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Supplement A

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

Hair, nails and supermarkets: A high street approach to reducing health inequalities through hypertension case-finding

Submitting author: Minimol Santhosh

Background and aim: Nationally, cardiovascular disease (CVD) accounts for one-fifth of the life expectancy gap between best and worst-off populations. High blood pressure (BP) is the leading modifiable risk factor for CVD and each 20 mmHg increase in blood pressure increases risk of developing heart failure by 28%. Two out of every three people with Type 2 diabetes also have high blood pressure and share common risk factors. It is often referred to as the silent killer because it may show no symptoms and around half of all people with it are not aware they have it. Identifying hypertension (HTN) is a priority in Harrow, given it has the highest prevalence of coronary heart disease (CHD) in London. The aim of the initiative was to deliver a high impact community-based intervention in non-traditional venues to identify undiagnosed hypertension. This contributes to the aim to reduce heart failure mortality by 25% in the next 25 years. This initiative was funded and successfully completed in partnership with NHS NW London Integrated Care Board (ICB) and partners. **Method:** Data analysis using a statistical approach incorporating artificial intelligence (AI) highlighted four geographical areas in Harrow with expected high prevalence of undetected hypertension. Members of the public were opportunistically approached by a Heart Failure Specialist Nurse in non-traditional venues in these areas, via barbers, hairdressers, nail salons, libraries and supermarkets. They were asked whether they would like to learn about blood pressure and have theirs checked. Results were given. With consent, the readings were also fed back to the person's GP practice. **Results:** 685 people were screened between Nov 23 and Mar 24, with the majority in supermarkets (43%) and libraries (35%). Libraries and supermarkets were found to be more amenable to participation than small businesses like barbers and nail salons, who found it harder to balance the intervention with their customers needs. Undiagnosed hypertension was identified in 130 people (around 1 in 5 people or 19.0%), higher than the level of undiagnosed hypertension found in the population nationally (Health Survey for England 2015–19 approx. 11%). **Conclusion and recommendations:** A data-driven community intervention can effectively target CVD health inequalities, thereby contributing to the national Core20PLUS5 approach. The high street intervention was successful at identifying higher risk groups, particularly in supermarkets. The use of volunteers could be considered to ensure project value for money and long-term sustainability. ■

P2

How acceptable is self-directed digital type 2 diabetes education in the current climate?

Submitting author: Alison Northern

Background: 89 healthcare providers from across the UK, Ireland and Crown Dependencies include MyDESMOND as part of their type 2 diabetes education offer, including Wales-wide roll-out. Each provider establishes their own referral and onboarding pathway. **Aim:** To explore the user demographic of self-directed digital self-management education for people with type 2 diabetes in the UK and Ireland. **Method:** Users self-report demographic, clinical, behavioural and psychological measures, and annually are sent an online feedback form. **Results:** As of 22 August 2024, MyDESMOND had 50 160 registered users (since June 2018) with 11 852 (23.6%) registering in the last 12 months. **Users registered before 22.08.2023:** 51% female. 8% 18–40 years old, 16% 41–50 years, 30% 51–60 years, 29% 61–70 years, 17% 71 or over. Ethnic groups: 82.5% White, 10% Asian, 4.1% Black, 3.2% Mixed, 2.2% Other. 12.2% also attended group education. **Users registered on or after 22.08.2023:** 52% female. 11% 18–40 years old, 18% 41–50 years, 31% 51–60 years, 27% 61–70 years, 14% 71 or over. Ethnic groups: 78.3% White, 12.1% Asian, 5.1% Black, 2.4% Other, 1.8% Mixed. 17% also attended group education. 2024 User Survey (n=1003): 90% would recommend MyDESMOND to others. 91% found information valuable. 87% better understood condition. 79% changed diet. 66% more active. 51% less stressed. **Conclusion:** Currently, this data shows MyDESMOND is highly acceptable with or without group education; with an increasingly ethnically diverse user-base mirroring the UK's total population and a growing number of under 40's registered, reflecting the global increase in early-onset type 2 diabetes. ■

P3

Type 2 diabetes mellitus (T2DM) self-management among people of black African ethnic background in high-income countries: A systematic review of qualitative studies

Submitting author: Immaculate Ajok Okello

Background: Type 2 diabetes is a growing concern globally with approximately 100 000 people in the UK diagnosed with diabetes annually. This prevalence is higher among people of minority ethnic backgrounds, with black Africans being three to five times more likely to have diabetes compared to their white counterparts. Despite the investment, challenges like non-adherence to treatments or self-management advice among patients lead to complications and worse outcomes. **Aims:** To explore the experiences and understand the contextual factors that enable or hinder diabetes self-management among people of black African ethnic backgrounds. **Methods:** Study protocol available on PROSPERO (CRD42023481117). 7 electronic databases were searched with no language or date restrictions. We assessed the methodological quality of the included papers using the CASP tool. The eligible studies were analysed using thematic synthesis by Thomas and Harden (2008), and a realist evaluation by Pawson et al (2005). **Preliminary results:** We retrieved 11 301 papers and de-duplicated and double-screened these articles. After excluding ineligible papers, 21 articles involving 551 participants were included in the analysis. 10 articles were based in the USA, 7 (UK), 3 (Canada) and 1 (Australia). The commonly cited themes focused on cultural beliefs (e.g. gendered roles), self-efficacy (e.g. conflicting priorities), contextual factors (e.g. stigma) and how these positively or negatively influence self-management behaviour. **Conclusion:** To enable sustainable self-management practices and positive diabetes outcomes, interventions should incorporate culturally appropriate components. This includes addressing contextual barriers like stigma, inadequate lay resources and mechanisms fuelling negative outcomes. ■

P4

Optimising type 2 diabetes care with continuous glucose monitoring as an educational tool and lifestyle interventions to reduce medication dependence: A pilot study in North Central London Integrated Care Board (NCL ICB) March 2024

