, one-step method with GDM; group 2, one-step method without GDM; group 3, two-step method with GDM; group 4, two-step method without GDM. We performed comparative analysis between these groups. GDM was associated with a higher BMI in both the one- and two-step groups. Participants in group 1 had a lower average birth weight than those in group 2, thought to reflect earlier average delivery gestation as well as appropriate management of GDM in those diagnosed. No significant differences were found between groups testing positive for GDM. When comparing those without GDM, group 2 had a lower average age and higher BMI than group 4. Higher rates of neonatal hypoglycaemia were seen in group 2, and higher pre-term birth rates were seen in in group 4 (9% vs 4%, $P = 0.004$), which warrants further attention.

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EP36

Acute diabetes dietitians in Ireland: advancing dietetic practice in technology in type 1 diabetes care

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Clinical guidelines and competency frameworks recommend that registered dietitians (RDs) knowledge and skills are utilised to support people with diabetes in effective technology use to improve outcomes. In 2024, a Managed Medicine Programme (MMP) preferred glucose sensor ordering process was introduced, which currently excludes RDs. The Diabetes National Clinical Programme Interim Dietetic Lead surveyed the mailing list of the Acute Diabetes Dietitians group in December 2024 to ascertain current practice in relation to diabetes technology. Data were gathered and analysed using SmartSurvey and Microsoft Excel. There was a response rate of 74%. All respondents (n28) reported involvement with diabetes technology pathways. They most frequently identified candidates, prepared for onboarding (70.4%) and educated on interpreting data (66.7%), and least frequently ordered devices (18.5%). Over 75% 'highly' rated their macronutrient estimation, insulin management, communication, and technology-specific clinical knowledge skills. All respondents had undertaken technology training to support their role and 88% used best-practice guidelines. Since the introduction of the MMP process, 76% and 84% respectively, had changed their practice to recommend preferred options on initiation or switching. The majority (76%) identified work duplication or delayed access to treatment as a result of not ordering devices directly. RDs working in acute diabetes care in Ireland are advancing and evolving their practice to use their knowledge, skills and training in diabetes technology as part of care delivery. RDs role in optimising cost-effective device use, would be enhanced by equality of ordering access, in line with their acute multidisciplinary team colleagues.

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EP37

Thyroid function and RED-S risk in elite female GAA athletes across a playing season

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Low energy availability (LEA) arises when an athlete's energy expenditure exceeds intake, and can lead to Relative Energy Deficiency in Sport (REDS). LEA has been associated with downregulation of the thyroid axis as a metabolic adaptation, and studies to date have shown reduced levels of T3 but variable TSH and T4 results. This study, with CREC approval and supported by Research Ireland, assessed thyroid function (TSH, T3 and T4) in 44 female intercounty GAA players at three time points across a season, as part of a larger investigation. Fifty-six percent of assessed participants were identified as at risk of LEA based on a validated questionnaire(LEAF-Q), while 30% were considered at mild risk of REDS via the International Olympic Committee REDS Clinical Assessment tool (REDS IOC CAT 2).

Mean free T 3 concentration results across the season were:

- pre-season 4.79 $\pm$ 0.71 pmol/l[3.7 - 7.5 pmol/l]
- mid-season 5.34 $\pm$ 0.79 pmol/l[3.7 - 7.4 pmol/l]
- end-season 4.99 $\pm$ 0.87 pmol/l[3.8 - 7.5 pmol/l].

Notably, 43% (19) of participants recorded at least one low/subclinically low T3 result and 4 athletes had two low/subclinically low results. However, no significant association was found between thyroid function and LEA risk, determined by LEAF-Q or IOC REDS CAT2. Previous studies in female team sports have a prevalence of low/subclinically low T3 of 10- 13% (Dasa et al,2024.doi:10.1002/ejsc.12129). The prevalence of low/subclinically low T3 in our study is higher than previously reported, however no association was noted with risk of LEA or REDS in this cohort.

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EP38

Measuring health-related quality of life in patients with diabetic foot ulcers

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This quantitative cohort study assessed health-related quality of life (HRQoL) in patients with diabetic foot ulcers (DFU). The study was approved by the Connolly hospital ethics committee. Forty-eight patients attending a diabetic foot clinic completed the EQ-5D-5L survey, which measures mobility, self-care, usual activities, pain/discomfort, anxiety/depression, and overall health perception. Clinical data including age, ulcer severity (graded 0 to 3), ulcer duration, and gender were obtained from medical records. The cohort included 42 males (87.5%) and six females (12.5%) with a mean age of 65 years (standard deviation 13). Ulcer grades were grade 0 (14.6%), grade 1 (56.3%), grade 2 (14.6%), and grade 3 (14.6%). Mean (standard deviation) scores for EQ-5D-5L subdomains were: mobility 2.35 (1.10), self-care 1.42 (0.94), usual activities 1.77 (1.09), pain/discomfort 2.04 (1.10), and anxiety/depression 1.31 (0.90). The overall mean health score was 75.9 (17.7) on a scale from 0 to 100. These results indicate that patients with DFU experience moderate to severe limitations in mobility and pain, with less impact on self-care and anxiety. The overall health score suggests moderately reduced quality of life compared to population norms. These findings highlight the significant impact of DFU on daily functioning and wellbeing, underscoring the need for comprehensive management strategies to improve outcomes.

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EP39

Evaluating the impact of GLP-1 receptor agonists on glycaemic control and weight in patients with type 1 diabetes: a retrospective multi-centre study

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GLP-1 receptor agonists are commonly used in Type 2 Diabetes and obesity but are less frequently prescribed in Type 1 Diabetes (T1D). In selected T1D patients with elevated BMI, they may aid in glycaemic control and weight reduction. A retrospective analysis was conducted on 97 T1D patients from three diabetes clinics in Dublin. Data on HbA1c, weight, BMI, and CGM metrics were collected pre- and post-GLP-1 initiation. Statistical analyses included Wilcoxon Signed Ranks, Mann-Whitney, and Kruskal-Wallis tests, given a non-normal distribution. Median age was 53 years; 63.9% were female. Semaglutide was the most prescribed agent (63.9%). Median HbA1c improved from 63 to 57.5 mmol/l/mol (7.9% to 7.4%) ($r = 0.24$, $P < .001$). No significant differences were found by gender, age, or GLP-1 type. Among patients with baseline HbA1c $\geq$65 mmol/l/mol, 52.3% achieved a $\geq$10% reduction. Weight decreased from 94.75 to 90.65 kg and BMI from 31.8 to 31.6 ($r = 0.17$, $P < .05$). A $\geq$5% weight loss was observed in 30% of participants, most commonly in those with BMI $\geq$35. No significant changes were found in TIR, GMI, or total daily insulin dose. No statistically significant difference was observed in the percentage change of HbA1c across patient BMI categories. GLP-1 receptor agonists were associated with modest improvements in HbA1c and weight among patients with T1D, particularly in those with poor baseline glycaemic control or higher BMIs. Their use may provide an effective adjunctive strategy in selected T1D populations.

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EP40

Immuno-oncology and new onset type 1 diabetes

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Immunotherapies have been added to the arsenal for oncology treatment. They are useful in cancers which have metastasised including malignant melanoma, breast, lung and renal cancers. The endocrine consequences of checkpoint inhibitors include: Hypothyroidism; Graves' disease; Hypophysitis; isolated ACTH deficiency; Type 1 diabetes (TID); and Primary Adrenal Insufficiency. The age of onset is approx. 61-66 yr and speed of onset is rapid. There is DKA at diagnosis in 50-76% of cases. There is undetectable C-peptide at diagnosis in 85% of cases. Positive antibody status at diagnosis is seen in 20-71% of patients. The three checkpoint inhibitors responsible for the development of diabetes are CTLA-4/PD-1/PI3K inhibitors. CTLA-4 (Cytotoxic T-lymphocyte associated protein 4) inhibitor: Ipilimumab (Yervoy). PD-1 (Programmed cell death protein 1) inhibitors: Pembrolizumab (Keytruda) and Nivolumab (Opdivo). P13K inhibitor Piqray (Alpelisib). It is the first approved for breast cancer treatment. We report 4 cases of T1D seen in 2019: 2 with DKA and two cases of diabetic ketosis without acidosis. PD-1 inhibitors compared to CTLA-4 inhibitors have higher prevalence of T1D. P13k inhibitor cause less endocrinopathies than both CTLA-4 and PD-1 inhibitors, but the prevalence of hyperglycaemia is about 51-64%. As a result of the cases above, we presented our findings to MDT, Day Care Oncology, Oncology ward, Pharmacy and Lunch and learn. A policy has been developed and all patients on these agents have lab glucose on each cycle, 3/12 HbA1c and are informed of the symptoms of hyperglycaemia: the 4 T's. No acute episodes have arisen since.

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EP41

Medical treatment with cinacalcet in primary hyperparathyroidism

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Cinacalcet lowers serum/plasma calcium in primary hyperparathyroidism (PHPT), but short-term effects on bone mineral density (BMD) are unclear. We sought to assess its efficacy and tolerability in outpatients with PHPT at our centre Ninety patients (mean age 66.3 $\pm$ 11.7 years) were identified, with baseline adjusted calcium 2.77 $\pm$ 0.10 mmol/l/l, parathyroid hormone (PTH) 10.7 $\pm$ 4.4 pmol/l, and 25-hydroxyvitamin D levels of 64 $\pm$ 36 nmol/l. Twenty-three patients (26%) commenced cinacalcet, resulting in a significant reduction in adjusted calcium (2.77 $\pm$ 0.06 vs 2.57 $\pm$ 0.14 mmol/l/l, $P < 0.001$) and increased phosphate (0.79 $\pm$ 0.01 vs 0.87 $\pm$ 0.11 mmol/l/l, $P = 0.0023$). PTH reduction was not statistically significant (13.5 $\pm$ 5.7 vs 12.1 $\pm$ 5.3 pmol/l, $P = 0.05$) Cinacalcet recipients had higher baseline adjusted calcium than non-recipients (2.76 $\pm$ 0.07 vs 2.67 $\pm$ 0.08 mmol/l/l, $P < 0.0001$), with no differences in age or PHPT duration. Mean treatment duration was 3.1 $\pm$ 3.0 years (range 0.6–13.4 years). BMD did not significantly change (–1.7 $\pm$ 1.6 vs –2.1 $\pm$ 1.5, $P = 0.59$). Five patients also received antiresorptive and 25-hydroxyvitamin D therapy. Two had a history of renal calculi prior to cinacalcet. Adverse effects included gastrointestinal symptoms ($n = 1$) and hypocalcaemia ($n = 2$). Cinacalcet effectively reduced adjusted calcium in PHPT without significant impact on BMD during follow-up.

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EP42

Vitamin D therapy does not worsen hypercalcaemia in primary hyperparathyroidism

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Primary hyperparathyroidism (PHPT) is characterised by inappropriately elevated parathyroid hormone (PTH) levels, leading to reduced bone mineral density (BMD). Deficiency of 25-hydroxyvitamin D can further raise PTH and potentially worsen parathyroid bone disease in medically managed patients. For such patients, vitamin D levels above 75 nmol/lare recommended, though the optimal management approach remains unclear. We assessed vitamin D status in individuals attending our centre, aiming to determine the use of supplementation and its effect on plasma adjusted calcium. Vitamin D prescriptions and levels at diagnosis and last follow-up were reviewed for 90 patients. The mean age was 66.3 $\pm$ 11.7 years, with an average 5.6 $\pm$ 3.3 years since PHPT diagnosis. At diagnosis, 11 patients (12%) were receiving vitamin D. 25-hydroxyvitamin D levels above 50 nmol/land 75 nmol/lwere found in 58 (64%) and 33 (37%) patients, respectively. Thirty-six patients (40%) commenced vitamin D supplementation, with a mean daily dose of 855 $\pm$ 237 IU over 3.8 $\pm$ 3.1

years. No significant changes were observed in adjusted calcium (2.68 ± 0.06 vs 2.69 ± 0.06 mmol/l/l, $P = 0.39$), phosphate (0.85 ± 0.13 vs 0.88 ± 0.16 mmol/l/l, $P = 0.26$), or PTH (11.7 ± 4.5 vs 11.0 ± 4.3 pmol/l, $P = 0.17$). Current mean 25-hydroxyvitamin D level is 80 ± 33 nmol/l. Additional therapies included cinacalcet ($n = 6$), bone protection agents ($n = 10$), and combined treatment ($n = 5$). These findings suggest that maintenance-dose vitamin D supplementation in PHPT does not significantly alter plasma adjusted calcium, phosphate, or PTH levels over the observed treatment period.

