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POSTER ABSTRACT BOOK

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- The abstracts in this supplement have been edited minimally from the submitted versions, primarily for house style on units.
- For full authorship details, please refer to the posters.
- Funding declarations are presented only where explicitly supplied with the abstracts. For full details, please refer to the posters.

P1

The use of GLP1 analogues in conjunction with dietary modification to achieve remission of T2DM in the South Asian population

Submitting author: *Glen Cheeran*

Aims and objectives: T2DM is one of the leading chronic conditions affecting those of Asian heritage. GLP1 analogues are a relatively new class of diabetic medication, first being licensed in the UK in 2007. While patients struggle to implement lifestyle modification, it is well established that this is the most effective way to manage T2DM. GLP1s work by promoting insulin secretion and facilitating appetite suppression, leading to weight loss. Unfortunately, many patients lack the understanding that sustained control of their condition requires permanent dietary changes and that GLP1 medication cannot be continued indefinitely. This project aimed to outline the relevant physiological processes for the benefit of clinicians; explore patient understanding of their condition therefore how they can best manage it; and suggest an alternative approach to explaining T2DM to patients. **Methods:** Project completed under the supervision of M. Johnson, partner at West Point Medical Centre. All necessary permissions to access electronic patient records and interview patients were granted by the relevant authorities. The practice's EMIS EPR system containing 5000 patients was accessed to retrieve the 31 cases who were categorised as diagnosed with T2DM, of Asian ethnicity and currently on GLP1 medication. The metrics that were of interest were HbA_{1c} values and weight, especially in relation to before and after commencing GLP1. Additionally, opportunistic sampling method was utilised to arrange interviews with eight patients from this cohort. This was to gather qualitative data regarding patient understanding of T2DM as a condition, the relevance of diet and its influence on T2DM and patient reported satisfaction regarding their control of their condition. **Results:** Only the five patients from the 31 eligible cases that had 3 or more measurements of their HbA_{1c} after commencing GLP1 were included in the graph. These did not display a dramatic reduction in HbA_{1c} values, rather a stabilisation and possibly even a steady incline. Though eight patients agreed to participate, only four attended the interviews. All participants held an incomplete understanding of their condition. Many were unaware of the function of the pancreas and the concept of insulin resistance. Others were convinced that the aetiology of T2DM was purely hereditary. There was a pronounced lack of awareness regarding the metabolism of carbohydrates and its role in insulin secretion. Participants were all more motivated to implement change and achieve remission of T2DM by the end of the interview. **Conclusions:** At present, the model of T2DM is glucose centred. However, there is evidence to suggest that an insulin centred model may be more appropriate to explain the condition. There needs to be a greater appreciation among patients of the influence of carbohydrates on blood glucose levels and subsequently its role in stimulating insulin production. Patient education carries utmost importance when attempting to promote behavioural change. GLP1 medications are of little benefit unless sustainable lifestyle modification is implemented. The data gathered in this small project is limited and has little functional application. Despite this, the qualitative data clearly indicates numerous patient misconceptions regarding their condition. The quantitative data was inconclusive due to limited follow up. Perhaps further studies could focus on the complex relationship between GLP1 use in T2DM in greater cohort sizes and over longer periods of time. Additionally, exploring the impacts of controlled and intentional dietary modification on T2DM. ■

P2

Improving EDKA education on initiation of a SGLT2 inhibitor

Submitting author: *Matthew Teesdale*

Aims: This quality improvement initiative aimed to enhance patient education regarding Sodium–Glucose Linked Transporter 2 inhibitors (SGLT2i) therapy and the potential risk of euglycemic diabetic ketoacidosis (EDKA) in patients with Type 2 Diabetes (PwT2DM). This was in response to an identified knowledge gap, as only 11% of PwT2DM were aware of the potential EDKA risk. **Methods:** An initial audit assessed the existing provision of EDKA education for PwT2DM commencing SGLT2is within the preceding 12 months. Identified barriers included limited resource access (e.g., telephone consultations, physical materials), systemic issues (e.g., missing EDKA code in EMIS, lack of automation, hot-desking), and staff knowledge gaps. To address these, a quality improvement approach was implemented, which included leveraging existing SMS systems and team involvement. **Results:** Over five months post-intervention, SGLT2i utilization increased from 42 to 64 PwT2DM. Among the 22 newly initiated patients, 17 had "education about ketoacidosis" documented in their Electronic Medical Records (EMR), indicating the effectiveness of the standardized template and SMS system. A survey of healthcare professionals (HCPs) who attended an educational session showed increased confidence in "suspecting EDKA and arranging investigations," with only one HCP reporting no change in their SGLT2i prescribing likelihood. An unexpected outcome was the increase in SGLT2i utilization, potentially due to the education session addressing prescribing barriers. **Conclusion:** The five-month post-audit results demonstrated improved patient safety and compliance following the implementation of patient information leaflets (PILs). The project highlighted the effectiveness of leveraging existing SMS systems and team involvement for successful adoption. While EMRs indicated EDKA education, the actual patient recall remains uncertain, and a patient survey would be beneficial to assess knowledge retention. The project also underscored the importance of strong leadership in driving change initiatives. ■

P3

How to improve trial design to increase uptake and adherence to gestational diabetes diet and health behaviour research amongst women from high risk ethnic minorities: Insights from patient and public involvement and engagement