Submitting author: Efa Mortty

Type 2 diabetes (T2D) is a significant health concern globally, with stagnant metabolic control despite increasing expenditure on endocrine care. The COVID-19 pandemic further impeded diabetes management efforts. This pilot study aimed to investigate the potential of dietary and lifestyle changes, coupled with continuous glucose monitoring (CGM), to improve health outcomes for patients living with T2D in North Central London (NCL), focusing on medication avoidance and the possibility of de-prescribing some medicines in patients who improved. Eight primary care practices participated, recruiting 95 patients. Patients underwent a 6-week intervention, focusing on dietary and lifestyle modifications, alongside education from instant feedback from dietary choices from CGM technology. Eligible patients included those at the initiation stage requiring treatment for type 2 diabetes or requiring step-up therapy due to poor HbA_{1c} levels. Insulin-using patients were excluded. Training sessions were provided for clinicians on medication adjustment by a clinician with a special interest in lifestyle medicine, expertise in diabetes remission and CGM use. Both patients and clinicians completed surveys post-intervention, and HbA_{1c} tests, weight and blood pressure were conducted before and a few weeks after CGM removal. Challenges such as incomplete data collection and time constraints were encountered. Results from the pilot show improvements in HbA_{1c}, weight and blood pressure. The pilot study clearly demonstrated that, in the short term, the utilisation of CGM and other supportive tools can effectively educate and motivate newly diagnosed patients and those with uncontrolled or stable hyperglycaemia to self-manage their condition and improve their diabetes outcomes. This benefits both patients and the healthcare

system through medication avoidance and in some patients a need for deprescribing. ■

P5

A retrospective study of patients with impaired fasting glycaemia and its association with hyperuricemia and dyslipidaemia, implications for management

Submitting author: Jake Rosen

Background: Impaired fasting glycaemia co exists with dyslipidaemia and hyperuricemia the vast majority are asymptomatic. Statin therapies for lipid management for dyslipidaemia worsen HbA_{1c} levels as they are promoters of hyperglycaemia. Patients should be risk scored using the Leicester Diabetes Risk Tool and or the FIND risk tool prior to instituting statins. However the availability of novel agents like bempedoic acid are viable alternatives for management of dyslipidaemia in these patients as it is a glycaemia-neutral medication and it is the agent of choice in patients with impaired fasting glycaemia instead of statins. However, one of the adverse side effects of bempedoic acid is the development of gout. Therefore screening of uric acid levels should be done prior to starting bempedoic acid therapy. **Aims & Objectives:** We did a retrospective study to understand the prevalence and temporal relationship of hyperuricemia between rising HbA_{1c} and uric acid levels and how to manage this as a risk factor if glycaemic-neutral agents like bempedoic acid are used which can further raise uric acid levels and the real risk of the prevalence of gout in these patients. **Methods:** A retrospective study of the impaired fasting glycaemia registers across four GP surgeries were analysed to look at the association of HbA_{1c} levels and uric acid levels. **Results and conclusions:** There was a positive correlation of raised HbA_{1c} with asymptomatic hyperuricemia which will have implications to their dyslipidaemia management and choice of lipid lowering therapies. We advocate screening for hyperuricemia in patients with impaired fasting glycaemia prior to starting bempedoic acid therapies. ■

P6

Impact on diabetes-related health outcomes using MyWay Diabetes platform in Somerset, UK: An interrupted time-series analysis

Submitting author: Mats Baxter

Background: MyWay Diabetes (MWD) is a digitally enabled diabetes self-management tool which contains a variety of multimedia resources aimed at improving diabetes self-management and lifestyle change, by providing information, access to electronic health records, accredited structured education and more. **Aims:** To improve diabetes management through providing patient-centred personalised access to electronic health records, structured education, and other self-management features (https://mywaydigitalhealth.co.uk/myway-digital-health-platforms/#_mdmw). This is the first observational analysis on clinical outcomes in Somerset since MWD implementation (2018). **Aims:** We aim to characterise trends in diabetes-related health outcomes (e.g. HbA_{1c}, lipids, blood pressure etc.) for MWD users within NHS Somerset, by comparing trends through time with respect to date of MWD registration. **Methods:** An interrupted time-series analysis in MWD users with type 1 diabetes (T1DM) or type 2 diabetes (T2DM) in Somerset, UK, compared pre- and post-MWD registration trends to estimate differences in health outcomes, within 48-month pre-MWD registration and 24-month post-MWD registration periods. Generalised estimating equations modelling was conducted, adjusting for participant baseline characteristics. **Results and conclusions:** 750 and 6457 people with T1DM and T2DM were included in the analysis, respectively. Most health outcomes (HbA_{1c}, blood pressure, triglycerides, BMI and weight) improved significantly for people with T2DM between pre- and post-MWD registration. HbA_{1c} was reduced by 8.7 mmol/mol at 24 months post-MWD registration. All health outcomes for T1DM were left unchanged. The large HbA_{1c} reduction for T2DM is unusual for a low-cost scalable digitally augmented self-management intervention and is similar in scale to commencing pharmacological treatment but considerably cheaper and without the risk of side effects. This research demonstrates the positive impact of MWD on diabetes-related outcomes and adds to the broader evidence base on digital health interventions for diabetes. ■

P7

Implementation of a primary care-based digitally-augmented type 2 diabetes self-management intervention with activity tracking device