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EP43

Pregnancy outcomes in women aged 35 years and older with singleton pregnancies complicated by gestational diabetes

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Pregnancy in women > 35 years is a key risk factor for GDM and is associated with additional complications. The aim of this research is to analyse the outcomes of pregnant women > 35 years and to compare the pregnancy outcomes of this cohort with those aged 18-34 diagnosed with GDM. We retrospectively reviewed our electronic medical records for all women with GDM from 2016-2020. We collected data on age, ethnicity, GDM risk factors (BMI), maternal and fetal outcomes including gestational age at delivery, preeclampsia, birth weight, large and small for gestational age births and congenital anomaly. From 2016-2020, 1260 women were diagnosed with GDM. In total 607 (48.2%) were aged 18-34 years (median age 31.8, interquartile range 4.4) and 51.8% ($n = 653$) were > 35 years (median age 38.1, 3.6). 30% overweight and 40% obese. There was no difference between groups in previous GDM, PCOS, family history or fertility treatment. Those aged > 35 years were twice as likely to develop pre-eclampsia ($P < 0.01$), more likely to have a Caesarean birth (46.2% vs 39.2%, $P < 0.05$) and preterm birth (9.8 vs 5.9%, $P < 0.05$). No difference were seen in birthweight (3440g vs 3460 g), small for gestational age (7%) or large for gestational births (10.2% vs 12.1%). There was also no difference in neonatal care, congenital anomaly or glycaemic management determined by HbA1c. We identified higher rates of pre-eclampsia, Caesarean birth and prematurity in women with GDM aged > 35 years. Advanced maternal age confers additional risks to GDM pregnancies.

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EP44

Unrecognised diabetes mellitus in acute stroke: prevalence and impact on hospital outcomes

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Background
Diabetes mellitus (DM) is common in acute stroke patients and may influence treatment and recovery. This study assessed the frequency of newly diagnosed DM in stroke admissions over two years and examined whether DM status (new, known, or absent) affected patient characteristics, hospital length of stay (LOS), and in-hospital mortality.
Methods
We retrospectively reviewed 528 consecutive stroke admissions. Patients were categorised as having newly diagnosed DM, known DM, or no DM.Group differences were analysed using non-parametric and categorical tests. Multinomial logistic regression identified factors associated with DM status. Predictors of mortality and LOS were assessed using binary logistic and multiple linear regression, respectively, adjusting for relevant covariates. Significance was set at $P < 0.05$ (SPSS v 22).
Results
Of 528 patients, 8.1% had newly diagnosed DM, 28.0% had known DM, 63.8% had no DM. Known DM was associated with lower eGFR (median 60 vs. 73, $P < 0.001$), higher glucose , HbA1c and more ketone positivity. Multinomial regression showed known DM was linked to lower eGFR (aOR 0.979, $P < 0.001$) and fewer prior strokes/TIAs (aOR 0.65, $P = 0.040$). Newly diagnosed DM had no unique predictors. Mortality was associated with older age and absence of prior stroke/TIA but not with DM status. LOS was longer with ischaemic heart disease (8.8%, $P = 0.033$) and when DM coexisted with atrial fibrillation(8.2%, $P = 0.023$).
Conclusion
Nearly 1 in 12 stroke patients had newly diagnosed DM. While DM status alone didn't impact mortality or LOS, comorbidities did, supporting routine DM screening and integrated stroke care.

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EP45

Bone health in medically managed primary hyperparathyroidism

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Primary hyperparathyroidism (PHPT) leads to reduced bone mineral density (BMD), particularly at cortical sites. The natural course of parathyroid bone disease without parathyroidectomy remains uncertain. This study aimed to assess the prevalence of reduced BMD in medically managed PHPT, the inclusion of cortical BMD in initial assessment, rates of reassessment, and BMD-targeted treatment. Biochemical features were compared between patients with reduced and preserved BMD. Ninety individuals were identified (mean age 66.3 ± 11.7 years) with mean adjusted calcium; 2.77 ± 0.10 mmol/l/l, PTH; 10.7 ± 4.4 pmol/l, and 25-hydroxyvitamin D; 64 ± 36 nmol/l. Eighty-three patients (92%) underwent DEXA scanning, with cortical bone assessment performed in 52 (63%). Osteoporosis was found in 30 patients (36%) and osteopenia in 37 (45%). Reduced forearm BMD at a single site was detected in 7 patients (14%). No significant differences in age, gender, adjusted calcium, PTH, or initial 25-hydroxyvitamin D levels were observed between those with reduced and preserved BMD (all $p > 0.05$). BMD-targeted therapy was prescribed to 32 patients (36%): 19 received bisphosphonates, 9 denosumab, and 1 anabolic treatment. DEXA reassessment occurred in 39 cases (47%). Patients who underwent reassessment had longer disease duration ($P < 0.001$), were more likely to be on BMD therapy ($P = 0.007$), and had lower PTH ($P = 0.02$) and 25-hydroxyvitamin D ($P = 0.04$) levels compared to those without reassessment. Parathyroid bone disease is common in medically managed PHPT, and biochemical markers alone do not reliably predict its severity. Including distal forearm BMD assessment is essential for identifying cortical bone involvement.

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EP46

Embedding young adults' voices in diabetes research: the D1 Now cluster RCT and the role of the young adult panel

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Background and aim
Young adults (YAs) with type 1 diabetes face self-management challenges unique to this life stage. The D1 Now definitive cluster randomised controlled trial assesses the D1 Now intervention, which consists of the Agenda Setting Tool and Support Worker, to improve clinical effectiveness and psychosocial outcomes. A central feature of our work is the Young Adult Panel (YAP), a group of young adults with lived experience, established in 2014, who are part of the research team and co-design study processes.
Methods
The trial will involve 348 young adults across 12 diabetes centres in Ireland. The YAP's role is action-oriented and continuous: refining study procedures,

co-developing strategies to maintain participant engagement, and shaping accessible, YA-friendly digital platforms and study communications. YAP members lead initiatives such as online engagement tools and tailored retention activities designed to sustain motivation over the entire trial duration.
Results
Trial set-up is actively ongoing. YAP-driven strategies, such as co-designed participant-facing materials, digital resources, and a robust social media presence, have laid a strong foundation for participant engagement and long-term retention.
Conclusion
Embedding YAP's insights and actions throughout all phases ensures a trial grounded in authenticity and relevance. This active partnership strengthens potential sustainability and effectiveness, setting a benchmark for future youth-centred research.

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EP47

An audit of early-onset type 2 diabetes at sligo university hospital

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Early-onset type 2 diabetes (EOT2D) is the diagnosis of type 2 diabetes in people under the age of forty. This audit assessed the characteristics and management of patients with EOT2D, attending Sligo University Hospital (SUH). This serves to highlight improvement areas in our current practice and aids the development of an optimal care model for this high-risk cohort. All individuals meeting the diagnostic criteria for EOT2D were included. The data was collected from ProWellness, the IT system used for diabetes at SUH and Sligo Chronic Disease Management Hub. The data collected includes age, BMI, current HbA1c, HbA1c at diagnosis, blood pressure, LDL and total cholesterol, diabetes treatment and referral to DESMOND or My Best Health programme. EOT2D was identified in 107 patients. The mean age was 35.3 years. The mean HbA1c at diagnosis was 73 mmol/l/mol. Currently, 47% had a HbA1c below 53 mmol/l/mol. The mean BMI was 30 kg/m^2, while the mean total cholesterol and LDL were 4.7 mmol/l/land 2.9 mmol/l/lrespectively. 20% of the cohort had been referred to DESMOND or My Best Health Programme. The most common treatment agents were metformin (83%), insulin (28%), GLP-1 agonist (27%) and SGLT-2 inhibitors (24%). There is a significant patient cohort attending SUH with EOT2D, sub-optimal glycaemic and cardio-metabolic risk profiles, with few of them on GLP 1 agonists or SGLT2 inhibitors. A dedicated EOT2D clinic has commenced at SUH, to provide the focus, environment and multidisciplinary team input needed to administer effective, intense and quality care to this high-risk group.

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EP48

Hyponatraemia: diagnosis and management at sligo university hospital

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Hyponatraemia is the most common disorder of body fluid and electrolyte balance in hospitalised patients. This audit retrospectively assessed patients admitted to Sligo University Hospital (SUH) with hyponatraemia. The diagnostic tests employed were compared against guidelines published by the European Society of Endocrinology (ESE). The aim is to introduce a clinical aid for the diagnosis and management of hyponatraemia at SUH. The records of all patients admitted to SUH over a two-week period in January 2025 were evaluated. Pregnant patients, day-case presentations, paediatric patients and patients on dialysis were excluded. The diagnostic tests evaluated were serum osmolality, urine osmolality, urine sodium, thyroid function tests (TFTs) and cortisol. There were 437 admissions during the two weeks, and hyponatraemia was noted in 77 patients (18%). Of the patients with hyponatraemia, the mean age was 75 years, and 59 patients (77%) were admitted under a medical team. 55% had mild hyponatraemia, 36% moderate and 9% had severe hyponatraemia. Serum osmolality was checked in 18%, urine osmolality in 19% and urine sodium in 16% of the patients presenting with hyponatraemia. TFTs were checked in 22% and cortisol in 10% of the patients. 37 patients (48%) did not attain normal sodium levels prior to discharge. 6 patients (8%) did not have repeat sodium levels prior to discharge. Majority of patients admitted with hyponatraemia at SUH did not have the diagnostic tests recommended by the ESE guidelines. Proper diagnosis and identification of the aetiology of hyponatraemia is important in guiding treatment, in this patient cohort.

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EP49

Radioactive iodine (I-131) therapy for benign thyroid disease: a single-centre outcomes analysis

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This single-centre retrospective analysis evaluated the effectiveness of a fixed-dose protocol for first-dose radioactive iodine (RAI) therapy in benign hyperthyroidism, including Graves' disease (DTG), toxic multinodular goitre (TMNG) and toxic uninodular goitre (TUNG). We assessed biochemical outcomes up to 12 months post-treatment and compared results with European Association of Nuclear Medicine (EANM) targets. All patients receiving first-dose RAI between 2019 and 2024 were included. The institutional protocol specified a fixed dose of 300 MBq for DTG and 500 MBq for TMNG/TUNG. A total of 150 patients were analysed (83.3% female; median age 55 (44–73) years). In the DTG group ($n = 85$), outcome data were available for 72 (84.7%) patients. Of these, 51 (70.8%) became hypothyroid, 9 (12.5%) euthyroid, and 12 (16.7%) remained hyperthyroid. The mean time to hypothyroidism was 3.5 months, and 60 (83.3%) patients met the EANM target ($\geq$90%). For the TMNG/TUNG group ($n = 65$), outcome data were available for 52 (80%) patients. Here, 15 (28.8%) became hypothyroid, 28 (53.8%) euthyroid, and 9 (17.3%) remained hyperthyroid. The mean time to hypothyroidism was 5.3 months, and 43 (82.7%) patients met the EANM target ($\geq$80%). Correlation between administered dose and favourable outcomes was weakly positive ($r = 0.129$ for DTG and $r = 0.095$ for TMNG/TUNG), while the correlation between pre-treatment 24-hour iodine-131 uptake and favourable outcomes was negligible in DTG ($r = 0.0$), and weakly negative in TMNG/TUNG ($r =$ -0.38). Our fixed-dose RAI protocol met EANM targets for TMNG/TUNG. However, DTG outcomes were below the target, which may be attributed to the absence of individualised dosimetic planning.

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EP50

An audit of glycaemic control among hospitalised patients referred to the insulin management round (IMR)

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Hyperglycaemia in hospitalised patients is associated with increased mortality and healthcare costs. American Diabetes Association (ADA) recommends a target glucose of 7.8-10 mmol/l/lfor insulin treated inpatients. The Insulin Management Round (IMR) is a unique specialty-led intervention at our hospital with daily insulin prescribing and titration on a dedicated insulin kardex for inpatients referred via the electronic record system. This audit retrospectively reviewed all IMR referrals (excluding critical care) over six random days to analyse referral characteristics and assess glycaemic control (classified as stable if glucose 5-10 mmol/l/l; unstable if $>$10 mmol/l/l). Of 253 IMR cases evaluated, diabetes types included type 2 (72.7%), type 1 (15.8%), CF related (5.1%), steroid-induced (4.7%), type 3c (1.6%). Baseline control was suboptimal in 40.1% (HbA1c 54–74 mmol/l/mol) and poor in 23.7% ($\geq$75 mmol/l/mol). Insulin regimen comprised multiple daily injections (38.3%), pre-mixed insulin (36.8%), sliding scale (13.8%), and basal insulin $\pm$ sliding scale (11.1%). Complex cases represented 43.5%, mainly due to erratic patterns (49.1%) or steroids (17.3%), followed by enteral feeding (12.7%), transplant (9.1%), dialysis (9.1%) and parenteral nutrition (2.7%). Complex patients were distributed across surgical (54.5%) and medical (45.5%) wards. Diabetes consultations were requested in 43.5% overall, rising to 74.5% in complex cases; diabetes nurse reviews were sought in 43.9%. Stable glycaemic control within ADA targets was achieved in 55.7% ($n = 141$). While $>$50% of IMR-managed patients achieved recommended targets, a significant proportion had inadequate baseline control and were deemed complex. Enhanced electronic flagging of at-risk patients and prompt diabetes consultation may further improve inpatient glycaemic outcomes.