Submitting author: *Elizabeth Daprè*

Introduction: Gestational diabetes (GDM) affects around 5% of pregnancies in the UK and is associated with adverse maternal and neonatal outcomes. Although many diets have been studied to improve blood glucose control in gestational diabetes, no single diet has been found to be effective for improving health outcomes for women and babies. We conducted patient and public involvement and engagement (PPIE) activities to inform a trial aimed at assessing the acceptability, feasibility, and safety of an intermittent low-energy diet (ILED) in GDM. PPIE input was especially helpful towards gaining insights into the lower than anticipated uptake and retention to the trial, particularly amongst South Asian women. It also yielded insights into how we might address potential barriers and facilitators to improve trial design and participation. **Methods:** Seven South Asian women with lived experience of gestational diabetes, overweight/obesity, and pregnancy were invited to provide insights into the trial procedures, methods and design via one-to-one discussions lasting up to 60 minutes long. A reflexive and inductive thematic analysis was used to identify key themes from which practical action points could be developed and applied to the ongoing research. **Results:** Three key themes were identified as likely barriers to participation and potential ways to maximise engagement; they included vulnerability (subthemes included trust and loss of control), accessibility, and mental load (subthemes included competing priorities, loss of control and family influence). **Conclusions:** Involving those with lived experience is critical to developing inclusive and accessible research and healthcare delivery. These findings will inform adaptations to improve healthcare engagement, especially amongst South Asian women. ■

P4

Real-world treatment patterns of tirzepatide versus semaglutide in GLP-1 RA-naive patients with type 2 diabetes

Submitting author: *Mais Absi*

Aims: To assess medication persistence and adherence, this real-world study analysed treatment patterns among glucagon-like-peptide-1 receptor agonist (GLP-1 RA)-naive patients with type 2 diabetes (T2D) initiating

tirzepatide or semaglutide. **Methods:** This retrospective cohort study used claims and clinical data from the Healthcare Integrated Research Database (HIRD®) to identify patients with T2D initiating any dose of either tirzepatide or injectable semaglutide indicated for T2D (index medication) from 13/05/2022 to 29/05/2023. Patients had at least 6-months continuous enrolment before and 12-months after initiation (index date) and no pharmacy claims for a GLP-1 RA during the 6-month pre-index period. Baseline characteristics across the two cohorts were balanced by 1:1 propensity score matching. Adherence (proportion of days covered ≥0.80), persistence (≤45-day gap in days covered), and switching were analysed across the 12-month post-index period. **Results:** Each cohort had 10,702 patients after matching. tirzepatide initiators had more index medication fills (mean [SD]: 8.9 [4.36] vs. 6.8 [3.89]; $p<0.001$) and a greater proportion were adherent (60% vs. 45%; $p<0.001$) than semaglutide initiators. More tirzepatide initiators were persistent to index medication (62% vs. 47%, $p<0.001$) and remained on treatment longer (mean [SD] persistent days: 271 [132.9] vs. 239 [135.4]; $p<0.001$) than semaglutide initiators. Among patients who discontinued, some restarted the index medication and/or switched to another GLP-1 RA. **Conclusion:** In this real-world study, among GLP-1 RA-naive patients with T2D, tirzepatide initiators had more index medication fills, and a greater proportion were adherent to and persistent on index medication than semaglutide initiators over the 12-month post-index period. ■

P5

Tirzepatide in general practice: Eligibility, cost forecasting, and long-term value

Submitting author: *Mohd Javaid Iqbal*

Aim: To determine the proportion of patients eligible for tirzepatide within a general practice population in the North West of England, calculate the estimated associated prescribing costs, and measure these against potential long-term healthcare savings—such as avoidance of myocardial infarction event (£7,200) or progression to dialysis (£30,000/year). **Methods:** A retrospective audit was conducted in a general practice with 5,700 registered patients. Electronic health records were reviewed to identify adults with BMI ≥35 and at least one comorbidity as defined by NICE (type 2 diabetes, hypertension, dyslipidaemia, cardiovascular disease, obstructive sleep apnoea, or prediabetes). The number of eligible patients was multiplied by the standard NHS drug tariff for tirzepatide (£122 per pen at its highest dose) to estimate total prescribing cost for the recommended 36-week course (9 pens per patient). **Results:** 230 patients (4.0% of the practice population) met NICE eligibility criteria. At an estimated cost of £1,098 per patient, the estimated projected total prescribing cost for treating this cohort is: £1,098 × 230 = £252,540. **Discussion:** Although the immediate prescribing cost is considerable, the economic burden of untreated obesity and its complications is far greater. According to NHS data, preventing a single myocardial infarction (£7,200) or avoiding dialysis (£30,000 annually) could offset the cost of tirzepatide for dozens of patients. National modelling by the Office for Health Improvement and Disparities shows that sustained 10% weight loss significantly reduces cardiovascular and metabolic risks. Within this framework, tirzepatide may function not as a cost burden but as a targeted preventative investment—provided it is used strategically in high-risk populations and supported by multidisciplinary care. **Conclusion:** This audit reveals a substantial proportion of general practice patients eligible for tirzepatide under NICE guidance, with significant budget implications. However, prioritised use in those at highest cardiovascular risk may yield meaningful long-term savings. These findings support the development of coordinated weight management services in primary care. ■

P6

Optimising glycaemic and blood pressure targets for older adults with type 2 diabetes: A quality improvement project