Submitting author: Mats Baxter

Background: MyWay Diabetes (MWD) is a digitally enabled diabetes self-management tool which contains a variety of multimedia resources aimed at improving diabetes self-management and lifestyle change, by providing information, access to electronic health records, accredited structured education and more (https://mywaydigitalhealth.co.uk/myway-digital-health-platforms/#_mdmw). Fitbit activity trackers connected to MWD may encourage regular physical activity, helping people capture step count, heart rate, sleep, and set goals to improve diabetes outcomes. **Aims and objectives:** We aim to assess a multi-site primary care-based diabetes self-management intervention utilising in-person healthy lifestyle coaching, access to MWD and linked Fitbit activity tracker in Somerset, UK. **Methods:** Participants from six primary care centres were provided with a Fitbit device, access to MWD and five in-person healthy lifestyle coaching sessions (lasting ~3 months) focussed on physical activity, nutrition, sleep, and general wellbeing/mental health for type 2 diabetes (T2D) between 2022 and 2024. Primary outcomes included changes in HbA_{1c}, blood pressure, BMI, and weight. Secondary outcomes included changes in diabetes self-management, diabetes distress, diabetes knowledge, diabetes-specific quality of life, overall health, and intervention satisfaction, collected via pre-post questionnaire. **Results and conclusions:** 63 out of 69 participants completed the in-person coaching sessions. Systolic blood pressure, BMI, and weight all significantly improved, while diabetes knowledge, diabetes self-management, diabetes distress and overall health all significantly improved, and intervention satisfaction was high. Our findings indicate that the intervention improved most study outcomes. This research could help inform the roll-out of similar future programmes in NHS England and add to the existing research on digitally-enabled interventions for T2D. ■

P8

Real-world rollout of digital type 2 diabetes management education for Wales

Submitting author: Alison Northern

Background: Prior to June 2021 digital self-management education was not available for people with type 2 diabetes living in Wales; MyDESMOND was the first-of-its-kind offered Wales-wide. **Aim:** To describe user demographics of Wales-wide digital self-management education for people with type 2 diabetes. **Method:** Users self-refer via an online portal promoted through primary care, dietetic services, social media and local press. Users join the existing 50 000 users from the UK and Ireland completing demographic, clinical, behavioural and psychological self-reported measures, and after eight weeks are sent an online feedback form. **Results:** Since June 2021, 2348 people have requested access, with 1435 (61%) activating their account (correct as of 08.08.2024). **Demographics:** 53% female. 10% 18–40 years of age, 16% 41–50 years, 31% 51–60 years, 30% 61–70 years, 13% 71 or over. 91% White British. Users represent all bands of Wales Index of Multiple Deprivation, 44% living in areas classified "most deprived". Understanding of type 2 diabetes (self-reported) in a small sub-group increased after 8-weeks from 4.8/10 to 8.0/10 (n=50) and confidence to self-manage increased from 4.5/10 to 7.5/10 (n=50). Users providing at least one follow-up saw HbA_{1c} reduce on average from 68 to 61 mmol/mol (n=40), and weight from 96 kg to 93 kg (n=56). After 8 weeks (n=120), 62% of users reported increased physical activity, 74% reported making wiser food choices and 43% felt less stressed. 91% agreed MyDESMOND was easy to use. 89% found MyDESMOND valuable and 86% engaging. **Conclusion:** Wales-wide implementation of MyDESMOND for people with type 2 diabetes highlights acceptability and effectiveness. ■

P9

Primary care teams' perception of the quality of service provided by the secondary care, multidisciplinary diabetes foot team

Submitting author: Laura Harris

Objectives: NICE guideline (NG19) recommends referral to secondary care, multidisciplinary diabetes foot team (MDFT) within 24 hours of review. We obtained primary care, health professionals (HCPs) perceptions of the quality of care provided by MDFT. **Methods:** An online questionnaire was devised to assess the quality of service provided by MDFT. HCPs were asked to comment on improvements needed and any unmet educational needs. **Results:** Feedback was received (n=24) from general practitioners, practice managers, podiatrists and practice nurses. 12.5% referred patients to MDFT several times a week. Experience was rated mostly positively, with "excellent" and "good" selected by

29.2% and 37.5%, respectively. Suggestions for improving the service included an advice hotline, clear clinic review summaries, and MDFT input about glycaemic control management. Up to date guidelines were requested for wound care, antibiotics and the referral pathway. The feedback highlighted that the referral form was outdated and the need for clarification of referral criteria to various teams (MDFT, vascular, orthopaedic and tissue viability teams). Based on feedback, we designed a flowchart (incorporated into the referral form) with the referral criteria to various teams and the criteria for urgent referral and hospital admission. We also developed posters for patients and HCPs, highlighting the need to seek early attention and manage the diabetes foot ulceration and its risk factors proactively. **Conclusion:** We highlight the importance of acting on feedback to improve the quality of service and respond to the needs of patients and HCPs and meet the standard set by NICE.

P10

Diabetes cardio-renal clinic in Salford

Submitting author: *Sarah Kierans*

Diabetes cardio-renal disease is inextricably linked and often presents as a complex triad. Multi-factorial risk management reduces disease progression, morbidity, and mortality. Care closer to home is preferred by many and a cornerstone to national and local strategies. A personalised, holistic approach to care is highly valued. **Aims:** Provide holistic, specialist person-centred care to patients with T2DM at high risk of or established cardio-renal disease, through empowerment, engagement, and early proactive care to manage modifiable risk factors. Upskill practice teams, leaving a legacy enabling those with highly complex needs to be managed in Primary care. **Method:** Advanced Nurse Practitioners reviewed 200 patients within 14 GP practices in Salford, an area of high socio-economic deprivation. Motivational interviewing and individualised approaches engaged patients; many had previously opted out of care. Lifestyle coaching and tailored education promoted self-management. Addressing 3 disease areas in the same clinic streamlined their care. Integrated working with secondary care provided timely access to expert advice, reducing multiple referrals. Education and mentoring for HCPs increased skills, challenged consultation and coaching styles. **Results: Emerging outcomes:** HbA_{1c} reduced by 32.7 mmol/mol. BP reduced by 24/15.5 mmHg. Lipids improved in 98% of patients. 50% normalised albumin excretion. DCR clinic average DNA 17%, CDT clinic average DNA 24% for 2023/24. **Conclusions:** We empowered people to master behaviour changes, build confidence in self-care and achieve their personal goals through tailored care planning and evidence-based treatments. This transferable, holistic approach, delivered in primary care improved clinical outcomes and was preferred by patients.