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EP51

Audit of osteoporosis management in patients undergoing total parathyroidectomy for primary hyperparathyroidism

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Osteoporosis in primary hyperparathyroidism is an indication for surgical referral. Anti-resorptive treatment may be used as a medical treatment in patients not suitable for or who decline surgery. However, given system restraints there are often long wait times from referral to surgery. We examined the time from referral to parathyroidectomy, the use of antiresorptive agents and follow-up DXA rates. We identified patients referred from our centre with osteoporosis on DXA on an ENT database of parathyroidectomies from 2023-2024. We collected demographics, diagnostic work-up data, time from referral to surgery, anti-resorptive use, pre/post-op DXA and histology. 34/69 (49%) of patients were referred from our department. Indication for surgery was osteoporosis in 18/34 (53%). Mean age was 67.4 years. At referral for surgery, 4/18 were already on osteoporosis treatment, 7/18 were started on treatment, totalling 11/18 (61%). Median time from referral to parathyroidectomy was 15 months (range 2-60 months). There were no hospitalisations for hypercalcemia or fractures prior to surgery. For those started on bone treatment 5/7 (71%) had a follow-up DXA at 18 months. 3/7 (42%) of those not started on bone treatment had a follow-up DXA post parathyroidectomy. Almost half of patients referred for surgical intervention have a diagnosis of osteoporosis with the majority started on bone treatment. There was a variable wait time from referral to parathyroidectomy with often significant delays. Many patients did not have follow up DXAs, this is of concern particularly where decision on treatment was deferred until post op.

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EP52

Audit of use and compliance with continuous subcutaneous insulin infusion kardex

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Diabetes mellitus is a common comorbidity in hospital inpatients. Type 1 diabetes clinical guidelines recommend, where possible during admission, continuing the existing insulin regimen, including Continuous Subcutaneous Insulin Infusion (CSII), enabling insulin self- administration. However, many non-diabetes healthcare staff are unfamiliar with CSII, which may lead to medication errors. We introduced a new CSII Kardex, supported by an educational video on CSII, aiming to prevent errors in the prescribing and administration of CSII. We audited the use and compliance with this new Kardex. 19 patients and 26 admissions using CSII were identified in 2023 and 2024. Three patients had multiple admissions which were audited separately. Records were unavailable for three admissions. Thus, 23 admissions and 18 patients' records were retrospectively reviewed. Mean diabetes duration was 31.3 $\pm$ 15.1 years; mean HbA1c was 59.8 $\pm$ 9.7 mmol/l/mol, where available. CSII used were Medtronic MiniMed™(14), Tandem t:slimX2™(3) and Roche Accu-Chek® Spirit(1). CSII Kardexes were used in 86.9% of cases. Subcutaneous insulin Kardexes were used in 30.4% of cases and additional subcutaneous insulin was administered or incorrectly recorded in 17.4%. 78.3% of admissions using CSII were under non-Endocrinology teams. Of these, diabetes consults were requested in 61%. Diabetes nurse specialist input was requested in 82.6% of the total 23 admissions. Reference to insulin prescription was made in 65.2% of Kardexes and 56.5% of discharge summaries. This audit demonstrates good compliance with a new CSII Kardex and highlights the importance of continued education for non-diabetes healthcare staff and involvement of diabetes specialists.

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EP53

Audit of clinical data availability in diabetes clinics at connolly hospital blanchardstown

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Retinopathy and nephropathy are preventable microvascular complications of diabetes. National clinical guidelines suggest annual assessment of risk factors, including urinary Albumin-to-Creatinine Ratio (ACR) and retinal screening, to detect complications early and initiate appropriate treatments. A prospective audit of availability of ACR, currently measured off-site, and retina screening results was conducted over one month in the diabetes review clinics at Connolly Hospital. Additional data collected included demographics, prescription rates of additional therapies and patient awareness of associated sick day rules. Of 133 patient encounters, 75% were living with T2DM. Medication review indicated that 67% of patients were on either an ACEi or ARB; 42% were on an SGLT2i, but only 18% of these patients were aware of sick day rules. Laboratory records indicated 60% of patients had ACR samples received in laboratory of which only 18% had results available in clinic. Although 92% of patients reported being registered for diabetic retinopathy screening, only 16% had screening results accessible to the clinician. We identified substantial deficiencies in the availability of key clinical parameters with implications for treatment optimisation and adherence to clinical guidelines. The lack of real-time access to urine ACR and retinal screening results may hinder appropriate initiation or adjustment of therapies such as SGLT2i, ACEi/ARBs, and GLP-1 receptor agonists. We suggest a feasibility study is conducted in relation to on-site ACR testing with re-audit once this is in place.

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EP54

An audit of therapy settings and glycaemic metrics in users of the Tandem T:slim X2 with control IQ technology attending diabetes services in Beaumont hospital

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Introduction
Over the last 10 years, advances in diabetes technology, including the introduction of continuous glucose monitoring (CGM) and hybrid closed loop (HCL) therapy, has resulted in improved outcomes for people with diabetes.
Aim
We analysed the proportion of users of the T:slim X2 with Control IQ technology achieving glycaemic targets as outlined in the international consensus guidelines (1). We also examined the therapy settings associated with optimal glycaemic metrics.
Methods
This was a retrospective analysis of last available glucose and insulin data uploaded to GLOOKO by users of the T:slim X2 with Control IQ technology attending Beaumont Hospital.
Results
Data was available for 72 users, 58% male. Mean Glycemic Management Indicator (GMI) was 7.4%. Mean Time in Range (TIR) was 63.9 %, time above 10 mmol/l/lwas 31.3 % and time below range was 1.8%. 39% of users achieved optimum TIR $\leq$70%. Mean insulin:carbohydrate ratio (ICR) and insulin sensitivity factor (ISF) was more aggressive in those achieving TIR$\leq$70% compared to those with TIR $\leq$70% (366/total daily dose (TDD) and 122/TDD Vs 394/TDD and 131/TDD respectively).
Conclusion
More aggressive ICRs and ISFs are required to optimise TIR in those not achieving glycaemic targets in patients using the Tandem T:slim X2 Control IQ technology.
Reference
Battelino T, Danne T, Bergenstal RM. Clinical Targets for Continuous Glucose Monitoring Data Interpretation: Recommendations From the International Consensus on Time in Range. Diabetes Care [Internet]. 2019 Jun 8;42(8):1593–603. Available from: https://care.diabetesjournals.org/content/42/8/1593

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EP55

Service evaluation of phaeochromocytoma and paraganglioma management: experience from a single centre

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Phaeochromocytomas and paragangliomas (PPGLs) are rare neuroendocrine tumours arising from chromaffin cells. These tumours commonly secrete catecholamines and, if untreated, are associated with significant cardiovascular morbidity and mortality. This service evaluation aimed to describe the clinical and genetic characteristics of patients with PPGLs attending our centre. We conducted a retrospective observational study at a tertiary Irish hospital, including all patients diagnosed with PPGL or under surveillance for a genomic variant known to predispose to PPGL who attended between 2015 and 2024. Clinical and genetic data were extracted from medical records and the Clinical Portal laboratory information system. A total of 108 patients were included: 52 (48.1%) had adrenal phaeochromocytoma, 39 (36.1%) had extra-adrenal paraganglioma, and 17 (15.7%) were under surveillance for a known pathogenic variant. The mean age was 53.6 years (±18.2), and 56 (51.9%) were female. Referral indications included incidental imaging (25.9%), symptomatic presentation (11.1%), post-operative diagnosis (3.7%), external referral (17.6%), and genetic surveillance (24.1%). Nineteen patients (17.6%) were under long-term follow-up for previously diagnosed PPGL. A positive family history was reported in 35 patients (32.4%), across 11 kindreds. Germline variations were identified in SDHB (30.6%), SDHD (2.8%), and TMEM 127 (1.9%); syndromic associations included MEN2A (1.9%), MEN2B (2.8%) and VHL (4.6%). Forty-five (41.7%) patients underwent surgical resection within the study period with 34 (31.5%) having undergone preoperative alpha blockade in our centre. This study provides a descriptive profile of a PPGL cohort in an Irish tertiary referral centre, highlighting the range of presentations and underlying genetic findings.

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EP56

Attainment of glycaemic targets and clinical characteristics of individuals with Type 1 Diabetes Mellitus using continuous glucose monitors with insulin pens

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A proportion of individuals with T1DM decline insulin pump use and instead use continuous glucose monitors (CGM) with insulin pens. We wished to describe glycaemic control and clinical characteristics of this specific cohort and look for any associations between the two. Interrogation of electronic databases Dexcom Clarity and Imeddoc was performed to identify individuals with T1DM over 18 years of age using Dexcom CGM and insulin pens. Glycaemic control was evaluated using the parameters of time in range (TIR), time below range (TBR) and time above range (TAR), referring to blood sugar ranges of 4-10 mmol/l/l, <4 mmol/l/l, and >10 mmol/l/lrespectively. Guidelines recommend target ranges for TIR, TBR and TAR of >70%, <4% and <25% respectively. Statistical analysis was performed using SPSS. The mean age of the 263 individuals was 49 and 53% were males. The mean body mass index was 28.8kg/m2 and mean duration of diagnosis was 20 years. Diabetic Retinopathy was present in 51%. Targets for TIR, TBR and TAR were reached in 17%, 92%, and 16% respectively. Average TIR was 51%. The only statistically significant associations identified found that age over 65, elevated BMI and presence of diabetic retinopathy were negative predictors of achieving TAR target. While only 16% achieved the TIR target of 70%, the average TIR was 51%, and 92% achieved the TBR target. The lower-than-expected mean age of 49 shows that this is not merely an older population. Correlation with HbA1c prior to CGM use may be an even more insightful comparator than TIR targets.

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EP57

Screening & treatment of hyperglycaemia in accordance with 'joint british diabetes societies for inpatient care(JBDSFIC)' guidelines in admitted patients treated with systemic corticosteroids in a single centre

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Glucocorticoids are employed for their immune-suppressive & anti-inflammatory effects in a variety of medical conditions. The metabolic effects pose significant burden including hyperglycaemia in patients without diabetes mellitus & uncontrolled hyperglycaemia in diabetes mellitus (DM). Rates of steroid induced hyperglycaemia (SIH) and Diabetes Mellitus (SIDM) are estimated at 32.3% and 18.6% respectively. The 'JDBSFIC' published guidelines in January 2023 titled: Management of Hyperglycaemia and Steroid (glucocorticoid) Therapy. Data of patients being treated with supraphysiological doses of systemic glucocorticoids was gathered retrospectively over 1 week period. Frequency of pre-treatment assessment with HbA1C performed within 3 months prior to treatment and screening for risk factors was collected. Inpatient blood sugar level (BSL) monitoring and escalation as per JDBSFIC guidelines was collected. 10 patients met the criteria for inclusion in the audit. 3 patients had pre-treatment diagnosis of DM. 40% had a HbA1C within 3 months of treatment but no patients with DM had HbA1C checked in the 3 month period. Mean HbA1C was 42.88 mmol/l/l. 2 patients had any BSL checked during admission. Of these patients, 1 had BSL checked at appropriate time to screen for SIH. Both patients had DM. 1 patient with prior history of DM did not have any BSL checked while on systemic corticosteroids. Due to lack of BSL data, we were unable to assess frequency of SIH/SIDM and practices of managing same. The results demonstrates poor compliance with inpatient monitoring of hyperglycaemia with potentially missed diagnosis of SIH & SIDM as well as potential for missed therapeutic intervention.

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EP58

A review of current approach to preoperative imaging and resultant operative findings in parathyroidectomy surgery for primary hyperparathyroidism

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Approaches to preoperative imaging in primary hyperparathyroidism (PHPT) vary in clinical practice. British and European endocrine societies recommend ultrasound (US), Single Photon Emission Computed Tomography (SPECT) or Computed Tomography (CT) without specific guidance around which to use and when. Our institution's usual approach is to arrange US and SPECT simultaneously. We assessed the degree of concordance between preoperative imaging and histological findings to determine a local recommended approach to preoperative imaging in PHPT. Charts of 60 patients with biochemical evidence of PHPT who underwent parathyroidectomy were analysed. 56/60 had an US, 57/60 had a SPECT and 12/60 had a CT. 51.8% of US and 64.9% of SPECT were concordant with histology. 51 patients had an adenoma. Of those with both US and SPECT, 66.6% had concordant imaging. 10 additional adenomas were detected on SPECT that were not found on US and 4 additional were detected on US but not on SPECT. The PPV of US in detecting an adenoma was 86.6% with sensitivity of 55%. The PPV of SPECT in detecting an adenoma was 86% with sensitivity of 75%. The overall sensitivity of combined US and SPECT was 86.2%. No cases of adenoma were picked up on CT that were not already found on US or SPECT. We recommend that those with positive US for adenoma should proceed to surgery. Those with negative US should proceed to SPECT. Those with negative 1st and 2nd line imaging may consider; 3rd line CT or proceed directly to exploratory surgery.