Submitting author: *Amara Aziz*

Background: Managing Type 2 Diabetes in older adults with frailty requires a personalised approach to minimise risks from tight glycaemic and blood pressure (BP) control. Guidelines recommend individualised targets, especially for those at risk of hypoglycaemia, with limited life expectancy or polypharmacy. **Aim:** To assess whether glycaemic and BP targets in frail older adults with Type 2 Diabetes were appropriately individualised and to explore opportunities for safer treatment adjustments. **Methods:** Fifteen patients coded as moderately or severely frail (Rockwood score ≥6) were identified during annual Diabetes review assessments, conducted by a practice nurse. Data on HbA_{1c}, BP, medications, frailty coding, and adverse events (e.g., hypoglycaemia, falls) were collected and compared against QOF, NDA, and national/local guidelines. Descriptive statistics were used to analyse findings and identify barriers to individualised care. **Results:** 60% patients achieved HbA_{1c} levels below 53 mmol/mol; 33.3% of these patients were on glucose-lowering agents (hypoglycaemia risk). BP targets were met in 53.3%, with one patient showing postural hypotension. Frailty coding was completed in 73.3%. Medication de-prescribing occurred in 13.3% of patients on glucose-lowering and 13.3% on BP-lowering therapies. Key barriers included clinical inertia and poor documentation. **Conclusions:** Improving documentation and adopting a patient-centred approach are essential to reducing overtreatment and improving safety in frail older adults with Type 2 Diabetes. Individualised care plans, re-assessing frailty post-intervention and regular structured medication reviews assessing falls risk and de-prescribing, may address these issues. **Re-audit:** Annually. ■

P7

A retrospective cohort study assessing the impact of the Diabetes Exercise and Lifestyle Programme on individuals living with type 2 diabetes within the Chronic Disease Hub.

Submitting author: *Bernie Kelly*

Introduction: Type 2 diabetes mellitus (T2DM) is a growing public health issue, strongly linked to obesity and sedentary behaviour. Structured, exercise-based lifestyle programmes offer potential to improve glycaemic control and address psychosocial challenges. **Objective:** This study evaluated the impact of the Diabetes Exercise and Lifestyle Programme (DELP) on metabolic, functional, and psychological outcomes in adults with T2DM within a community Chronic Disease Hub. **Methods:** A retrospective cohort design included participants who completed a 10-week DELP in Galway. Pre- and post-programme assessments measured HbA_{1c}, blood pressure, waist circumference, grip strength, shuttle walk distance, and sit-to-stand performance. Psychological wellbeing was assessed using the Hospital Anxiety and Depression Scale (HADS) and the Problem Areas in Diabetes (PAID) scale. **Results:** Significant reductions were observed in HbA_{1c} (–9 mmol/mol, $p<0.001$), systolic blood pressure (–5 mmHg, $p=0.025$), and waist circumference (–3 cm, $p<0.001$). Functional performance improved, with gains in grip strength (+5 kg) and shuttle walk distance (+55 m). Psychological outcomes demonstrated reductions in depressive symptoms ($p=0.049$) and diabetes-related distress ($p=0.019$), alongside modest quality-of-life improvements ($p=0.009$). **Conclusion:** The DELP programme achieved meaningful improvements in metabolic health, physical fitness, and psychological wellbeing. These findings support integrating multidisciplinary, community-based exercise and education models into T2DM care. ■

P8

Quality improvement/clinical audit to improve early detection and management of Chronic Kidney Disease (CKD) in patients living with Type 2 Diabetes within General Practice

Submitting author: *Carmen Villegas-Galvez*

Aims: To improve early detection and management of Chronic Kidney Disease (CKD) in patients living with Type 2 Diabetes within General Practice, aligning with NICE guidelines and the NHS Long Term Plan's prevention priorities. **Methods:** A Quality Improvement Project was launched in July 2024. The intervention included: One whole-practice training session; 266 individual mentoring encounters with GPs, nurses, and pharmacy team staff; Education focused on interpreting eGFR and ACR, coding CKD, and medication optimisation, using clinical tools already embedded on the clinical system; Team-led innovations such as uACR sample pots with signage in the waiting room and proactive housebound sample collection. **Results:** ACR screening rates increased from 22% to 74%. CKD diagnoses among patients with Type 2 Diabetes rose from 4 to 27 in the same 7-month period compared to year before. 322 patients identified for medication optimisation. Confidence

scores among staff rose from 2.25 to 4.1 (scale 0–5), with mentoring rated excellent. Improvements were achieved without additional resources. **Conclusions:** The project demonstrates that targeted education and mentoring can empower primary care teams to deliver measurable improvements in CKD care. It has earned local recognition through local county wide initiative and enabled access to further funding. The model is scalable to PCN level, with opportunities for expansion being actively explored. ■

P9

Missed opportunities: The SGLT2i treatment gap in UK patients with T2DM, CKD and CHF

Submitting author: *Chelsea Stefanska*

Background: Sodium–glucose co-transporter 2 inhibitors (SGLT2i) are recommended by NICE for managing type 2 diabetes mellitus (T2DM), chronic kidney disease (CKD), and chronic heart failure (CHF). However, utilisation data are limited. **Aim:** To describe the UK patient population with T2DM, CKD, and/or CHF who are eligible for, but not currently prescribed, an SGLT2i. **Methods:** We conducted a cross-sectional study using the 2024 Optimum Patient Care Research Database (OPCRD) primary care dataset. Prevalence, SGLT2i eligibility per NICE guidelines, and current SGLT2i prescription were measured for T2DM, CKD, and CHF individually and in combination. Treatment patterns were examined by age, sex, deprivation, selected concomitant therapies, eGFR and uACR (CKD only), and Integrated Care Board (England only). CKD sensitivity analyses identified uncoded CKD cases based on eGFR and uACR measures. **Results:** Of 9.8 million adults, 10.7% had at least one of the conditions (6.5% T2DM, 4.9% CKD, 1.4% CHF). Comorbidity was common: 23.8% of those with T2DM also had CKD and/or CHF. Across all indications, 17.5% of eligible patients were prescribed an SGLT2i (18.5% T2DM, 14.9% CKD, 22.4% CHF). SGLT2i treatment was lower among women and those aged 80+, and higher in the most deprived areas and among those with 2–3 comorbid indications. Sensitivity analyses revealed substantial under-recognition of early-stage CKD, increasing prevalence to 7.1%. **Conclusions:** In the UK, an estimated 3.58 million adults who are eligible for treatment are not receiving an SGLT2i. This significant treatment gap highlights missed opportunities to improve outcomes for patients with T2DM, CKD, and CHF. ■