P11

Diabetes care improvement project

Submitting author: *Shital Joshi*

Background: Review of diabetes 8 care processes and 3 treatment standards. Following the pandemic we identified that our patients were disengaged from their diabetes management. During this period these patients were at highest risk, therefore reducing their cardiovascular risk associated with diabetes became our priority. **Aim/Objective:** To improve diabetes care and processes at Ashburton Park Medical Practice and encourage patients to be involved and invested in their diabetes management. **Methods:** Regular review of Eclipse data to identify patients with missing processes and above-target HbA_{1c}, blood pressure and cholesterol. We engaged in regular joint clinics with a diabetes specialist. We upskilled staff with training from the diabetes specialist nurse to initiate injectables and train patients on insulin initiation. CGM patients invited to share their readings with the practice to ensure we can review records regularly and advise them on insulin management. Enrolled and successfully completed the SWL Diabetes improvement project. **Results out of 46 Croydon Practices: December 2022:** 7th for 8 care Processes and 13th for 3 treatment standards. **August 2023:** 20th for 8 care processes (mid-year on target) and 2nd for 3 treatment standards. **August 2024:** 21st for 8 care processes (mid-year on target) and 5th for 3 treatment standards. **Conclusion:** We have improved our 3 treatment standards (outcomes in HbA_{1c}, BP and cholesterol) for our patients and as a result of the project we are delivering group consultations to improve patient engagement.

P12

Improving blood pressure control in diabetic patients using patient education and intensive home blood pressure monitoring: A quality improvement project in primary care

Submitting author: *Zobia Nawaz*

Aims: Diabetes disease progression increases risk of cardiovascular disease. A risk reduction strategy will require tight consistent glycaemic control and maintaining blood pressure targets over a long period to ensure their is no disease progression and mitigation risk of developing diabetes chronic renal disease. **Objectives:** A reliance on annual or biannual blood pressure measurements was found to be inadequate to achieving and maintaining BP targets throughout the year. A review of literature showed paucity of an evidence base on blood pressure screening intervals. **Methods:** A quality improvement project using the NHS improvement model was instituted. **Results:** Process mapping was followed by a first PDSA cycle showed less than 50% of patients were able to achieve diabetes blood pressure targets. Following this, patients whose BP was not achieving targets were allocated to a dedicated nurse and were put on more intensive screening intervals. We found that more intensive home blood pressure monitoring intervals were productive in enabling closer and more frequent scrutiny and reduced therapeutic inertia, enabling timely and more accurate uptitration of blood pressure medication, ensuring rapid correction of blood pressure excursions out of target. We also educated patients on what targets need to be achieved; this ensured patients were able to send back blood pressures quickly. **Conclusions:** More frequent monitoring of blood pressure, patient education and use of home blood pressure monitoring enabled us to achieve targets we advocate differential monitoring schedules should be in cooperated in the guidelines

P13

Addressing health inequalities in partnership: Community outreach/early detection case study: A Welsh pilot project

Submitting author: *Neerja Jain*

Background: Wales has the highest prevalence of T2D and lower completion rates of 8 diabetes essential care processes; South Asians are 2–4× more likely to have diabetes than White populations; T2D is the leading cause of kidney failure. **Aims/Objectives:** As inequalities have widened since the pandemic, new approaches are needed to overcome barriers to effective monitoring and detection. The aim is to raise awareness of uACR testing and CKD within South Asian communities and lower SES communities in Cardiff & Newport, ultimately to improve rates of kidney screening with those PLWD. **Methods:** Funded by the Diabetes Network, our novel approach is to deploy volunteers, called Peer Educators (PEs), with lived experience and affiliation to the target communities to educate and empower PLWD to get their uACR tests. PEs are empathetic volunteers who are the "right messengers": they have a shared culture, faith, and language. They are trusted and are passionate. They have received accredited training leading to a HNC level 4; i.e. 1st-year University undergraduate; hence we are building capacity at grassroots level. **Results:** The project has just started following training of the 7 PEs. So far, 10 events have been attended including mosques, 961 people reached largely unaware of and the importance of a uACR. Quotes include: *"I had no idea about CKD. Will ensure I get it [uACR] done."* **Conclusions:** We are optimistic that Peer Educators, a grassroots and culturally sensitive intervention, will be effective in providing education on uACR and empower those most experiencing health inequalities.

P14

The impact of cultural diet and dietary advice on type 2 diabetes remission in the Black Caribbean communities

Submitting author: *Kamille Patricia Radcliffe Smith*

Background: Type 2 diabetes mellitus (T2DM) is a metabolic condition characterised by insulin resistance. Research shows that individuals of Black African–Caribbean origin are about three times more likely to develop this condition, at least ten years earlier, compared to individuals of white European descent. Genetics plays a role in the disease's development, but broader health and social factors like nutritional intake and advice influence disparities. Therefore, a holistic approach with culturally sensitive nutritional guidance is essential in aiding the remission of T2DM within Black African and Caribbean communities. **Aims/Objectives:** Research indicates that a low-calorie diet can restore normal glucose and insulin metabolism in many people with newly diagnosed Type 2 diabetes. The aim of this

research is to understand if nutrition advice from health care workers can impact diabetes remission in people of African–Caribbean descent. **Methods:** A systematic literature review was conducted on articles published between 2019 and 2024. **Results:** The literature review suggest that individuals can achieve success with diabetes remission if they lose at least 15% of their starting weight. However, the evidence further suggests that advice around medication, exercise, diet and family support is instrumental in achieving remission. **Conclusions:** The evidence suggests that support and advice from healthcare professionals who understand the individual's cultural background and food choices has a better impact on weight loss and, therefore, remission of diabetes. ■

P15

A retrospective study of the relationship between glycaemic control and blood pressure with patients with diabetes