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EP59

Awareness and knowledge of alcohol consumption in young adults with type 1 diabetes

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Introduction
Type 1 diabetes mellitus (T1DM) is an autoimmune disease characterised by hyperglycaemia caused by absolute deficiency of insulin, and is the most common condition diagnosed in adolescence. It is known that young adulthood represents a period of suboptimal glycaemic control among individuals with T1DM. Emerging adulthood is a significant transitional life stage, which presents additional challenges for those with T1DM attempting to self-manage their condition. To date, studies have revealed a disparity in the education provided to young adults with T1DM regarding the potential harms of alcohol consumption. The aim of this audit is to determine the awareness of the potential risks associated with alcohol consumption among young adults with T1DM.

Methods
A survey was distributed among young adults with T1DM attending the Diabetes Day Centre at Galway University Hospital. Questions pertained to the patients experience and knowledge of the effects of alcohol on T1DM.
Results
Over 90% (30) participants self-reported an awareness of the effects of alcohol on glycemic control. Knowledge of the fluctuations in blood glucose levels with alcohol was demonstrated; the majority of participants stated blood glucose levels increase with drinking, and 14 participants reported a fall in blood glucose levels associated with alcohol consumption. Two patients surveyed reported admission to hospital with diabetes ketoacidosis (DKA) as a consequence of alcohol consumption.
Discussion
An awareness that alcohol has an influence on glycaemic levels was generally communicated by the cohort, and almost 70% of participants recall being formally educated in this regard.

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EP60

Audit on cardiovascular risk assessment in a cohort of adults with Adrenal Insufficiency

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Adrenal Insufficiency (AI) is associated with increased cardiovascular risk factors (CVR). There is no optimal glucocorticoid replacement regime and excess of cortisol can lead to detrimental metabolic effects. Data extracted from one-year-adrenal clinic letters included twenty AI patients, 17 (85%) with primary-AI and rest with secondary-AI. The average age was 51 (±20) years old, BMI 22(±3) kg/m^2 and 9 (45%) were male.7 (35%) had past medical history of hypertension, 1 had a stroke, 2 had Atrial fibrillation, 3 had Diabetes. The mean hydrocortisone dose-equivalent was 0.24 (±0.04) mg/Kg or 16(±3) mg/day and 100 mg Fludrocortisone/day. 19 (95%) patients had a documented blood pressure, average systolic / diastolic being 124 (±17) / 72(±10) mm Hg. Out of the 15 (75%) patients who had HbA1c checked, the mean was 36.8 (±6.37) mmol/l/mol. 11 (55%) had lipid profile documented with average of T-Cho 5 (±1), HDL 1.3 (±0.2), LDL 3 (±1), Tg 1.1 (±0.6). Only 4 (20%) patients were on cholesterol-lowering agents. Overall, findings suggest that the steroid dose is similar to the one used in current literature, but CVR are sometimes left unmonitored. Our study aims to emphasize the need for a comprehensive approach including regular cardiovascular risk assessment in patients with adrenal insufficiency.

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EP61

Demographic, clinical, and socioeconomic profile of adults with diabetes awaiting outpatient review at university hospital kerry

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Hospital outpatient diabetes clinics in Ireland face increasing demand with the rising prevalence of diabetes. Understanding the characteristics of patients awaiting review can inform service planning, including the transition of care to the community diabetes service. A waiting list initiative was undertaken whereby existing referrals to University Hospital Kerry were reviewed and demographic and clinical data were gathered. Socioeconomic profile was characterised using address data and the Pobal HP deprivation index. Of 123 adults with diabetes on the outpatient waiting list, 55 were deemed suitable for the community diabetes service. Of these 55 people, the mean age was 62 years and the mean HbA1c at triage was 66 mmol/l/mol, with an average of 1.7 non-insulin glucose lowering medications per person. The mean time spent on waiting list was 109 days (median 117, range 14–275). The mean Pobal HP Deprivation Index score was −3.23, categorised as marginally below average. Co-morbidities included ischaemic heart disease (15%), nephropathy (13%), foot disease (7%), heart failure (5%), and retinopathy (4%). Almost half of adults with diabetes awaiting a hospital outpatient appointment are eligible for transition to the community diabetes service. This can reduce the burden on hospital diabetes clinics, creating capacity for people with type 1 diabetes, complex type 2 diabetes on insulin, and facilitate universal roll out of diabetes technology. The cohort includes individuals from modestly disadvantaged areas, highlighting the need for equitable access to timely and appropriate diabetes care in both hospital and community settings.

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Case Reports

Physical Posters

PCR1

Safe use of carbimazole in a patient with graves' disease and thyroid storm after PTU-induced agranulocytosis

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Agranulocytosis is a rare but potentially life-threatening complication of anti-thyroid medications. While the actual risk is unknown, agranulocytosis induced by one thionamide is generally regarded as a contraindication to the use of another thionamide due to the risk of cross-reactivity. Consequently, clinical experience of prescribing carbimazole in patients with a history of PTU-induced agranulocytosis is exceptionally limited. We present the case of a 64-year-old female who presented with pyrexia, weight loss and uncontrolled fast atrial fibrillation with a takotsubo cardiomyopathy. Thyroid function test revealed a TSH < 0.01mIU/l, fT4 > 100.0 pmol/l (11.9- 21.6) with positive TSH-receptor antibodies. She was diagnosed with a thyroid storm secondary to Graves' disease. She was commenced on high-dose PTU 200 mgs qds and other supportive therapy. However, after 14 days she developed agranulocytosis and neutropenic sepsis. She developed thyrotoxicosis-induced severe myopathy and respiratory compromise necessitating a prolonged ITU ventilatory support. She had persistent thyrotoxicosis, so Lugol's iodine and lithium were used in preparation for a salvage thyroidectomy. However, she remained unfit for a thyroidectomy after two weeks, so the Lugol's iodine was stopped. After careful consideration, a decision was made to commence carbimazole; 10 mg with daily close monitoring of her blood counts. Her TFTs normalised and blood counts remained stable (without GCSF support) on carbimazole. She ultimately underwent a total thyroidectomy after 6 weeks of intensive inpatient rehabilitation. In conclusion, we report a case of successful carbimazole use in a critically ill patient unfit of early surgery with preceding PTH-induced agranulocytosis and limited alternative therapeutic options.

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PCR2

Metastatic paraganglioma with parathyroid hormone-related protein (PTHrP) dependant hypercalcaemia and avascular necrosis of bone

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Paragangliomas are rare neuroendocrine tumours arising from the extra-adrenal autonomic paraganglia. Clinical presentation is usually related to catecholamine hypersecretion. Hypercalcaemia is rarely reported and the aetiology is varied. Literature review revealed two cases of PTHrP-related and one calcitonin-related hypercalcaemia. No prior reports were found of avascular necrosis with paraganglioma. A 69-year-old female presented with severe constipation, weight loss, anorexia and lethargy. She had a background of progressive metastatic noradrenaline-secreting paraganglioma since 2013. Despite two surgical resections and iodine meta-iodobenzylguanidine (MIBG) therapy she had significant progression of disease. Genetic screening was negative. Her corrected calcium was 3.12 mmol/l (2.2 ×2.6), phosphate 0.95 mmol/l (0.8×1.5), 25-vitamin D 95 nmol/l (>50 nmol/l). Renal function was normal. Parathyroid hormone was suppressed; 12 ng/l (10×47 ng/l), her calcitonin was 1.4 ng/l (< 10), her PTHrP was 5.24 pmol/l (<1.4). MIBG and CT imaging revealed metastases involving multiple lymph nodes, liver, peritoneum and retro-peritoneum but no skeletal metastases. Plasma normetanephrines were > 80,000 pmol/l (0-1180), metanephrines 537 pmol/l (0-510) and 3-methoxytyramine 2030 pmol/l (0-180). Isotope bone scan showed increased uptake in humeral heads and proximal femurs in keeping with avascular necrosis.She received intravenous fluid therapy and two doses of zolendronic acid. There was an initial treatment response (corr Ca 2.9 mmol/l). However, after a few days her calcium rose again (3.29mmol/l). Unfortunately, her condition deteriorated and she passed away.This case highlights paragangliomas secrete non-catecholamine products like PTHrP and can cause hypercalcaemia. This is the first reported case of avascular necrosis associated with paraganglioma.

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PCR3

Case report – severe hyperandrogenaemia in a post-menopausal female

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Hyperandrogenism in postmenopausal females is rare and always mandates investigation. It may be due to an ovarian or adrenal source of androgen production. A 75-year-old post-menopausal woman was referred by her dermatologist for investigation of severe hyperandrogenaemia (testosterone 30.6nmol/l, RI < 1.4; LH and FSH undetectable), on background of polycythaemia. She had a 3-year history of androgenic alopecia (resistant to spironolactone and minoxidil) and virilisation (Ferriman Gallwey score 32/36, Ludwig scale 3/3). DHEAS levels, overnight dexamethasone suppression testing, and adrenal imaging were normal. Both ovaries were enlarged, with multiple small follicles and a mildly thickened endometrium on pelvic MRI. Pathology from a subsequent hysterectomy and bilateral salpingo-oophorectomy revealed a steroid cell tumour of the left ovary. Following surgery, the patient lost; 5 kg in weight, testosterone level fell (<0.4 nmol/l), LH and FSH rose (30, 23 IU/lrespectively), polycythaemia resolved (Hgb 14.4g/dl), and her plethora, hirsutism and alopecia improved (Ferriman Gallwey score 17/36, Ludwig scale 2/3). The patient had presented to multiple physicians over years, with conditions potentially related to hyperandrogenaemia, prior to measurement of testosterone. Investigations suggested an ovarian source of androgens, and although imaging did not identify a suspected tumour, the height of elevation of testosterone was most in keeping with a steroid producing ovarian tumour, so oophorectomy was the best course of action. Her case highlights the need to consider unusual causes of hirsuitism and polycythaemia and the need for prompt investigation and management of post-menopausal hyperandrogenaemia.

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PCR4

Case series: management of extreme hypertriglyceridemia in pregnancy and type 2 diabetes mellitus

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We report two cases of severe hypertriglyceridemia (HTG) successfully managed using an intravenous insulin-based protocol in settings where plasmapheresis was unavailable. Case 1: A 39-year-old woman, at term pregnancy with a history of gestational diabetes, hypertension, and hypothyroidism, was found to have TG of 164 mmol/lintrapartum. Following elective caesarean section, TG reduced to 20 mmol/lbut then plateaued postpartum despite insulin, anticoagulation, and lipid-lowering therapy. She was encouraged to breastfeed, which was associated with a marked and rapid TG reduction to 2.5 mmol/lwithin weeks, highlighting a potential postpartum metabolic benefit of lactation. Case 2: A 31-year-old male with poorly controlled type 2 diabetes mellitus (HbA1c 116 mmol/mol) was admitted with asymptomatic TG of 50 mmol/l. Using our standardized protocol—nil per os, intravenous insulin infusion at 0.05 units/kg/hour with dextrose and potassium supplementation, and escalation of anticoagulation from once to twice daily—TG levels decreased steadily to 5 mmol/lprior to discharge. Both patients tolerated therapy without hypoglycaemia or major adverse events. We have observed a rising trend of lipotoxicity in both well-controlled and poorly controlled type 2 diabetes, suggesting a need for earlier screening and intervention. This series demonstrates that protocol-driven intravenous insulin therapy can achieve rapid TG reduction, prevent complications such as pancreatitis, and facilitate recovery in diverse clinical contexts. Wider implementation and further study may improve outcomes in severe HTG.

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PCR5

Case report: bullous diabeticorum – a skin or bone condition?

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We present a rare case of bullous diabeticorum that resulted in bony deformity in the lower limb. A 48-year-old female with a background of complicated type 1 diabetes, presented with a 3-year history of a skin disorder associated with recurrent spontaneous bullae and ulceration on her right anterior shin and foot.

Skin biopsies showed focal epidermal infarction, subcorneal vesiculation, papillary dermal fibrosis and minimal dermal inflammation, direct immunofluorescence was negative, the overall features were reported as not specific but in keeping with bullous diabeticorum. Typical features of bullous pemphigoid and epidermolysis bullosa were not present. Despite wound care and antibiotic therapy for intermittent secondary infection, there was ongoing degeneration of the skin which progressed to severe scarring and deformity of the bony structure of the right foot. The result was a dystrophic, foreshortened foot, with contractures of several digits. Imaging including plain x-ray, ultrasound of foot, MRI and CT scans showed extensive skin thickening with resorption of underlying bone, marrow oedema and deformity of bones of the forefoot and midfoot. The impression was that the bone deformities were secondary to skin inflammation similar to that seen in epidermolysis bullosa. There were no features of neuro-arthropathy (Charcot foot) or of osteomyelitis as the cause of the foot deformities. In summary we report a case of a severe bullous diabeticorum leading to bony abnormalities secondary to contractures due to skin inflammation.