P10

A scalable weight management solution: Efficacy of a fully digital, patient-led GLP-1 program

Submitting author: *Matthew McCarter*

Aims: To evaluate the effectiveness of a fully digital, patient-led weight management program using GLP-1 medications (Wegovy and Mounjaro) in a real-world direct-to-consumer cohort. This abstract highlights the potential for such a model to provide a cost-effective, scalable solution for Integrated Care Boards (ICBs) that aligns with the NHS's long-term strategy for community-based care. **Methods:** A retrospective analysis was conducted on self-reported data from 3507 patients enrolled in the Habitual GLP-1 program. Data points included patient demographics, weight loss at 3, 6, and 12 months, and reasons for discontinuation. The program is entirely app-based, and patient-led, designed to empower patients to learn and apply skills independently, fostering increased accessibility, privacy, and a sense of independence in their treatment. Patient weight was self-recorded on average 35.57 times over six months. **Results:** The cohort had an average age of 44 and a starting BMI of 35.16, with 79% female patients. Average weight loss was 10.28% at 3 months, 15.87% at 6 months, and 20.73% at 12 months. Discontinuation reasons included cost (29%) and side effects (4.87%). Over the year, symptom scores improved by 14% and patient engagement, measured by tracking habits in the app, improved by 27%. **Conclusions:** The findings demonstrate the significant efficacy of a digitally-led, patient-centric GLP-1 program in achieving substantial and sustained weight loss. The model's success is further supported by high and sustained patient engagement, demonstrating a scalable and cost-effective alternative to traditional pathways. This presents a viable option for ICBs to expand access to weight management medications and align with national health strategies. ■

P11

Beyond the clinic: Real-world effectiveness of a patient-led, digital TDR program

Submitting author: *Matthew McCarter*

Aims: To assess the effectiveness of a fully digital, patient-led Total Dietary Replacement (TDR) program in achieving significant weight loss, drawing on principles from the DiRECT trial and NHS Digital Path to Remission. To establish its potential as an effective, cost-effective, community-based solution for primary care in achieving weight loss and type 2 diabetes remission. **Methods:** A retrospective analysis was conducted on self-reported data from 901 patients enrolled in the Habitual TDR program. Data points included patient demographics and weight loss at 4, 8, and 12 weeks. The program is entirely app-based, designed to empower patients to learn and apply skills independently, fostering increased accessibility, privacy, and a sense of independence in their treatment. Patient weight was self-recorded on average 35.57 times over six months. **Results:** The cohort had an average age of 48 and a starting BMI of 34.91, with 40% female patients. At 12 weeks, 467 patients remained on the program. Average weight loss was 6% at 4 weeks, 7.9% at 8 weeks, and 11.47% at 12 weeks. **Conclusions:** The results show that a fully digital, patient-led TDR program is a highly effective method for achieving rapid and clinically significant weight loss, and is effective for improving the chances of type 2 diabetes remission. This model offers a scalable and cost-effective approach for primary care teams to deliver structured weight management, presenting a viable alternative that aligns with national health strategies for combatting obesity in a community setting. ■

P12

Changes in CGM metrics for people with type 2 diabetes switching from dulaglutide or semaglutide to tirzepatide 5 mg: A sub-analysis of the SURPASS-SWITCH-2 study

Submitting author: *Simon Coates*

Aims: This sub-analysis of the SURPASS-SWITCH-2 study aimed to describe changes in continuous glucose monitoring (CGM) metrics after switching from dulaglutide/semaglutide to tirzepatide 5 mg in adults with type 2 diabetes. **Methods:** Eligible participants had HbA_{1c} ≥48 mmol/mol to ≤75 mmol/mol and were on a stable dose of dulaglutide/semaglutide for ≥3 months, whereafter tirzepatide 5 mg QW was initiated for 12 weeks. Participants wore a blinded CGM device for 14 days at baseline, week 4, and week 12. **Results:** Participants in the dulaglutide subgroup (N=63) had an average age of 58.4±10.3 years, with females comprising 50.8% and an average BMI of 34.7±6.5 kg/m^2. In the semaglutide subgroup (N=84), participants had an average age of 57.6±10.0 years, with females comprising 57.1% and an average BMI of 35.4±7.2 kg/m^2. From baseline to week 12, changes in CGM metrics were numerically greater in the dulaglutide subgroup: time above range (TAR) (>10.0 mmol/L) 21.4%, time in range (TIR) (3.9–10.0 mmol/L) 77.6%, TBR (≤3.9 mmol/L) 1.0%, and TITR (3.9–7.8 mmol/L) 49.4% and 23.6%, 74.9%, 1.6%, and 44.6% in semaglutide respectively. Changes from baseline in CGM metrics in dulaglutide/semaglutide subgroups included: an increase in TIR by 6.3±2.6 for dulaglutide and 5.0±2.1 (p<0.05) for semaglutide. TBR increased by 3.0±1.6 with dulaglutide and 1.8±1.0 with semaglutide. TITR increased by 14.0±3.9 for dulaglutide and 11.4±3.1 (p<0.001) for semaglutide. **Conclusion:** Switching from dulaglutide/semaglutide to tirzepatide 5 mg was associated with improved CGM metrics, with improvements more pronounced in the dulaglutide subgroup. ■