Submitting author: *Jake Rosen*

Background, aims and objectives: Guidelines both national and international do not indicate optimal glycaemic or blood pressure screening intervals for timely detection of deterioration because of a lack of an evidence base. The QOF GMS contract framework resources only annual reviews irrespective of glycaemic or BP control. The lack of an evidence base may be leaving many patients with poor glycaemic control and blood pressure undetected for a long period of time. **Methodology:** We undertook a retrospective review of 600 patient records across 4 primary care sites to examine the temporal relationship between glycaemic control and blood pressure and analysed the blood pressure readings as a percentage deviation from previous readings. **Results:** Worsening glycaemic control showed a positive correlation with deterioration of blood pressure indices rising at 6% incrementally over a three-year period. Clearly annual or biannual reviews were inadequate in timely detection of deterioration, and these lagged behind clinical reviews enabling therapeutic inertia. **Conclusion:** Our study showed inadequately lengthy screening intervals as resourced under the GMS contract would enable deterioration to go undetected for significant periods of time. Prior to the advent of home blood pressure monitoring, reliance on annual office readings was also inadequate. An awareness of glycaemic deterioration should enable clinicians to intensify mitigation of all cardiovascular risk factors to prevent worsening renovascular hypertension and intensification of glycaemic monitoring to prevent progression of renovascular disease. Further studies are needed to determine optimal glycaemic and BP monitoring intervals. ■

P16

Tirzepatide treatment in SURPASS-2 through -5 participants 65 years old with BMI <30 kg/m²: A *post hoc* analysis

Submitting author: *Rumbi Karen Manamike*

Aims: In phase 3 SURPASS-1–5 studies, tirzepatide (TZP)-treatment showed improved glycaemic control and body weight (BW) in adults with type 2 diabetes (T2D) (mean age range 53–64 years, HbA_{1c} 62.3–70.4 mmol/mol, BMI 32–35 kg/m² at baseline). Glycaemia and BW endpoints for adults ≥65 years without obesity treated with TZP in SURPASS-2–5 were investigated in this *post-hoc* analysis. **Methods:** Primary and key secondary endpoints were assessed at week-40 (SURPASS-2, -5) or week-52 (SURPASS-3, -4) in participants randomised to TZP 5, 10, or 15 mg. Subgroup analyses 65 years old, BMI 30 kg/m²) were done on the modified intent-to-treat population and included data while on treatment with data after rescue medication censored (efficacy estimand). **Results:** Subgroups had baseline mean age of 68.8–71.6 years, BW 71.0–76.6 kg, BMI 26.7–27.9 kg/m², 35.0–72.2% were male, 52.6–90.3% were White. For all TZP doses, mean HbA_{1c} reduction and mean subgroup BW reductions from baseline ranged from 18.8–22.6 mmol/mol, and 5.1–8.6 kg (6.9–11.5%). The most frequent adverse events (AEs) for the subgroup were gastrointestinal-related. In TZP-treated participants, the aggregated rates per year for hypoglycaemic events with blood glucose <3.0 mmol/L or severe hypoglycaemia were highest when used with insulin or sulphonylurea and ranged from 0–0.70/year. **Conclusion:** In this *post hoc* analysis, TZP-treated participants ≥65 years old with BMI <30 kg/m² experienced glycaemic and BW reductions. The most frequent AEs were GI in nature, consistent with the overall study population. The risk of hypoglycaemia was not observed to be worsened. ■

P17

Tirzepatide achieves significant weight loss without adverse effects on muscle composition (SURPASS-3 MRI)

Submitting author: *James Shipton*

Aims: This exploratory analysis examined the effect of tirzepatide on muscle composition (muscle volume and muscle fat) and compared observed changes with tirzepatide (5/10/15 mg) or insulin degludec (IDeg) to changes predicted from the longitudinal UK Biobank (UKB) imaging study. **Methods:** Thigh muscle fat infiltration (MFI), fat-free muscle volume (FFMV), and sex-, height-, and weight-invariant FFMV *z*-scores were quantified from MRI using AMRA Researcher. Predicted changes for MFI, FFMV, and FFMV *z*-score in the SURPASS-3 MRI substudy (*N*=296) were calculated using data from UKB (*N*=2942). Paired *t*-tests were used to compare observed with predicted change. **Results:** MFI was significantly reduced across TZP arms (mean [SD] difference –0.23 [0.77] / –0.42 [0.61] / –0.44 [0.81] percentage points [pp] for TZP 5/10/15 mg, respectively), but not for IDeg (+0.03 [0.40] pp); Changes were greater than predicted by UKB. FFMV was significantly reduced for TZP 5/10/15 mg (–0.44 [0.57] / –0.71 [0.60] / –0.76 [0.74] litres), but not for IDeg (+0.16 [0.54] litres); changes were overall similar to those predicted by UKB. FFMV *z*-score was significantly reduced for TZP 5/10/15 mg (–0.12 [0.33] / –0.23 [0.48] / –0.30 [0.47] SD, but not for IDeg (+0.06 [0.43] SD); changes were greater than predicted by UKB, but the difference was only significant for TZP 15 mg (p=0.004). **Conclusion:** In SURPASS-3 MRI, tirzepatide significantly improved body weight and fat levels without apparent adverse impact on muscle composition, with greater than predicted reduction in MFI and as-predicted reduction in FFMV versus changes described by data from the longitudinal UKB imaging study. ■