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PCR6

A case series of isolated central hypothyroidism in adults on antidepressant therapy

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Isolated central hypothyroidism in adults is extremely rare, though emerging data suggest that antidepressant drugs may occasionally alter the hypothalamic–pituitary–thyroid axis. We present three adult cases referred for nonspecific symptoms who were found to have abnormal thyroid function tests (TFTs) while taking antidepressant medications. The first, a 40-year-old woman on olanzapine, venlafaxine and mirtazapine, had normal TFTs until early 2025, when fT4 was repeatedly low (7.1-7.5 pmol/l), with inappropriately normal TSH (1.55-2.99 mUI/l), normal fT3 and negative TPO-Ab. The second, a 36 year old man on clomipramine, quetiapine, mirtazapine, and fluvoxamine, showed persistently low fT4 (5.1–8.8 pmol/l) since 2022 with TSH between 0.7–1.4 mIU/l, and an otherwise intact pituitary profile. The third, a 48 year old woman on Sertraline, had annual normal TFTs until recent testing, which revealed fT4 7.8 pmol/land TSH 2.8 mIU/l. None used lithium, amiodarone, steroids, or checkpoint inhibitors. These findings raise concern for antidepressant/antipsychotic induced central hypothyroidism. Existing literature supports this condition, particularly for sertraline or tricyclic antidepressants. In addition, a retrospective study indicated an increased risk of hypothyroxinaemia in patients taking mirtazapine. No consensus exists on management, but case reports suggested recovery of thyroid function when the offending medication is discontinued. Given minimal symptoms, which may be attributed to depressive disorder, the relative stable TFTs, and the potential reversible cause, we opted for conservative management. In conclusion, an increased awareness regarding potential interaction of psychotropic medication and thyroid function could prevent unnecessary imaging, overtreatment and patient anxiety regarding a new diagnosis.

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PCR7

A case report of androgen excess following ovarian stimulation in a female with blepharophimosis, ptosis, epicanthus inversus syndrome (BPES)

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Blepharophimosis, ptosis, epicanthus inversus syndrome (BPES) is a rare autosomal dominant condition caused by a variant in the FOXL2 gene. Type I BPES is associated with premature ovarian insufficiency, often prompting early fertility preservation. While androgen elevations during ovarian stimulation are well described, longer-term effects are less well documented.We present the case of a 19-year-old female with BPES referred for the investigation of elevated serum testosterone (5.6 nmol/l, [0.1-1.3]) following ovarian stimulation and oocyte retrieval for prophylactic fertility preservation. She reported a four-year history of oligomenorrhoea. Examination revealed mild facial hirsutism and acne without acanthosis, alopecia, striae, or proximal myopathy. Eight months post-stimulation, testosterone remained elevated (4.1 nmol/l [0.1-1.3]) with normal DHEAS (8.3 umol/l [1.8-10]), androstenedione (4.3 nmol/l [1.7-4.6]), SHBG (34.4 nmol/l [24.6-122]); and 17-hydroxyprogesterone (3.75 nmol/l [0.6-4.5]). Pelvic ultrasound was normal. A triptorelin suppression test 18 months post-stimulation showed normal baseline and post-suppression testosterone (1.0 and 0.7 nmol/l, respectively). An MRI pelvis is awaited. This case illustrates prolonged hyperandrogenaemia following ovarian stimulation in a patient with BPES. Although transient androgen elevation is expected during stimulation, persistence beyond several months is rarely reported. In this patient, testosterone normalised spontaneously over 18 months, suggesting a benign, self-limiting process, though further evaluation is ongoing. It is possible that in women undergoing fertility preservation, prolonged post-stimulation hyperandrogenaemia may occur and resolve without intervention. Recognition of this phenomenon may avoid unnecessary invasive investigations, reduce patient anxiety, and provide reassurance during follow-up. Patient gave consent for this case to be presented.

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PCR8

Case report - an opportunistic infection in a young patient with type 1 diabetes mellitus

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A 19-year-old gentleman was brought to the emergency department found collapsed at home. X-Ray of his chest revealed cavitating lesions within the lung fields. This was on a background history of type 1 diabetes mellitus. HbA1c was 116 mmol/mol which was indicative of chronically poor control. Diabetes was diagnosed at age 13 yet the patient had never attended a scheduled appointment with the diabetes services, however he did frequently present with diabetic ketoacidosis to the emergency department. A contributing factor to the patient's poor diabetes control had been identified as deprivation, considered extremely disadvantaged as per HP deprivation indices 2022 (www.pobal.ie). CT thorax revealed bilateral cavitating lung lesions. Acid-fast bacilli were seen on sputum sampling and culture confirmed mycobacterium tuberculosis with no resistance. He has no infected contacts. The patient was hospitalized for 6 weeks of anti-tuberculosis treatment and diabetes optimisation with subsequent directly observed therapy at home. The patient, initially under-weight at presentation, gained 11Kg during the 6 week hospitalisation. Although exact mechanisms have not been identified, it is believed that hyperglycemia impacts an individual's immune system leading to an immunocompromised state. This case highlights the immunosuppressive effect that persistent hyperglycemia has on a patient with diabetes mellitus leading to the development of pulmonary TB. Despite advancements in diabetes therapies, deprivation remains an important determinant of healthcare outcomes.

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PCR9

Pregnancy-associated relapse of central diabetes insipidus due to vasopressinase activity

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A 33-year-old woman (G2P1) was referred to our combined obstetric–endocrine clinic at 23 weeks' gestation with a 12-week history of excessive thirst, polyuria, and nocturia. She had a history of pituitary adenoma resection in 2008, complicated by transient central diabetes insipidus (DI) requiring desmopressin therapy for one year. Current treatment included levothyroxine 75 mg daily, and she used stress-dose hydrocortisone during intercurrent illness. The pregnancy was conceived via ovulation induction. She reported drinking up to 5 litres of water daily and waking to void seven times nightly. Similar symptoms occurred in a prior pregnancy but were not investigated. Investigations revealed a serum osmolality of 288 mOsm/kg, urine osmolality 326 mOsm/kg, sodium 139 mmol/l, and normal glucose tolerance testing. In the context of her pituitary history and clinical presentation, relapsed partial central DI was diagnosed. Oral desmopressin 0.2 mg BD was initiated and increased to TDS with resolution of symptoms. Pregnancy progressed uneventfully under multidisciplinary care. She delivered a healthy male infant by caesarean section at 38 + 2 weeks' gestation (3920g). Desmopressin was discontinued immediately postpartum without symptom recurrence; sodium on day 1 postpartum was 139 mmol/l. Pregnancy is associated with increased degradation of arginine vasopressin (AVP) due to placental production of vasopressinase, a cystine aminopeptidase that inactivates AVP. In individuals with underlying hypothalamic–pituitary dysfunction, this

increased enzymatic activity may unmask previously compensated central DI. This case highlights the importance of considering relapsed DI in pregnant women with relevant pituitary history to enable timely diagnosis and management.

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PCR10

Paw-sitive diagnosis: type 1 diabetes unleashed by a dog's CGM

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Type 1 diabetes mellitus is a common autoimmune condition affecting both humans and canines. Traditionally, the condition is diagnosed upon presentation to hospital with diabetic ketoacidosis (DKA). Continuous glucose monitoring (CGM) is now the standard of care for all individuals with type 1 diabetes mellitus, including the canine population. A 19-year-old female presented to the emergency department with hyperglycaemia while wearing a CGM device. She had developed symptoms similar to her dog, who is also being treated for diabetes mellitus and wears a CGM monitor. On arrival, her blood glucose was 21.9 mmol/l, ketones 4.1 mmol/l, pH 7.36, and bicarbonate 21.5 mmol/l. HbA1c was 105 mmol/mol, consistent with the hyperglycaemic trends seen on her CGM device. She was treated with intravenous fluids and subcutaneous insulin, as she did not meet the criteria for DKA. She was discharged within 8 hours to a virtual ward, where she continued to be monitored via CGM. Subsequent antibody testing confirmed a diagnosis of type 1 diabetes mellitus. With the increasing use of CGM devices, glucose data is now often available at the time of diagnosis of diabetes mellitus, prior to the development of DKA. Sensor technology is also expanding to include non-invasive glucose monitoring methods, such as infrared spectroscopy. As a result, CGM data may become available for a growing number of individuals without a diagnosis of diabetes mellitus. This could potentially reduce the number of people presenting to hospital in DKA and transform the early experience of living with type 1 diabetes mellitus.

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PCR11

Pharmacological and non-pharmacological therapies in the management of refractory hypoglycaemia secondary to malignant insulinoma

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Malignant insulinoma is a rare pancreatic neuroendocrine tumour. Challenges include the clinical implications and management of refractory hypoglycaemia. A 42-year-old gentleman presented with behavioural changes secondary to point-of-care-confirmed hypoglycaemia of 1.8 mmol/l, associated with neuroglycopaenia. Biochemistry during fasting hypoglycaemia revealed an elevated C-peptide, with Whipple's triad fulfilled. Imaging showed a heterogeneous mass in the pancreatic body and tail. Endoscopic ultrasound with limited sampling confirmed a pancreatic neuroendocrine neoplasm with poorly differentiated features, consistent with a malignant insulinoma. He was treated with first-line temozolomide/capecitabine neoadjuvant chemotherapy and somatostatin analogue lanreotide for hypoglycaemia. Continuous glucose monitoring (CGM) was used to assess hypoglycaemia and assess response to treatment, with a pre-treatment time below range (TBR) of 7%. Management of symptomatic fasting hypoglycaemia included clinical nutrition input, diazoxide, and glucocorticoids, which were later tapered due to hyperglycaemia. He underwent extensive surgical resection, with a transient normalisation in TBR. Histology showed a grade 3 neuroendocrine tumour NET, Ki-67 index 40%, ENETS stage pT4N2, R0 resection. However, due to radiological recurrence of disease and worsening hypoglycaemia (TBR 18%), nocturnal cornstarch and high-protein snacks were introduced, temporarily reducing TBR. He was subsequently commenced on everolimus and lutetium peptide receptor radionuclide therapy (PRRT), with no further episodes of hypoglycaemia to date (TBR 0%). The management of malignant insulinoma is enhanced by the use of CGM devices in establishing patterns of hypoglycaemia for targeted treatments. In this case, cornstarch was a successful non-pharmacological bridge to second-line pharmacological therapy in the treatment of refractory hypoglycaemia.

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PCR12

Diabetic ketoacidosis complicated by acute subarachnoid haemorrhage in a patient with Mauriac syndrome

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Diabetic ketoacidosis (DKA) can be associated with severe complications which are now rarely seen with improvements in management. We present the case of an 18- year-old male patient, who looked young for his stated age and presented comatose, in severe DKA with ketones of 6.5mmol/l, ph <7.0 and incalculable glucose and bicarbonate. Due to reduced consciousness, he required immediate intubation and despite treatment by DKA protocol showed no improvement in responsiveness. A CT brain scan revealed small volume sulcal sub-arachnoid haemorrhages (SAH) in the left temporoparietal region and the right parietal lobe. CT angiogram and venogram showed no evidence of aneurysm or sinus thrombosis. Over the subsequent 24 hours the patient required bicarbonate infusion followed by continuous veno-venous haemofiltration due to persistent acidosis with elevated lactate. A CT abdomen and pelvis showed gross (26 cm) hepatomegaly. Over the subsequent 48 hours the patient gradually improved with normalisation of his biochemistry and level of consciousness without evidence of neurological deficit. A repeat brain CT showed resolution of the SAH. This case shows illustrates rare complications of poorly controlled diabetes – probable Mauriac syndrome, given the massive hepatomegaly, and SAH associated with DKA, of which there are rare prior case reports. The pathophysiology of the SAH remains unclear but the fact that it resolved in a short space of times suggests that it was exudative in the context of severe DKA and chronic liver disease.

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PCR13

Isolated, complete third nerve palsy as presentation of prolactinoma

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Prolactinomas in men are often diagnosed late, when tumour size causes compression of surrounding structures, producing hypogonadism, headache, and visual disturbance. Third nerve palsy is a rare manifestation, possibly due to direct cavernous sinus involvement or vascular compromise. A 65-year-old male presented to Eye Casualty with a three-week history of painful right eye and visual disturbance. He denied headache, nausea, galactorrhoea, or features of hypogonadism. Examination revealed complete right ptosis with a dilated, sluggishly reactive pupil. Biochemistry showed prolactin 121317 mIU/l, total testosterone 1.5 nmol/l, LH 0.86 iu/l, FSH 2.20 iu/lFSH, IGF1 88 ug/l, cortisol 393 nmol/l, TSH 393 nmol/l. MRI Pituitary revealed a $3.1 \times 2.8 \times 2.6$cm sellar mass with suprasellar extension, partially extending into the right cavernous sinus and contacts the optic chiasm without convincing mass effect. Formal visual field (VF) assessment revealed markedly constricted VF in the right eye, likely exaggerated by the ptosis and preserved vision of the left eye. Cabergoline 0.5 mg twice weekly was initiated. Symptoms resolved within four days, and prolactin fell to 48809 mIU/l after two doses. This case demonstrates a rare presentation of prolactinoma with isolated third nerve palsy. Rapid improvement following dopamine agonist therapy supports tumour compression as the likely mechanism. Clinicians should consider prolactinoma in the differential diagnosis of third nerve palsy, particularly in the presence of sellar masses, as early recognition enables effective, non-surgical treatment.