P13

Gestational diabetes – self critique of postnatal review clinic

Submitting author: *Venkatram Navaneetha Krishnan*

Aim: To assess HbA_{1c} was ordered or carried out at postnatal review as per guidelines by 12 weeks after delivery. To assess BMI was calculated for prevention of obesity related disorders. **Methods:** 40 patients notes were retrospectively reviewed by giving random numbers out of 133 patients. **Results:** 49% patients had HbA_{1c} completed and reviewed as per guidelines. 58% patients had BMI calculated at postnatal check. The mean BMI was 29.7±4.4 kg/m^2. **Conclusion:** Our patients are mainly ethnic minority immigrant group where there is high prevalence of Type 2

diabetes. This project showed we need to improve our monitoring of gestational diabetes review in order to prevent future diabetes and obesity related disorders. We have introduced warning messages in patients records as reminder for clinicians. We had a training for monitoring/coding team to order blood test and use text messages as reminder for patients. ■

P14

Changes in cardiometabolic risk factors upon discontinuation of tirzepatide for 17 weeks: A *post-hoc* analysis of SURMOUNT-1 three-year study

Submitting author: *Yasur Mohammad*

Aims: In SURMOUNT-1 participants with prediabetes completed 176 weeks of tirzepatide treatment. In this *post hoc* analysis, we evaluated changes in cardiometabolic (CM) risk factors associated with weight regain after discontinuing tirzepatide for 17-weeks (weeks 176–193). **Methods:** All tirzepatide-treated participants with ≥5% body weight (BW) loss at week-176 (*N*=450) were categorised based on presence or absence of BW regain upon discontinuation. BW regain was defined as BW increase ≥3% at week-193 relative to week-176. CM parameters included systolic blood pressure (SBP), glycated haemoglobin A1c (HbA_{1c}), fasting serum glucose (FSG), serum insulin (SI), and non-high-density lipoprotein-cholesterol (HDL-C). The proportion of the study benefit retained at week-193 was calculated by change from baseline (CFB) at week-193 divided by the CFB at week-176. **Results:** Overall, 328 (72.9%) participants had BW regain, and 122 (27.1%) did not. The two groups had similar baseline characteristics, however, baseline BMI was lower in the BW regain group. In the BW regain group, benefit retention was 12.4–32.7% for SBP, 44.9–51.5% for HbA_{1c}, 35.5–47.4% for FSG, 70.0–81.4% for SI, and 22.1–46.1% for non-HDL-C. In participants with no BW regain, benefit retention was 43.9–91.9% for SBP, 51.0–80.0% for HbA_{1c}, 56.7–68.9% for FSG, 86.3–131.8% for SI, and 44.7–100.6% for non-HDL-C. **Conclusion:** This *post-hoc* analysis suggests that the level of improvements in CM risk factors achieved with 176-weeks of tirzepatide treatment decreased upon discontinuation for 17-weeks, which may support long-term intervention. The benefit retention for improvement in CM risk factors appeared to be lower among participants with BW regain following tirzepatide discontinuation. ■

P15

Influence of body mass index (BMI) on elective surgery in patients with osteoarthritis in England – a real world analysis of time to total joint arthroplasty (TJA)

Submitting author: *Simon Coates*

Objective: To determine the time from initial osteoarthritis diagnosis to elective TJA, stratified by BMI ≥40 or <40 kg/m² and BMI classifications among patients with hip or knee osteoarthritis in England. Interim intervals—including orthopaedic referral to specialist consultation, then to TJA—and sociodemographic impact were also assessed. **Methods:** This retrospective, observational study linked primary (CPRD Aurum) with secondary (Hospital Episode Statistics) care data to identify adults (≥18 years) newly-diagnosed with knee or hip osteoarthritis between January 2017 and December 2018 inclusive (index), who received orthopaedic specialist referral in England. Data from 12–18 months before to 5 years after index were extracted. Analyses were descriptive. **Results:** 31,595 patients were eligible: mean age 66.3 years, 60.1% female, and 8.9% with BMI ≥40 kg/m². Within 5 years post-diagnosis, TJA was received by 37.4% and 22.0% of patients with BMI <40 and ≥40 kg/m², respectively, and by 35.7%, 38.5%, 33.8% and 22.0% with normal BMI, Class I, II or III obesity, respectively. For patients with BMI <40 and ≥40 kg/m², time from initial osteoarthritis diagnosis for 25% of patients to receive TJA was 34.5 months and never achieved, respectively, and time from orthopaedic consultation for 25% of patients to receive TJA was 11.6 and 53.3 months, respectively. **Conclusions:** Patients with BMI ≥40 kg/m² less frequently received TJA within 5 years of diagnosis and experienced substantially longer delays (by 3.5 years) from consultation to TJA than those with BMI <40 kg/m². Tackling obesity in primary care could address this considerable health inequity. ■

P16

Tirzepatide teething troubles

Submitting author: *Nathan Davies*

Aims: Tirzepatide use is increasing substantially in primary care. This poster will explore Tirzepatide's efficacy in managing weight for those living with obesity without type II diabetes, exploring why patients are seeing reduced benefits when compared to participants in clinical trials. **Methods:** Scientific databases including Wiley Library and Google Scholar were searched for journals regarding the effectiveness of Tirzepatide and real-world subtracters from its effectiveness. Priority was given to sources higher on the hierarchy of evidence. **Results:** The SURMOUNT-5 clinical trial saw Tirzepatide achieve a mean percent change in weight of –20.2% at 72 weeks for those with obesity and without type 2 diabetes. Thomsen et al found a reduction in weight of 4.8–21.2% for those taking Tirzepatide in the studies reviewed which lasted between 6 and 12 months. For Tirzepatide a 2024 study looking at adherence in real world data found 5.7% stopped treatment after the first dose, only 13% reached the maximum dose for Tirzepatide. **Conclusion:** SURMOUNT-5 showed Tirzepatide to be significantly more effective at reducing weight than Semaglutide for patients living with obesity without type II diabetes. Patients are unlikely to see the full benefits due to low adherence, leading to lower doses being prescribed than used in clinical trials and discontinuation of the medications by patients. Evidence on the prevalence of factors affecting adherence is scarce. Factors for adherence can be demographic-specific, making it vital for future research into the barriers clinicians in the UK face when prescribing Tirzepatide. ■