P18

Scaling up dietary approaches to type 2 diabetes remission in primary care

Submitting author: *Helen Gowers*

Aims: Diabetes is the leading cause of blindness and amputation, with high blood glucose levels reducing life expectancy by 100 days each year. Yet, despite increasing medications, one third of patients fail to control their diabetes within recommended targets. The Lifestyle Club (TLC) is an award winning, diet and lifestyle programme based on the low carbohydrate approach pioneered by Dr David Unwin. His practice reports 51% remission rate and savings of £373 000 on diabetes medication since 2018. TLC health coaches empower participants to make sustainable diet and lifestyle changes, often reversing type 2 diabetes or prediabetes into remission. **Methods:** Following a successful 2021 pilot, TLC has now delivered courses to over 1400 participants. 53 surgeries across England commission TLC and signpost patients in consultations and via text messages. Over 80% of patients who attend an initial information session, enrol on the 8-week course. 88% complete at least four 90-minute sessions delivered over video conferencing technology. **Results:** Pilot data shows after 6 months, mean weight loss –6.5 kg (95% CI –7.1 to –5.9), waist reduction –10.5 cm (95% CI –11 to –10) and improved glycaemic control of HbA_{1c} –10.2 mmol/mol (95% CI –10.8 to –9.6) (–12.2 mmol/mol in type 2 only) despite reducing or stopping diabetes medication. **Summary:** TLC is a cheap, highly effective solution to the growing problem of type 2 diabetes. Initial results are very promising and hint at large cost savings from deprescribing at scale. A University of Surrey research study recruiting 100 participants is underway to provide robust data to examine this approach further. ■

P19

An audit of exocrine pancreatic enzyme insufficiency (PEI) in patients with diabetes type 2

Submitting author: *Ajay Mahajan*

Reasons for audit: **1.** To identify patient who will need stool Faecal Elastase 1 (FE-1) test to help diagnose Pancreatic Exocrine Insufficiency (PEI). **Aims and objective:** **2.** Initiation of treatment with Pancreatic Exocrine replacement therapy (PERT) for patients found to have FE-1 levels of <200 µg/g. **3.** Regular monitoring of patients who are found to have FE-1 levels of 200 µg/g to 300 µg/g. **Background:** During diabetes review, we do not generally ask patients whether they have any gastrointestinal symptoms. If a patient volunteers symptoms, such as loose bowel movements, abdominal discomfort, abdominal gurgling and flatulence, for example, we may consider diabetes-related causes. These causes may include drug-induced gastrointestinal changes that may be caused by medications such as metformin or complication of diabetes such as gastroparesis. Unfortunately, Pancreatic Enzyme Insufficiency (PEI) likely may not be considered. **Methodology:** A clinical

report was run on SystmOne to identify all patients with the diagnosis Diabetes Mellitus type 2 (DM-2). All the identified patients in the above search were contacted via telephone to complete the questionnaire. Based on the outcome of the questionnaire patients were screened who needs to have stool Faecal Elastase 1 (FE-1) test. **Results:** Patients with DM-2: 678. Patients with DM-2 responded to the request for FE-1 stool test: 231. Patients with stool FE-1 between 200–300 µg/g: 38. Patients with stool FE-1 <200 µg/g (Positive for PEI): 42. **Conclusions:** 42 patients were seen face to face in the GP clinic and counselled about the diagnosis of PEI and PERT and given written information. ■

P20

Identifying pre-type 1 diabetes in the pre-clinical phase

Submitting author: *Sreelakshmi Sivakumar*

With increasing incidence of type 1 diabetes (2–3%/year) and the predominant use of HbA_{1c} as a screening test for type 2 diabetes, more people with pre-clinical stage of type 1 diabetes are likely to be identified. We present the case of a 21-year-old woman who presented to the GP in December 2022 with tiredness and high random capillary blood glucose on home test. Her initial HbA_{1c} was 44 mmol/mol (Non-diabetic hyperglycaemia, NHD 42–47 mmol/mol). Her HbA_{1c} gradually went up from 44 to 54 over 1 year. In the subsequent 3 months it rose rapidly to 100 mmol/mol. Autoantibodies were strongly positive, confirming a diagnosis of type 1 diabetes. The uncertainty that came with the pre-diagnostic stage made counselling her difficult. She reported this period being very confusing due to ongoing symptoms affecting daily life and general unawareness and uncertainty regarding the pre-type 1 diabetes phase and duration. HbA_{1c} is not recommended as a screening test for type 1 diabetes, rather fasting or random glucose. However, the common practice of using HbA_{1c} can lead to misdiagnosis as pre-type 1 diabetes is not as widely recognised as pre-type 2 diabetes (NDH). This could lead to delay in diagnosis and incorrect choice of management. However, a wider understanding of this phase could open more opportunities for future early immunotherapy and potentially delay in progression. ■

P21

Hypertension case-finding and treatment to target initiative as part of the NHS diabetes eye screening programme

Submitting author: *Suneeta Kochhar*

Background: Insulin resistance, obesity, chronic systemic inflammation, hypertension and dyslipidaemia are risk factors for both cardiovascular disease and diabetes. Cardiovascular disease and hypertension are common comorbidities in those living with type 2 diabetes. **Aims:** To offer patients attending their diabetes eye screening appointments an opportunistic blood pressure (BP) check to support case-finding and treatment to target. **Methods:** We created an innovative pathway such that patients attending their diabetes eye screening appointments were offered an opportunistic blood pressure check. This cohort is at an increased risk of cardiovascular disease, therefore an at risk population was targeted for case finding and treatment to target for hypertension. The pathway promoted patient choice, facilitated primary and secondary care collaboration, as well as utilisation of home BP readings. **Results:** From the 200 participants in the study, 91 had clinic BP readings above 140/90 (45.5%). 48 out of 91 patients agreed to undertake home BP monitoring (53.3%). Of those, 40 patients (83.3%) returned their results, with some patients requiring reminders. 33 patients had elevated home BP readings (16.5%), of these 13 patients had newly diagnosed hypertension and 20 patients required treatment to target of their hypertension. All 33 patients with elevated home BP readings were contacted to ensure that they had been followed up by their GP practice. Patient feedback was positive and patients valued reminders to return home BP monitoring diaries, there was also positive feedback of the communication back to GP surgeries. **Conclusions:** Our pathway aligns with the principles of personalised care including shared decision-making and supported self-management. Importantly, capacity to check BPs opportunistically was increased and supported case finding and treatment to target in hypertension. ■