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PCR14

Use of continuous glucose monitoring to guide management of refractory late dumping syndrome post-oesophagectomy

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A 67-year-old man developed recurrent episodes of diaphoresis, presyncope, and syncope approximately three hours after meals, two years post two-stage oesophagectomy for ypT2N0 oesophageal adenocarcinoma. He had completed neoadjuvant chemoradiotherapy and adjuvant nivolumab. Syncope workup, including EEG and MRI brain, was unremarkable. Clinical suspicion of late

dumping syndrome led to endocrine referral. Continuous glucose monitoring (CGM) confirmed postprandial hypoglycaemia despite a slow-release carbohydrate diet. A structured low glycaemic index (GI) diet was introduced; however, repeat CGM demonstrated persistent hypoglycaemic episodes, with up to ten events over two weeks and an average duration of 45 minutes. Acarbose 50 mg twice daily was commenced and was generally well tolerated apart from mild gastrointestinal side effects. On follow-up CGM, the number of hypoglycaemic episodes decreased to six, though the duration of hypoglycaemia remained unchanged. The patient reported partial symptomatic improvement but continued to experience occasional presyncopal symptoms. While acarbose may have contributed to a modest reduction in episode frequency, clinically significant hypoglycaemia persisted. Further therapeutic escalation, including octreotide, is under consideration. This case highlights the utility of CGM in confirming late dumping syndrome and objectively monitoring response to intervention.

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PCR15

Megestrol acetate-induced adrenal insufficiency during a milk-based meal replacement programme

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Megestrol Acetate (MA) is a synthetic progestogen used in the management of abnormal uterine bleeding, endometrial and breast carcinomas, and cancer-related cachexia. In addition to its progestogenic and appetite stimulating effects, MA has strong glucocorticoid receptor affinity. Case reports have described MA-induced hyperglycaemia and Cushing's syndrome as well as hypothalamic-pituitary-adrenal (HPA) axis suppression and adrenal insufficiency. We report the case of a 51-year-old female living with obesity, who was admitted for an inpatient rehabilitation programme which includes a low-calorie diet component. Her background included stage; 1B endometrial carcinoma, managed with MA; 360 mg BD to control uterine bleeding, with planned hysterectomy following obesity management. Her inpatient stay was complicated by progressive fatigue, lethargy, presyncope and hypotension. Initial investigations revealed a morning cortisol of 26 nmol/l (reference range [RR] 166-507 nmol/l) and ACTH <3.0 ng/l (RR 7.2 – 63.3 ng/l). Serum sodium was 139 mmol/l (RR 133-146 mmol/l). A pituitary panel was otherwise normal. She had no history of steroid or other relevant medication use. She was commenced on hydrocortisone replacement (20 mg twice daily), with improvement in symptoms. In consultation with her gynaecology team, MA was discontinued and replaced with norethisterone 5 mg TDS. She was discharged on hydrocortisone 10 mg twice daily, with a plan for interval cortisol assessment in six weeks. This case highlights the risk of HPA axis suppression in patients receiving MA. Clinicians should consider adrenal insufficiency in symptomatic patients on MA particularly during physiological stress such as caloric restriction.

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PCR16

Maternal and neonatal outcomes in pregnancies complicated by type 1 diabetes using hybrid closed-loop insulin delivery: a case series

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Pregnancy in individuals with Type 1 Diabetes (T1D) requires intensive management to reduce complications mother and infant. Hybrid closed-loop (HCL) systems offer automation and real-time glucose data, real-world pregnancy outcome data remain limited. We reviewed glycaemic control, obstetric characteristics, delivery outcomes, and neonatal outcomes in a cohort of nine pregnant individuals with T1D using HCL over a 14-months May 2024 - July 2025. Most participants were multiparous mean age of 34 years. HCL were used throughout pregnancy including delivery. Booking mean Hba1c was; 44 mmol/mol and values ranged from; 34 mmol/mol to 61 mmol/mol. There was improved glycaemic control in late pregnancy mean HbA1c; 38 mmol/mol in; 3rd trimester (SD = 5.1), significantly below the target of 48 mmol/mol ($t(8) = -5.10$, $P < 0.001$). No episodes of severe hypoglycaemia or diabetic ketoacidosis occurred during pregnancy, labour, or the postnatal period. Term delivery was achieved in all but one case (36 + 6 weeks), mean gestational age at delivery of 38 + 3 weeks. All women were delivered by caesarean section. Mean neonatal birthweight was 3.3kg, range 3.2 kg -5.0 kg. Admission to NICU was observed in 33.3% of neonates born. Neonatal hypoglycaemia occurred in 11% of cases managed without major complications. No stillbirths, neonatal deaths, or significant congenital anomalies were recorded. Use of HCL insulin delivery systems during pregnancy appears safe and is associated with favourable maternal and neonatal outcomes in individuals with T1D. These findings reinforce the potential benefits of automated insulin delivery in pregnancy and support further prospective comparative studies in this area.

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PCR17

Ketosis prone diabetes in the caucasian population – a case series

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Background
Ketosis-prone diabetes (KPD) is an uncommon form of diabetes characterised by presentation with diabetic ketoacidosis (DKA) or ketosis in the absence of autoimmune type 1 diabetes, with potential for subsequent insulin independence. While more prevalent in African, Hispanic, and Asian populations, its occurrence in Caucasians is poorly documented.
Objective
To describe the presentation, classification, and clinical course of five Caucasian patients with KPD using the Aβ classification system.
Methods
A retrospective review identified adults presenting with DKA or ketosis between 2022 and 2024. C-peptide and islet autoantibody testing (anti-GAD, IA2, ZnT8 where available) determined Aβ status. Clinical parameters, treatment regimens, and time to insulin cessation were recorded.
Results
All five patients were classified as A−B+, indicating absent autoimmunity and preserved beta-cell function. All initially received basal-bolus insulin, later discontinued in favour of oral hypoglycemic agents or GLP-1 receptor agonists within weeks to months. Insulin cessation was prompted by hypoglycemia, improved glycemic control, and confirmatory phenotyping. Misclassification as type 1 diabetes occurred in all cases prior to antibody and C-peptide testing.
Conclusion
KPD occurs in the Irish Caucasian population but is likely under-recognized due to diagnostic bias and lack of routine phenotyping. Early measurement of C-peptide and islet antibodies in adults presenting with DKA or ketosis enables accurate diagnosis, optimizes therapy, and prevents unnecessary long-term insulin use. Prospective studies are warranted to better define the prevalence, natural history, and optimal management of KPD in Caucasian populations.

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PCR18

A case of florid autoimmune hyperthyroidism in a patient with propylthiouracil (PTU)-induced vasculitis and significant contrast iodine load: treatment dilemma and endocrinologist's worst nightmare

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We present a challenging case of Graves' disease complicated by Propylthiouracil (PTU)-induced ANCA-positive vasculitis and recent iodine contrast exposure, creating a therapeutic dilemma where standard treatment options were severely limited. A 60-year-old man was diagnosed with graves' disease in december 2020 and treated with carbimazole for one year. On stopping carbimazole, he went into relapse and was switched to PTU in 2022 as he reported side effects on re-starting carbimazole. Although radioactive iodine (RAI) therapy was offered, he initially declined. Nearly two years into PTU therapy, he developed worsening breathlessness, and CT chest revealed a new pericardial effusion. He was treated presumptively for pericarditis, but follow-up imaging showed minimal improvement. By early 2025, he experienced migratory joint pain, swelling, and persistently raised inflammatory markers. During his work-up, he received a significant iodine load from contrast-enhanced imaging. Autoimmune screening confirmed vasculitis (positive p-ANCA and anti-MPO). PTU was discontinued and corticosteroids initiated, leading to clinical improvement. Given florid hyperthyroidism and recent iodine exposure, his case was reviewed at the endocrine multidisciplinary meeting. Carbimazole was restarted as a bridging

therapy; despite its vasculitis risk, it remains the best option until RAI, which is currently ineffective due to iodine saturation, can be given. Surgical thyroidectomy was unsafe due to severe thyrotoxicosis. These limitations created a narrow therapeutic window requiring careful multidisciplinary planning. This case highlights the rare but serious complication of PTU-induced vasculitis and the complexities of managing florid hyperthyroidism when drug intolerance, iodine exposure, and surgical risk converge — truly an endocrinologist's worst nightmare.

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E-Posters

EPCR19

Primary hyperparathyroidism in pregnancy unveiling hyperparathyroid jaw tumor syndrome: importance of early genetic evaluation

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Primary hyperparathyroidism (PHPT) is a relatively common endocrine disorder, and more than 10% of affected individuals carry mutations in one of several implicated genes. Genetic testing can play a pivotal role in guiding the management and surveillance of patients with PHPT. We report the case of a 38-year-old woman with asymptomatic hypercalcemia identified during the third trimester of pregnancy, with an adjusted calcium level of 3.01 mmol/l (reference range: 2.20–2.57 mmol/l). Postpartum evaluation confirmed PHPT, with an adjusted calcium of 3.19 mmol/l and parathyroid hormone (PTH) concentration of 156 ng/l (reference range: 15–65 ng/l). Parathyroid sestamibi imaging revealed a right-sided adenoma. Her brother had previously undergone parathyroidectomy for PHPT in his 30s. Given her age and family history, genetic testing was undertaken and identified a pathogenic CDC73 mutation, confirming hyperparathyroid jaw tumor syndrome (HPT-JT). This rare autosomal dominant disorder is associated with parathyroid adenomas, parathyroid carcinomas, ossifying fibromas of the jaw, renal cysts or neoplasms, and uterine abnormalities. The patient underwent a two-gland parathyroidectomy, and histology confirmed parathyroid adenomas. Postoperatively, calcium and PTH levels normalized. Screening for associated complications showed no evidence of jaw, renal, or uterine involvement. Genetic testing of her children revealed that two of her three children also carry the mutation and are undergoing clinical surveillance. This case highlights the importance of genetic evaluation in young patients with familial PHPT. Early identification of HPT-JT enables appropriate surveillance and intervention, potentially reducing morbidity and improving long-term outcomes.

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EPCR20

A case series of two brothers: familial isolated hyperparathyroidism due to CDC73 mutation

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We report two brothers diagnosed with familial isolated hyperparathyroidism (FIHP) secondary to a CDC73 gene mutation. CDC73 mutation is a rare yet important cause of early-onset and aggressive hyperparathyroidism associated with parathyroid carcinoma, jaw tumours, and renal or uterine lesions, long-term surveillance for affected individuals is essential. Case 1: An 18-year-old male was referred to the Endocrinology Service following a presentation to a regional hospital with a three-month history of malaise, constipation, PR bleeding, muscle aches, polyuria and polydipsia. Work-up revealed PTH dependent hypercalcaemia, Ca 3.04 (2.15 – 2.50 mmol/l), PTH 2.33 (1.6-6.9 pmol/l). Imaging revealed a left parathyroid adenoma. Sigmoidoscopy showed multiple ulcers. IV zoledronic acid was given pre-op. He underwent partial parathyroidectomy, which was complicated by profound hungry bone syndrome necessitating a prolonged calcium infusion over 21 days and ICU admission. Genetic testing identified a heterozygous CDC73 mutation. Pathology showed a parathyroid adenoma. Case 2: Family screening subsequently identified his 19-year-old brother as asymptomatic but with elevated calcium (Ca 2.98 mmol/land PTH 2.52 pmol/l). Ultrasound confirmed a parathyroid adenoma. He also underwent pre-operative optimisation with IV fluids and zoledronic acid followed by partial parathyroidectomy. Parental genetics were also sent at this time. This case series emphasizes the value of considering genetic causes in young patients with hypercalcaemia and the critical role of family screening and lifelong follow-up in hereditary endocrine disorders.

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EPCR21

Case series: the multidisciplinary approach to facilitating radioactive iodine therapy in those with complex care needs

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Introduction
Radioactive iodine (RAI) therapy with 131I is a key pillar in the management of thyroid malignancy and thyrotoxicosis. Specialised isolation rooms are used for radioiodine ablation, while thyrotoxicosis is usually an outpatient treatment. Patients undergoing RAI therapy are typically self-caring making adherence to radioprotective measures straightforward. Occasionally patients with complex biological, psychological and social circumstances are referred requiring careful consideration.
Methods
A retrospective observational study detailing the extensive work of our multidisciplinary team to ensure equal access to this important therapy, despite individual care needs. We describe the distinct clinical and radiation protection considerations for three unique cases.
Results
Three patients with a learning disability and resultant inability to perform independent self-care. These cases include uncontrolled grave's disease and papillary thyroid cancer across both outpatient and inpatient settings respectively. Our cases highlight solutions for challenges including dysphagia, behavioural difficulties, contamination whilst handling bodily excreta and waste management. In addition, the challenge of patient wellbeing in an unfamiliar/isolated environment, acceptable risks to comforter/carer and an approach to those with no obvious choice for comforter/carer are also addressed. Finally, managing staff anxiety when navigating unfamiliar risks also poses significant challenges.
Conclusions
Complex cases require a tailored therapy approach. This minimises occupational exposures and ensures compliance with regulations without compromising overall care. Clear communication with the MDT, the patient and their carers to develop a customised plan is imperative. A significant effort and often bespoke approach are critical to ensure equal and safe access for all.