P17

A systematic review and meta-analysis: Levels of physical activity and sedentary behavior in children with diabetes compared to healthy children's

Submitting author: *Rabha Elmesmari*

Context: Levels of Moderate-to-vigorous physical activity (MVPA) and sedentary behavior (SB) are important for child health but there is much less information about these behaviours in children with chronic diseases. **Objective:** To examine the accelerometer measured habitual amount of time spent in MVPA and SB in children and adolescents with chronic disease compared with current MVPA recommendations, and with levels in healthy peers. **Methods:** An extensive search was carried out in the five most relevant electronic databases: Medline, Cochrane Library, EMBASE, SPORTDiscus and CINAHL from 2000–2015. **Study selection:** Studies of accelerometer-measured MVPA and/or SB (at least 3 days and 6 hours/day) in children and adolescents (0–19 years) with cardiovascular disease, respiratory disease, diabetes, and malignancy who were well and clinically stable were included. Study quality was assessed formally. The meta-analyses were planned for all outcomes. **Results:** Out of 1505 records, 20 studies (5 in cardiovascular disease; 5 in respiratory disease; 8 in diabetes; 2 in malignancies) were eligible with a total of 1784 children with chronic diseases and 834 healthy children. 11 of these 20 studies were suitable for inclusion in meta-analysis. 14 out the 20 eligible studies compared levels of MVPA between patients with chronic disease and a healthy comparison group; 11 of the 20 studies also provided data on SB, and 9 of these 11 studies compared SB in children with chronic disease with a healthy comparison group. In the children with chronic disease, MVPA was below the recommended 60 min/day and SB generally high regardless of the disease condition. Comparison with healthy controls suggested no difference in MVPA between controls and patients with cardiovascular disease (1 study, *n*=42) and type 1 diabetes (5 studies, *n*=400; SMD –0.70, 95% CI –1.89 to 0.48, *p*=0.25). In children with respiratory disease MVPA was lower than controls (4 studies, *n*=470; SMD –0.39, 95% CI –0.80, 0.02, *p*=0.06). Meta-analysis indicated significantly lower MVPA in children with malignancies than in the controls (2 studies, *n*=90; SMD –2.2, 95% CI –4.08 to –0.26, *p*=0.03). Sedentary time was fairly consistently higher in the children with chronic diseases but there no marked differences with healthy peers (3 studies (*n*=355) SMD –0.40, 95% CI –1.53 to 0.74, *p*=0.49, I^2=95%). **Conclusions:** MVPA in children/adolescents with chronic disease appear to be well below guideline recommendations, although broadly comparable with activity levels of their healthy peers except in those children with malignancies. Tailored intervention strategies will be needed to increase MVPA and reduce SB in children and adolescents with chronic diseases. ■

P18

Implementing opportunistic HbA_{1c} and BP checks during acute consultations in high-risk patients: A single-GP quality improvement audit

Submitting author: Pravish Kashyap

Aims: To evaluate whether systematic opportunistic HbA_{1c} and blood pressure checks during acute consultations could improve cardiovascular risk detection and management in high-risk patients without requiring additional appointments. **Methods:** A single GP in a 3,000-patient practice identified high-risk patients (aged 45–75, BMI >30, family history of diabetes, previous gestational diabetes, or established hypertension). During acute consultations over 12 months, opportunistic HbA_{1c} and BP measurements were performed when clinically appropriate. Patient notes were systematically copied for audit. When abnormal results were identified (HbA_{1c} >42 mmol/mol or BP >140/90 mmHg), brief intervention included medication optimisation and single lifestyle advice. A cohort of 42 high-risk patients was audited, measuring detection rates and medication changes. Re-audit occurred at 18 months. **Results:** From 42 patients with 78 acute consultations, opportunistic screening identified 6 new pre-diabetes cases (14.3%) and 2 diabetes cases (4.8%). Among 15 known hypertensives, BP control improved from 60% to 80% ($p<0.05$). Medication changes occurred in 45% of encounters with abnormal results. Mean consultation time increased by 90 seconds. Re-audit showed sustained improvements: 73% maintained BP control, newly diagnosed patients achieved mean HbA_{1c} of 54 mmol/mol. **Conclusions:** Opportunistic screening during acute consultations provides pragmatic cardiovascular risk management requiring minimal additional time and no extra resources. The main limitation was reliance on acute presentation frequency; future expansion to routine consultations could increase detection rates further. ■

P19

Private weight loss injection usage – a ticking bomb for GP surgery workload

Submitting author: Venkatram Navaneetha Krishnan

Introduction: The Local ICB guidelines for weight loss injection are very strict for general obese patients in our surgery. Many of our patients have started treatment via private providers. As per NICE, GP must provide follow-up care for 12 months after completion of treatment regime. This led to: (1) Document number of patients are in weight loss injection; (2) To check BMI recorder at least 12 months prior to start of the medications. **Methods:** The private letters received are checked and the medication is coded in patient records as hospital only prescription. This led to total of 197 patients in our surgery are taking the weight loss injections. 54 are males and 143 are females. Randomly, 50 patients' records are reviewed for BMI documentation. **Results:** 47 patients are treated in private sector. 3 diabetic patients are having injections via surgery. 18 are males and 32 are females. The age range is 24 years to 82 years. BMI recorded within 12 months prior to start of treatment is for 32 patients. 18 patients have no BMI recorded in last 12 months. There were few patients who are less than BMI of 30 are in these injection regime. **Conclusion:** The coding of private letters has helped us to understand the perception of our patients. This will lead to better care in future follow up care of these patients. We need to plan self-reporting questionnaire tool for monitoring the weight loss injections in order minimise the workload. ■

P20

Poster withdrawn. ■

P21

Does lifestyle rather than metformin work in obese patients with metabolic syndrome and PCOS?