P22

Shifting paradigms in diabetes management: Metformin's diminished role amid the rise of SGLT2 inhibitors and GLP-1 agonists

Submitting author: *Shawn Joseph*

Background: Metformin has been the foundation of type 2 diabetes treatment due to its efficacy, safety, and low cost. However, with the advent of newer agents, including sodium–glucose co-transporter 2 (SGLT2) inhibitors, glucagon-like peptide-1 (GLP-1) receptor agonists, and dual GIP/GLP-1 receptor agonists, the standard treatment paradigm is evolving. These drugs offer additional benefits, including cardiovascular protection, renal preservation, and weight loss, prompting a reassessment of metformin's role as the primary first-line therapy. **Aims and objectives:** This study aims to determine whether newer antidiabetic agents should replace metformin as first-line therapy in specific populations, based on emerging guidelines and clinical evidence. The secondary objective is to evaluate the impact of these agents on cardiovascular outcomes, renal function, and weight management compared to metformin. **Methods:** A five-year review of literature using PubMed, Cochrane, and major diabetes guidelines from organizations such as European Association for the Study of Diabetes (EASD) was conducted. Convenience sampling and focused discussion among four general practitioners (GPs) with special interest in diabetes were used to assess the evidence. **Results:** SGLT2 inhibitors and GLP-1 receptor agonists demonstrated superior cardiovascular and renal outcomes in patients with comorbid conditions when compared to metformin alone. GLP-1 agonists also showed better weight reduction, and dual GIP/GLP-1 receptor agonists delivered potent glycaemic control and weight loss beyond monotherapy. **Conclusion:** The evolving diabetes guidelines reflect a patient-centred approach where newer agents may take precedence as the first-line treatment. Newer pharmacotherapies provide enhanced benefits, challenging metformin's universal role. ■

P23

Educating patients on the risks of meat consumption and type 2 diabetes: A primary care approach

Submitting author: *Bharatkumar Modhwadia*

Background: Type 2 diabetes (T2D) continues to rise globally, driven by lifestyle and dietary factors. Evidence from meta-analyses suggests that high consumption of red and processed meat significantly increases the risk of T2D. Primary care settings are essential for early interventions, yet translating complex epidemiological findings into actionable patient education remains a challenge. Simple, effective communication tools are needed to support patients in making informed dietary decisions that reduce T2D risk. **Aims and objectives:** This project aims to develop and implement a patient education tool that simplifies the link between meat consumption and T2D risk. The objective is to use visual aids and actionable tips to help patients reduce their red and processed meat intake and adopt healthier dietary practices. Additionally, a digital tool will be linked through a QR code for ongoing patient engagement outside of the clinic. **Methods:** A systematic review of the literature was conducted to gather data on the relationship between red and processed meat consumption and T2D risk. Based on these findings, a visually engaging patient education tool was created, including infographics showing the increased diabetes risk associated with meat consumption and tips for reducing intake. A QR code linked to a digital resource with additional interactive features was included for extended patient engagement. The tool was piloted in a primary care setting, with feedback gathered from both patients and healthcare providers. **Results:** The education tool successfully simplified complex dietary risk factors, and patients reported increased awareness of their meat consumption's impact on their health. Preliminary data showed a moderate reduction in daily meat consumption among patients who utilized the tool. Healthcare providers reported that the tool enhanced their ability to discuss diet with patients in a clear and concise manner, and the QR code feature was particularly popular, leading to continued engagement post-visit. **Conclusions:** This patient education tool offers a practical, easy-to-understand method for communicating the risks of red and processed meat consumption in the development of T2D. By integrating digital tools for continued patient engagement, primary care providers can support sustained dietary changes. The success of this pilot suggests that such tools could be widely implemented in primary care settings to improve patient outcomes and reduce T2D incidence. Further studies are needed to evaluate long-term effectiveness. ■

P24

Designing a regional clinical service for people with early-onset type 2 diabetes

Submitting author: *Vicki Alabraba*

Aims: To improve care for people with early onset type 2 diabetes (EOT2D) through a targeted, collaborative

approach in Leicester, Leicestershire and Rutland (LLR). **Methods:** Utilising the best available literature alongside key stakeholders from both primary and secondary care we designed a regional service to match intervention-intensity to clinical need. To facilitate this, novel clinical risk criteria were developed, including Red, Amber and Green (RAG) categories. Additionally, we wanted to identify people at the highest risk of complications for "Red flag review". HbA_{1c} ≥86 mmol/mol (10.0%) was used to identify these people, due to it being a strong predictor of mortality and complications, and a good surrogate for poor access to care. Searches of primary care electronic medical records (EMRs) were conducted in November 2023 to understand feasibility of planned interventions and to adapt accordingly. New clinics were planned, one for people at the highest-clinical risk, another for women planning pregnancy. A healthcare professional training package was also developed to increase awareness of the unmet clinical needs of people with EOT2D and to upskill in provision of holistic care. **Results:** From searching EMRs, a total of 2772 adults (35.0% women) and 40 children with EOT2D were identified, with 299 (10.8%) people with HbA_{1c} ≥86 mmol/mol (10.0%) and 1188 (42.9%) people meeting Red criteria. These people were prioritised for clinic access. The service is now in early stages of implementation, this has now expanded to include a specialist nurse educator supporting practices with clustering of patients to identify and facilitate specialist intervention. **Conclusion:** In conclusion, we showcase a service specifically for people with EOT2D based on the literature, a broad range of stakeholder involvement and utilising a locally-sourced data-driven approach. ■