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EPCR22

Variant-causing false positive HbA1c and the risk of an inappropriate diagnosis of diabetes mellitus; the need for vigilance and a proactive approach regarding HbA1c variants

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A 69-year-old woman was referred from primary care to Endocrinology in December 2024 with apparent new onset Type 2 Diabetes Mellitus, associated with a rapid deterioration in HbA1c which increased from 21 mmol/mol Hb (July 2023) to 51 mmol/mol Hb (March 2024). Relative inactivity, following a DVT in March 2024, was considered a possible contributor. However, this was not associated with weight gain nor any other remarkable clinical or laboratory findings. Although the HbA1c analyser changed (from Menarini to Array) over this period, the same methodology (cation exchange HPLC) was used, both demonstrating comparable analysis. Furthermore, a variant Hb (Peak D) was consistently detected by both HbA1c analysers. However, HbA1c levels and trending were discordant to fasting glucose (6.9 mmol/l [July 2023]; 5.5 mmol/l in March 2024) and to HbA1c analysed by different methodology (Boronate Affinity HPLC: 38 mmol/mol, Latex immunoagglutination inhibition: 37 mmol/mol). Fructosamine (247 umol/l) was within reference limits (205-285 umol/l), equivalent to HbA1c $<$ 42 mmol/mol Hb, corroborating glucose and latter HbA1c analysis. Interestingly, HbA1c could not be determined by Capillary Zone Electrophoresis due to presence of an unknown alpha variant (heterozygote). Our case illustrates the unreliability of HbA1c analysis in the presence of Hb variants,

of which >900 exist and are of increasing prevalence as our population diversifies. We call upon laboratories to not only ("passively") caution and advise clinicians regarding alternative and more appropriate methods of long-term glycaemic assessment, where such variants are identified, but to also actively reflex for such testing where possible.

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EPCR23

A Case report of Insulin-like growth factor II (IGF-II) mediated hypoglycaemia associated with metastatic colorectal cancer

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Non-islet cell tumour (NICTH) hypoglycaemia is a rare clinical phenomenon. IGF-II mediated hypoglycaemia is the most common cause of NICTH encountered in clinical practice. When observed, it is most commonly in the setting of epithelial or mesenchymal neoplasms. Colorectal cancer is an uncommon malignancy associated with IGF-II mediated hypoglycaemia. We present the case of a 59 year old gentleman with no known history of diabetes who presented acutely to hospital with symptomatic hypoglycaemia with a glucose of 0.4mmol/l. He had a past medical history significant for metastatic colorectal cancer to liver. He had normal synthetic liver function, normal renal function and passed a short synacthen test subsequent to admission. While in hospital the patient had a serum glucose of 2.0mmol/l recorded with an appropriately suppressed insulin and C-peptide level. IGF-1 and IGF-II levels were subsequently sent and an IGF-II:IGF-I ratio of 11.5 confirmed a diagnosis of IGF-II mediated hypoglycaemia. This gentleman was started on escalating course of oral steroids and IV dextrose to maintain his blood glucose and was transferred under the care of his oncology team to commence on chemotherapy to treat his underlying malignancy. This led to a short term improvement in his blood glucose but sadly he passed away from his malignancy within months of his initial presentation with symptomatic hypoglycaemia.

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EPCR24

Langerhans cell histiocytosis with central endocrinopathy in an adolescent male: a case report

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Langerhans Cell Histiocytosis (LCH) is a rare clonal disorder marked by proliferation of abnormal Langerhans cells forming granulomatous lesions that disrupt normal tissue function. Clinical features vary with organ involvement

We report an 11-year-old male presenting to ENT with foul-smelling otorrhea, localized pain, and a mass in the left external auditory canal. Culture showed commensals, and the first biopsy suggested an inflammatory polyp. Symptoms persisted despite antibiotics. Months later, he developed growth retardation, polydipsia, polyuria, and delayed puberty. The aural lesion recurred, and repeat biopsy confirmed LCH. Endocrine evaluation revealed central diabetes insipidus from ADH deficiency, hypogonadotropic hypogonadism, and growth failure. Brain MRI demonstrated thickened, enhancing pituitary stalk, consistent with LCH of the hypothalamic–pituitary axis causing anterior and posterior pituitary insufficiency. He was started on desmopressin for diabetes insipidus and testosterone for pubertal induction. Remission followed the first chemotherapy cycle, but relapse occurred two years later. Cytarabine therapy was initiated, leading to radiological regression of pituitary stalk thickening. This case underscores the need to recognize atypical otologic presentations in children and to evaluate systemic features suggestive of endocrine dysfunction, which may represent the first manifestation of multisystem LCH.

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EPCR25

Case report of successful outpatient treatment of diabetic foot osteomyelitis with dalbavancin

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Dalbavancin is a Lipoglycopeptide antimicrobial that, when administered through intravenous infusion on day 1 and day 8, maintains therapeutic concentrations within the cortical bone for up to 8 weeks; Dalbavancin is thus an option in Diabetic Foot Osteomyelitis (DFO). Here we present an 86-year-old female who attended the Diabetic Foot Protection Service at Regional Hospital Mullingar with active ulcers of her left foot, at the lateral border of her metatarsophalangeal joint (4.5cm x 5cm), hallux interphalangeal joint (1.5cm x 1.5cm) and second digit interphalangeal joint (2cm x 2cm). Past medical history was significant Type 2 Diabetes Mellitus and Chronic Kidney Disease stage 3b. Inflammatory markers were elevated (CRP 104mg/l (ref, <5)), white cell count 13.28x10^9/l (ref, 4 - 10)). DFO was confirmed clinically as all ulcers probed to bone. The patient completed multiple courses of oral antibiotics over 8 weeks without clinical improvement. Dalbavancin was given in the outpatient setting (1g on day 1, 500mg on day 8). Dalbavancin treatment was associated with a significant improvement in inflammatory markers (CRP 9 mg/l, WBC 9.27x10^9/l), and ultimately wound healing. Five months post administration, the ulcers have reduced in size (metatarsophalangeal (1.5cm x 3.8cm), hallux (0.2cm x 0.2cm) and second digit in remission). In this case study Dalbavancin was shown to successfully treat DFO. Dalbavancin has significant potential benefits over standard antimicrobial treatments, potentially eliminating the need for lengthy oral or intravenous antibiotic courses, reduced burden on Outpatient Parenteral Antimicrobial Therapy services, and avoidance of inpatient admission.

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EPCR26

Case report: beyond the usual symptoms - persistent hiccups as a presentation of diabetic ketoacidosis in an adult with type 2 diabetes

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Diabetic ketoacidosis (DKA) is a serious and potentially life-threatening metabolic complication of diabetes that requires prompt recognition and treatment to improve outcomes. Common precipitating factors include infection, intercurrent illness, medication non-adherence, and failure of insulin delivery systems. Typical clinical features often include gastrointestinal symptoms such as nausea, vomiting, and abdominal pain; however, hiccups are an unusual and rarely reported manifestation. Diagnosis is confirmed through biochemical evaluation, and timely intervention is lifesaving. We report the case of a 65-year-old male with a history of type 2 diabetes mellitus, diagnosed four years earlier after an episode of DKA, and atrial fibrillation, who presented with persistent, intractable hiccups. His medications included dapagliflozin, metformin, bisoprolol, atorvastatin, amlodipine, and rivaroxaban. On presentation, arterial blood gas demonstrated a pH of 7.217. Laboratory studies revealed hyperglycaemia (23.4 mmol/l) and ketonemia (6.1 mmol/l), confirming DKA, with a HbA1c of 123 mmol/mol. Insulin was 37 mU/l and c-peptide 0.93 µg/l. Autoimmune markers were negative. CT brain revealed a probable left frontal meningioma or granuloma and bilateral low-attenuation areas posterior to the lateral ventricles; he declined further investigation with an MRI. Management followed the institution's DKA protocol. Dapagliflozin was discontinued, and a basal–bolus insulin regimen was initiated. It remains unclear whether the hiccups and reduced oral intake precipitated DKA or represented an atypical presenting feature. This case highlights the need for clinicians to recognize unusual presentations of DKA, particularly in patients with type 2 diabetes, to ensure timely diagnosis and management.

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EPCR27

A case report of symptomatic hypercalcemia post-total hip replacement in a 77-year-old female

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Calcium sulphate (CS) beads are increasingly used in orthopaedic procedures for the local delivery of antibiotics to prevent infections in the immediate post-operative period. CS beads are typically absorbed over six weeks, though there are a number of factors affecting the rate of absorption. Hypercalcemia in the days following orthopaedic surgery involving CS beads is rarely documented in the literature. A 77-year-old female was readmitted to Tallaght University Hospital from a rehabilitation site, five days after elective total hip replacement, for revision of total hip replacement. She was noted to have delirium and

constipation. On readmission, corrected calcium was 4.04mmol/l (2.15 – 2.55mmol/l). Prior to the initial surgery her corrected calcium was 2.46mmo/l (2.15 – 2.55mmol/l). She had no previous history of hypercalcemia. Her renal function was stable with eGFR >90 ml/min/1.73m2. Concurrent vitamin D level was 62 nmol/l (>50 nmol/l suggests normal vitamin D status) and parathyroid hormone (PTH) level was 13 pg/mL (15-65pg/mL). CS beads had been used in her initial procedure. Given her age and PTH level, she also had a worked-up for possible occult malignancy, which was negative. The patient with given zolendronic acid and intravenous fluids. Treatment was complicated by pulmonary oedema requiring addition of furosemide. Nine days after admission, serum corrected calcium was within normal range and remained stable, with resolution of confusion. This case demonstrates the importance of checking calcium levels in confused patients post-orthopaedic procedures and considering CS beads as the cause in those patients who are hypercalcaemic.

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EPCR28

Bilateral atypical femoral fractures (AFF) in a postmenopausal cancer survivor on bisphosphonate therapy

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Bisphosphonates (BPs) are prescribed to prevent vertebral and hip fractures in osteoporosis and malignancy-related bone loss. However, prolonged therapy has been linked to atypical femoral fractures (AFF). We present the case of a 68-year-old woman with osteoporosis diagnosed in 2022 (T-scores: left femoral neck –2.7, left total hip –2.4). Her medical history included moderately differentiated invasive endometrioid adenocarcinoma, treated in 2021 with total hysterectomy, bilateral salpingo-oophorectomy, paclitaxel–carboplatin chemotherapy, and brachytherapy. One month later, she was diagnosed with right breast invasive ductal carcinoma (node-negative, ER-positive, HER2-negative) subsequent to a wide local excision with sentinel lymph node biopsy, and received radiotherapy, and two years of anastrozole. She had been on monthly ibandronate for approximately three years. In July 2025, she presented to our Emergency Department with bilateral thigh pain, more severe on the left. During admission, she developed sudden onset, severe left thigh pain without trauma. Radiographs revealed a displaced transverse midshaft femoral fracture, necessitating urgent internal fixation. The following day, she experienced worsening right thigh pain, and imaging demonstrated an incomplete transverse fracture of the right proximal femur, which was managed with prophylactic intramedullary nailing. This case fulfils the American Society for Bone and Mineral Research criteria for AFF, characterised by minimal trauma, transverse fracture pattern, and bilateral occurrence. In cancer survivors undergoing hormonal therapy, oestrogen deprivation further amplifies bone fragility. Therefore, in this cohort, periodic monitoring, carefully tailored BP therapy duration, consideration of drug holidays, heightened vigilance for AFF, and early contralateral femur imaging should be implemented.

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EPCR29

Advanced hybrid closed-loop (HCL) technology in residential settings: collaborative efforts and rewarding outcomes

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HCL insulin pumps represent a major advancement in diabetes management. However, their use in residential settings remains underexplored. This case describes a 27-year-old woman who is unable to self-care diabetes. She has Trisomy 21, type 1 diabetes for five years, total hypoglycaemia unawareness, primary hypothyroidism, coeliac disease, and oesophageal achalasia. She resides in residential care, has limited vocabulary and experiences sensory issues with insulin injections. Progression of achalasia necessitated a percutaneous endoscopic gastrostomy (PEG) tube for nutrition. Despite basal-bolus insulin therapy and real-time CGM, her glycaemic parameters were suboptimal (average glucose 14.5mmol/l, GMI 9.6%, Time-in-Range 15%, Very High-Above-Range 57%, High-Above-Range 28%, HbA1c; 61mmol/mol), with frequent hospitalizations for hypo- and hyperglycaemia, weight gain (BMI 43 kg/m2), and reduced quality of life. The Diabetes MDT explored the Metronic MiniMedTM 780G HCL insulin pump with her family and caregivers. Twenty-two residential staff were trained via virtual/in-person sessions covering pump functions, set changes and SmartGuard technology. The Diabetes MDT provided close in-person/virtual follow-ups, adjusting the PEG feeding plan and HCL settings. Over 13 months on the pump, she achieved improved and sustained glycaemic ranges (GMI 7.1%, Time-in-Range >70%, Time-below-Range 0-1%, HbA1c 53 mmol/mol), and enhanced quality of life with only two brief hospital admissions. She became energetic, engaged in daily activities and lost 5 kg. Her caregivers reported markedly reduced diabetes-related distress. This case suggests HCL technology, combined with a skilled MDT support, offer substantial and sustained benefits in residential care. Further research is warranted to optimize HCL use for individuals unable to self-manage diabetes.