Submitting author: Mayukh Bhattacharyya

Aim: We aim to study the effect of metformin versus lifestyle interventions on weight management in obese patients. **Material:** 67 [30 in lifestyle group, 37 in metformin group] patients female of child bearing age [18–32] over 24 months periods were reviewed. 30 were given lifestyle interventions including diet, exercise, and counselling. 37 patients were already treated with metformin for polycystic ovarian syndrome. These patients were requested with medication as per other clinician's advice. Outcomes evaluated included body mass index, weight, waist and hip circumference, blood pressure, serum lipid levels, HbA_{1c}. **Result:** The metformin group (N=37) had more components of the metabolic syndrome than the lifestyle (N=30). All components of the metabolic syndrome were present in both groups. There was a trend toward better diastolic blood pressure at 6 months in the metformin group, which was not seen in the lifestyle group. **Conclusion:** Lifestyle changes produce some degree of weight loss. Obesity is a phenomenon that requires a comprehensive medical approach that encompasses intensive lifestyle modification including behavioural changes towards nutrition, and physical activity, as well as pharmacotherapy and possible surgical management. ■

P22

Bridging community with clinical diabetes prevention and health education

Submitting author: Corinne McSharry Payne

Health Education interventions for early stage T2DM and prediabetes remission are not well attended. A free, community based healthy lifestyle – weight loss and physical activity programme – is well attended and reviewed by participants. It was mooted that the community intervention "Weigh to Go" could be adapted to support health education engagement as well as providing supported self management of weight loss. The redrafted programme incorporates T2DM and prediabetes remission knowledge and goal setting for eligible patients. Patients are taken through the programme using behaviour change principles, coached by trained health instructors. At the programme end, a review appointment with a specialist nurse is arranged. This appointment includes repeat HbA_{1c} and liaison with primary care for any identified medical management requirements. Participants (19) in pilot cohorts demonstrated positive changes to physical activity and mobility as well as weight loss (in 16 of 19 completers) and reduced or stabilised HbA_{1c} levels (11 of 19 HbA_{1c} below 42 mmol/mol) at review after 15 weeks. The promising outcomes in this pilot programme suggest a combination approach is desirable and time efficient for patients, while achieving weight loss and lowered glucose levels. ■

P23

The impact of a diabetes group consultation programme

Submitting author: Jahnavi Veeramasuneni

Aims/Objectives: To evaluate the effectiveness of a structured lifestyle-based Group Consultation Diabetes Lifestyle Intervention Programme (DLIP) in improving glycaemic control, weight, and patient empowerment in a high-deprivation area of Stockton-on-Tees. **Methods:** A 6-week DLIP was piloted with groups of 12 patients diagnosed with pre-diabetes or type 2 diabetes. Sessions lasted 90 minutes and integrated the six pillars of lifestyle medicine (nutrition, physical activity, sleep, stress management, social connection, avoidance of harmful substances). Outcomes were assessed through HbA_{1c}, weight change, and patient feedback at baseline, 6 weeks, and 5 months. **Results:** Among diabetes patients, 75% improved their status, with some achieving remission or moving into pre-diabetes range. Of those with pre-diabetes, 66% improved, with 50% achieving remission. Average weight loss was 6.69 kg. Patients reported high motivation, useful behaviour change, and willingness to recommend the programme. Qualitative feedback highlighted the value of peer support, a safe environment, and practical tools in sustaining lifestyle change. Early results suggest benefits were maintained at 5 months, although some variability existed. **Conclusions/Summary:** A structured lifestyle-first group consultation model can deliver significant improvements in glycaemic control, weight, and patient engagement within a short timeframe, even in areas of high deprivation. Group consultations foster community, shared learning, and sustained motivation, offering an effective, scalable approach to tackling the rising burden of diabetes. Larger studies with longer follow-up are warranted to confirm impact on long-term outcomes. ■

P24

A review of the management of people with diabetes who have microalbuminuria in primary care

Submitting author: Philippa Williams

Background: Microalbuminuria is the earliest indicator of diabetic nephropathy (DN), one of the

most expensive long-term complications of diabetes mellitus (DM). Microalbuminuria is also an independent risk factor for all-cause mortality. 30–40% of people with diabetes (PWD) will develop DN. Angiotensin-converting enzyme inhibitors (ACEi) and angiotensin receptor blockers (ARB) slow the rate of progression of DN, improving mortality rates. **Aims:** To review current clinical practice in a primary care setting of the management of microalbuminuria in PWD to identify the need for changes to align with national recommended guidelines. **Method:** A clinical report was run in EMIS to identify all PWD with an ACR result of >3 mg/mol in the preceding 6 months. I manually reviewed the records to identify those not prescribed ACEi/ARB and to identify the reason for this. **Results:** 50% of PWD with raised ACR were not prescribed ACEi/ARB. 13.5% were intolerant of ACEi/ARB, 2% had contraindications to ACEi/ARB, 54% had no documented offer of ACEi/ARB, 17% were lost to follow up, 8% had a review planned but still pending, and 6% had a normal ACR on repeat testing. **Conclusions:** There was a lack of clear process for management of microalbuminuria in PWD in this primary care setting, impacting on the care of PWD. Recommendations for change in practice include education on the significance and management of microalbuminuria in PWD and a clear protocol for managing a raised ACR result in PWD. ■