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EPCR30

Angiotensin II receptor blocker induced enteropathy in a patient with type 1 diabetes

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A 63-year-old female presented to Galway University Hospital with a two-week history of vomiting and diarrhoea on a background of poorly controlled type 1 diabetes. She was hypotensive and tachycardic with a GCS of 13/15. Investigations revealed hyperglycaemia and ketonemia with a high anion gap metabolic acidosis. The working diagnosis was diabetic ketoacidosis (DKA) secondary to sepsis of unknown source. She was commenced on a DKA protocol with intravenous antibiotics and steroids and transferred to the high dependency unit for ionotropic support. Despite resolution of her hyperglycaemia and ketonemia, her metabolic acidosis persisted and on day 5 of admission she developed an acute transaminitis with synthetic liver dysfunction requiring vitamin K and fibrinogen replacement. Differential diagnosis was vitamin K deficiency secondary to malnutrition. Gastroscopy showed flattening of the duodenum. Drug reconciliation revealed that she was commenced on Konverge 20 mg/5mg in 2019 which was increased in 2022 to 40 mg/5mg. Considering this, the differential diagnosis was angiotensin II receptor blocker (ARB) induced enteropathy. She was commenced on Rifaximin and Budesonide. Her symptoms gradually improved and she was discharged home on day 33 of admission. She has since completed treatment with Budesonide and remains well. Sprue-like enteropathy associated with angiotensin II receptor blockers was first described in 2012. Although the incidence is not clear, it is thought to be rare. The mechanism of injury is not well established however an immune-mediated disorder is thought to occur in susceptible individuals. Cessation of the ARB results in complete resolution of both clinical and histological features.

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EPCR31

Case report: insulin derived amyloidosis in a patient with insulin dependent type 2 diabetes

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Insulin-derived amyloidosis is a rare form of localised amyloidosis resulting from the aggregation of exogenous insulin into subcutaneous amyloid fibrils at injection sites. Although its true prevalence remains unknown, increasing evidence suggests it is underdiagnosed and often mistaken for lipohypertrophy. We report the case of a 68-year-old Irish male with longstanding type 2 diabetes mellitus, managed with subcutaneous insulin for over 20 years—initially via continuous subcutaneousinsulin infusion(2003–2022), and subsequently with a basal-bolus regimen(2022–present). Despite escalating insulin doses due to significant insulin resistance, his diabetes control has been deteriorating(HbA1c). Work up for systemic amyloidosis was initiated due to constellation of symptoms such as subcutaneous abdominal masses, autonomic dysfunction, upper limb sensory symptoms, and heart failure due to hypertrophic cardiomyopathy. A subcutaneous fat biopsy performed on 8th January 2025 confirmed amyloid deposits via Congo red staining and mass spectrometry. Subsequently the patient has been diagnosed with insulin-derived amyloidosis. The patient has been

educated regarding the importance of rotating injection sites and his HbA1c has improved from 77 to 55 over a few months and he is requiring lower doses of insulin. Repeated insulin injections at the same site can lead to amyloid formation, contributing to poor glycaemic control and unpredictable hypoglycaemic episodes. Treatment strategies include rotation of injection sites and, in some cases, surgical excision of amyloid masses. This case highlights the importance of clinical suspicion for insulin-derived amyloidosis in patients with unexplained insulin resistance and subcutaneous masses, particularly in those with long-term insulin therapy.

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EPCR32

A rare primary testicular neuroendocrine tumour associated with pre-pubertal teratoma

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Testicular neuroendocrine tumours (TNETs) are rare accounting for less than 1% of all testicular neoplasms. We present the case of a 64-year-old male referred from urology services with a slowly enlarging, painless, firm right testicular mass. This was on a background of chronic kidney disease IV secondary to membranoproliferative glomerulonephritis. Ultrasound revealed an enlarged right testis with a 2.5 x 2.8 x 3.3cm encapsulated, heterogenous, intratesticular mass. Of note, a previous testicular ultrasound in 2004 had shown a coarse calcification of the right testicle with a differential diagnosis at that time of old tuberculosis epididymitis. He proceeded to radical orchidectomy. Post-operative histology revealed a well-differentiated tumour, 27 mm in maximum dimension, Ki67 2%, with tumour cells positive for synaptophysin, cytokeratin AE1/3, somatostatin receptor 2A, and chromogranin. Findings were in keeping with a primary TNET, monodermal teratoma, pre-pubertal type. The patient is planned for Gallium DOTA-TOC PET CT to out rule metastatic disease with pending urinary 5HIAA. He denies any symptoms of carcinoid syndrome. TNET can be subdivided into pure tumours (75%) or tumours associated with teratoma (25%). Mean age at presentation is 46 years. Clinical carcinoid syndrome is seen in up to 12% of cases. Metastases via haematogenous spread can occur, with lymphatic spread also reported. Metastatic disease is usually associated with atypical features such as larger tumour size $>$ 7 cm and carcinoid syndrome. Diagnosis is made histologically, and treatment is with orchidectomy. This case highlights the interesting association of a rare TNET associated with pre-pubertal teratoma.

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EPCR33

Cerebral salt wasting syndrome: a diagnostic challenge in traumatic brain injury

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Background
Cerebral Salt Wasting Syndrome (CSWS) is a rare but serious cause of hyponatremia, characterized by hypovolemia and excessive urinary sodium loss, typically occurring in the context of acute neurological injury. Differentiating CSWS from other causes of hyponatremia, such as Syndrome of Inappropriate Antidiuretic Hormone Secretion (SIADH), is critical but often challenging.
Case Presentation
A 35-year-old male with chronic alcohol excess, previous seizures, and neuropsychiatric comorbidities presented following an alcohol-related fall. CT brain revealed large bilateral subdural hematomas requiring neurosurgical intervention. Postoperatively, he developed polyuria, hypovolemia, and severe hyponatremia (Na 114–123 mmol/l). Investigations showed markedly elevated urinary sodium ($>$200 mmol/l), fractional excretion of sodium $>$15%, preserved pituitary function, and no renal tubular injury.
Management and Outcome
The patient was managed with intravenous normal and hypertonic saline, fludrocortisone to reduce urinary sodium losses, and strict fluid-electrolyte monitoring. Sodium levels improved to 126–129 mmol/lwith resolution of polyuria and hypovolemia. Salt-sensitive hypertension developed transiently during hypertonic saline therapy and resolved upon cessation. He was discharged in stable condition after five weeks.
Discussion
This case underscores the diagnostic complexity of CSWS, particularly in patients with multifactorial neurological and systemic illness. Key differentiating features from SIADH included hypovolemia and persistently high urinary sodium excretion.
Conclusion
Prompt recognition and targeted management of CSWS are essential to prevent morbidity. Clinicians should maintain a high index of suspicion for CSWS in acute neurological patients with hyponatremia, as timely intervention can significantly improve outcomes.

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EPCR34

An unexpected lesion of the suprasellar region

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TSH-expressing pituitary neuroendocrine tumours (PitNETs) are a rare entity with a spectrum of clinical features. These range from functioning TSH-producing adenomas associated with thyrotoxicosis to clinically silent TSH-expressing adenomas that are unassociated with thyrotoxicosis and present with symptoms of mass effect. We present the case of a 28 year-old woman in whom pre-operative imaging was consistent with a craniopharyngioma but histopathology revealed a TSH-expressing PitNET. The patient presented after an ophthalmic examination showing significant visual field defects. She reported amenorrhoea of 15 months duration. She did not have any clinical features of thyrotoxicosis. Biochemistry showed a mildly elevated prolactin of 552 (102-496) mIU/l, along with hypogonadotropic hypogonadism (FSH 5.2 IU/l, LH 1.0 IU/l, oestradiol 27 pmol/l), but otherwise normal pituitary profile. MRI pituitary demonstrated a 3.7cm suprasellar solid-cystic mass with mass effect, suggestive of an adamantinomatous craniopharyngioma. She was transferred to a neurosurgical centre for emergent endoscopic transsphenoidal excision of this lesion. Histopathological examination revealed a PitNET with positive immunohistochemistry staining for PIT1, TSH, chromogranin and CAM5.2, consistent with a thyrotroph PitNET. The patient experienced interval improvement in her vision and return of menses post-operatively. Thyroid function tests remained within normal limits. Prolactin normalised but there was persistent biochemical evidence of hypogonadotropic hypogonadism, whilst interval imaging is pending. The post-operative diagnosis is consistent with a silent TSH-expressing adenoma. The functional status of a silent PitNET can change during the course of disease with interval development of enhanced secretory activity, and our patient will remain under close surveillance.

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EPCR35

Case report: rapid progression of diabetic retinopathy during pregnancy in a woman with ABCC8-mody

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We describe an uncommon presentation of rapid progression of clinically significant diabetic retinopathy during pregnancy in a woman with a rare form of diabetes, ABCC8-MODY. The subject's clinical history, diabetic management, laboratory results, continuous glucose monitoring data, and retinal imaging obtained during pregnancy are examined. Target glycemic control was achieved by the end of the first trimester using insulin therapy and remained controlled for the duration of the pregnancy. Routine retinal imaging in the second trimester noted progression to active proliferative retinopathy which required four sessions of panretinal photocoagulation to each eye. There was no associated loss of visual or nephropathy. We suggest that there is a theoretical possibility that the ABCC8 pathogenic variant results in changes to SUR1 which may contribute to the rapid progression of clinically significant diabetic retinopathy.

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EPCR36

Case report: type 2 or not type 2; that is the question

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A 25-year-old female was referred to the diabetes service for specialist management of her type 2 diabetes. She was diagnosed with diabetes mellitus at 7 years and attended paediatric services. At diagnosis she was non-ketotic and did not behave as autoimmune mediated diabetes. She was treated as type 2 diabetes mellitus with diet and metformin. Throughout her childhood she was serially evaluated for alternative causes of this atypical diabetes presentation. Islet antigen autoantibodies were negative and so too was genetic testing for GCK and HNF1A mutations. During adolescence a hyperandrogenic phenotype emerged in keeping with polycystic ovarian syndrome, and she was considered to have an insulin resistance phenotype. On assuming care of this patient her assessment revealed acanthosis nigricans, hirsuitism and pseudoacromegalic features. There was no lipodystrophy. Triglyceride levels were normal indicating that the insulin resistance was arising at the level of the insulin receptor. There was an autosomal dominant pattern of diabetes in her family, however she was the only female in the pedigree impacted. Insulin levels confirmed hyperinsulinaemia at 4,991 pmol/l (18-173 pmol/l). A clinical diagnosis of type A insulin resistance was made, and genetic testing confirmed a heterozygous pathogenic missense variant in the insulin receptor gene (INSR). Type A insulin resistance is a rare inherited cause of diabetes. Recognition is essential to facilitate genetic counselling, family screening, and access to specialist care, while allowing consideration of emerging targeted therapies. Affected females experience additional challenges with hyperandrogenism and infertility. Tailored management involves prioritising insulin-sensitisation with pharmacotherapy and lifestyle modification.

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EPCR37

DAFNE and type 3c diabetes

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DAFNE (Dose Adjustment for Normal Eating) is a structured Education programme for patients with Type 1 Diabetes. It is based on the principles of a German course since the 1980's. Courses started in the UK in 2000 and commenced in Ireland in 2004 with 24 DAFNE centres now in operation. During the COVID Pandemic a new version–Remote DAFNE was developed. DAFNE was selected as a finalist in the "recognising innovation related to the covid-19 pandemic" Bright ideas in health awards. Evidence shows that DAFNE can result in: Improved HbA1c, a 70% reduction in severe hypoglycaemia (SH), a 60% reduction in diabetic ketoacidosis (DKA), a reduction in average insulin doses, Improvements in quality of life, Improvements in treatment satisfaction and fewer participants progressing to insulin pump therapy. Two Pancreatectomy patients and one Immuno-oncology induced DM completed the remote DAFNE programme. One man 64yrs had a whipples 2021 for pancreatic adenocarcinoma-with recurrence had Total Pancreatectomy 06/24, and a history of Lynch syndrome. Started Remote DAFNE Jan 2025, using Libre 2 CGM- refused HSE approval. The second man 69yrs had a total pancreatectomy for neuroendocrine tumour, with hepatic metastases, partial gastrectomy, splenectomy and cholecystectomy. He was also refused CGM by HSE. Both men had reductions in their TDD doses and hypoglycaemic events. The immune-oncology patient a 61yr old female with malignant metastatic melanoma, treated with Nivolumab (PD-1 inhibitor) and Ipilimumab (Mono-clonal antibody treatment targeting immune checkpoint CTLA-4). She presented in 2019 with Severe DKA PH 7.055: Bicarb 8.2: Ketones 7.4.

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Author Index