P25
Improving the management of microalbuminuria in people with diabetes in primary care

Submitting author: *Philippa Williams*

Background: 30–40% of people with diabetes (PWD) will develop diabetic nephropathy (DN). Microalbuminuria is the earliest indicator of DN. Microalbuminuria is also an independent risk factor for all-cause mortality. Research shows that angiotensin-converting enzyme inhibitors (ACEi) and angiotensin receptor blockers (ARB) slow the rate of progression of DN. A recent review of a GP practice (see Poster 24) found no clear process for managing microalbuminuria in PWD and poor clinical knowledge of staff regarding microalbuminuria. **Aims:** To address current unsatisfactory clinical practices in a primary care setting and implement changes to reduce DN progression and improve long-term outcomes for PWD in primary care. **Method:** Review findings and 20-minute teaching on DN and microalbuminuria management was presented to all clinical staff. I developed a process flowchart for managing microalbuminuria in PWD based on NICE guidelines and local prescribing database. Staff completed questionnaires to review the impact of the teaching and efficacy of the flowchart. **Results:** 100% reported an increased awareness of the significance of microalbuminuria in PWD after the teaching. There was a 56.25% increase in the mean clinicians' confidence scores for managing a raised ACR result in PWD after the teaching and use of the flowchart. 100% of clinicians reported the flowchart be a useful clinical tool after 3 months of use. **Conclusions:** The process flowchart has been beneficial in aiding all staff to provide NICE recommended treatment to PWD, therefore long-term outcomes for PWD should improve. ■

P26
Implementing group consultations for patients with newly diagnosed type 2 diabetes

Submitting author: *Emily Feely*

I am the Diabetic Lead for Collingham Medical Centre and manage all of the diabetic patients in the practice. Of a practice size of nearly 8000 patients, just under 600 patients have type 2 diabetes. Last year 36 patients were diagnosed with type 2 diabetes, and the prevalence is rising. This meant that last year 18 hours of nursing time was spent discussing this new diagnosis and providing education. This led me to consider new ways to manage these appointments, whilst not affecting care. There is wide range of evidence demonstrating the effectiveness of group consultations within primary care, and as a practice we were keen to explore the effectiveness of this further. The group consultation was planned a month in advance, and any patients with a new diagnosis of type 2 diabetes were contacted via telephone to inform them of the diagnosis and to offer the group consultation. Out of 9 patients with a new diagnosis, only 2 declined the group consultation (these patients were then offered a one-to-one appointment). I offered potential dates and went with the majority. Out of the 7 patients that were due to attend, one cancelled on the morning of the consultation therefore 6 patients attended the consultation, some with partners as well. I used a simple PowerPoint presentation to guide the session and encouraged discussion. I received positive feedback from each patient and 100% said they would attend again. The patients would normally have received a one-to-one appointment for 30 minutes providing education, but the group consultation provided education over one hour – meaning patients received better quality education with time savings for the practice. Limitations included patient choice, as some patients will prefer to be seen individually. A further limitation is lack of patients following the initial consultation being diagnosed with diabetes – making a group consultation difficult. The positive feedback received, better quality education given and time saving for the practice will encourage the practice to explore this further, possibly incorporating into annual reviews and to consider trialling at PCN level. ■

P27
A quality improvement project to improve thyroid dysfunction in patients with diabetes

Submitting author: *Reshma Rasheed*

Aims: Diabetes and thyroid disease are closely linked. Despite this, current United Kingdom national guidelines do not recommend routine thyroid function tests (TFTs) in type 2 diabetes (T2DM). Undetected and untreated hypothyroidism contributes to insulin resistance and hyperglycaemia in diabetic patients which increases the risk of cardiovascular events. Progression of thyroid disease, if undetected, may be dismissed as poor control. This quality improvement project attempted to systematically improve the rate of detection of thyroid dysfunction in the diabetic population, with a view to optimizing diabetes control. **Method:** In the first PDSA cycle the prevalence of thyroid disease in diabetic patients (3.5%) was below the national average (4–5%). It also revealed lost opportunities at routine blood testing for detection. In the 2nd PDSA cycle employing the NHS Getting It Right First Time (GIRFT) and Making Every Contact Count (MECC) methodology, we cooperated in routine thyroid function screening with diabetes monitoring. This improved overall detection rates subsequently, allowing earlier intervention to ensure patients were both biochemically and clinically euthyroid. **Results:** Overall prevalence of hypothyroidism in our diabetic population: 13.80% (9/65) in T1DM and 13.70% (117/854) in T2DM showing that pro-active testing can improve detection rates higher than the national average. **Conclusion:** We found a similar prevalence of hypothyroidism in type one and type two diabetic patients. We advocate concurrent monitoring of TFTs with blood test in all diabetic patients to ensure thyroid dysfunction is detected. ■

P28
Health coaching in preventing and treating type 2 diabetes

Submitting author: *Kathy Hoffman*

Aims: Establishing the clinical effectiveness of a Health Coaching MDT in the prevention and treatment of type 2 diabetes. **Methods:** Patients recruited to health coaching from practice diabetes clinic, offered 5 sessions of 1:1 Health coaching with metrics take at the start and end of intervention. **Results:** Statistically significant impact on progression of NDH to Type 2 diabetes, reversal of established diabetes and de-prescribing of medication. **Conclusions:** Evidence of clinical impact of Health coaching MDT model in patients with pre-diabetes and type 2 diabetes. ■