P25

Improving care for people living with diabetes and experiencing homelessness

Submitting author: *Juliette Palmer*

Background: The use of assertive outreach as a model of care delivery for people living with diabetes and experiencing homelessness has been beneficial in improving engagement, in the completion of annual reviews and the 8 key care processes. It has provided a much more flexible approach to care delivery when often clinical settings are governed by accessibility and time constraints. **Aims and objectives:** To improve completion of 8 key care processes. To act on the results to improve outcomes. To ensure people living with diabetes have access to Specialist care in the most appropriate setting. To facilitate multi service/holistic care. **Methods:** Growth of team to recognise and provide all aspects of holistic management. Staff education to undertake comprehensive diabetes annual reviews. Monthly searches identifying people living with diabetes so assertive outreach can start as early as possible. Weekly MDT meetings. Outreach visits. Support staff education. **Results:** **April 23–March 24:** 36 Patients, HbA_{1c} 89%, Smoking 97%, Cholesterol 83%, BMI 100%, eGFR 92%, BP 97%, ACR 78%, Foot check 83%, Retinal screening 31%. Type 1 diabetes 8 pts, Type 2 diabetes 25 pts, Type 3 diabetes 3 pts. Number on insulin 39%. **Conclusion:** Improved assertive approach and upskilling of staff has allowed early identification and intervention. Development of the service and identification of areas of improvement has lead to better engagement and outcomes for people living with diabetes and experiencing homelessness. ■

P26

A novel acute pharmacist-led type 2 diabetes clinic: A service evaluation

Submitting author: *Josh Miller*

Introduction: Type 2 diabetes is a chronic disease caused by increased blood sugars, that when left untreated may cause micro and macrovascular complications. There is evidence of the use in pharmacists managing long-term conditions, utilising prescribing to modify and titrate treatment as well as their in-depth knowledge of drugs to avoid adverse drug reactions. **Aims:** To review this new service in regards to patient parameters and patient satisfaction. **Methods:** Inclusion criteria included patients diagnosed with T2DM with a recent HbA_{1c} <120 mmol/mol and on oral agents. Patients were seen at baseline and at least 3 months after initial clinic appointment. Parameters checked included HbA_{1c}, BMI, weight, mean systolic blood pressure, QRisk3 score and total cholesterol. **Results:** 32 patients were included. There were reductions in all parameters measured at the return clinic, with statistical significance found in HbA_{1c} (81 vs 66, p<0.001), mean systolic blood pressure (135 vs 129, p<0.05), QRisk3 score (24 vs 18, p<0.05) and total cholesterol level (5.0 vs 4.0, p<0.001). All patients reported positive feelings with 100% satisfaction rates. Cost analysis demonstrated a potential 16% cost saving in salary remuneration alone. **Conclusion:** There has been a clear reduction in diabetic parameters, especially in regards to glycaemic control. It is well documented that stricter glycaemic control can reduce the development of diabetic complications which may subsequently reduce costly hospitalisations. Pharmacists are well-trained in the management of long-term conditions and patients are receptive to management from these clinicians. ■

P27

Empowering patients and clinicians: The role of education in managing chronic kidney disease and diabetes

Submitting author: *Alice Pennock, Aamina Beebi*

Chronic kidney disease (CKD) has become a public health emergency with 7.19 million people estimated to have CKD in 2023. Progression to end stage renal failure requiring renal replacement therapy is estimated to cost £690 425 000 per year for people living with type 2 diabetes. Social deprivation, ethnicity, multimorbidity and mental health are some factors that disproportionately affect the risk of developing CKD, disease progression, treatments and outcomes. The CaRe4Me Leeds project collaborated with the Community Diabetes Service and four Primary Care Networks to target the population at risk. **Objectives:** Use of population health strategies to reduce the CKD health equity gap. Improve health messaging and communications reaching people most at risk. Improving clinician confidence in diagnosis and management of CKD (with or without diabetes). Increasing uptake of SGLT2 inhibitors (SGLT2i). **Method:** Baseline knowledge questionnaires tailored provision of education and upskilling. Measures included West Yorkshire CKD guidance, clinical templates and searches to guide practice and decision making, educational sessions, advice and guidance, MDTs, Teams channel and resource bank. Health literacy and accessibility for a diverse patient group was prioritised. Measures included leaflets in 9 languages, easy-read SGLT2i leaflet, videos in 4 languages. Digital literacy was considered, and hard copies made available. **Summary:** PCNs are improving knowledge and confidence in CKD management including appropriate screening and optimisation. Greater resource is needed to support patient understanding of CKD and encourage self-management where possible. ■

P28

Empowering and educating patients to improve urine albumin creatinine ratio uptake in type 2 diabetes

Submitting author: *Amir Ghanghro*

Background: The earliest sign of chronic kidney disease with diabetes is microalbuminuria, which is assessed by measuring the Albumin Creatinine Ratio (ACR) in urine. Unfortunately, due to GMS contract changes coupled with the impact of the COVID pandemic, urine ACR testing suffered a significant decline. Project **Aims and Objective:** The objective of this project was as follows: Enhance the utilization of Urine ACR among patients with Diabetes Mellitus. Educate patients about chronic kidney disease and urine ACR testing. **Method/Implementation Process:** Nine GP practices participated in the project. Data was extracted from Vision GP records using the corresponding Read codes. A telephone consultation was arranged for patient with HCSW to recall and educated patient about importance of urine ACR testing and Chronic Kidney disease. In addition, other diabetes key process including HbA_{1c}, Cholesterol, and Renal function were arranged if patient were due for it. Additionally, a patient education leaflet on urine ACR from Diabetes UK was attached to the urine ACR forms. **Results:** At the start of project there were 1644 outstanding urine ACR for patient in last 15 months. The project intervention improve the uptake by 80%. 1321 patients had their Urine ACR tested. There 96% increase in update of urine ACR compared to urine ACR update during COVID. Similar improvement was seen with other key process like HbA_{1c}. **Conclusion:** In conclusion, the uptake of Urine ACR/PCR tests in primary care can be improved through the implementation of a structured and organized system that includes patient education provided by HCSWs. ■

P29

Prediabetes – a window of opportunity. A pilot study using continuous glucose monitoring in reducing prediabetes

Submitting author: *Jodie Bennett*

Prediabetes now affects approximately 1 in 9 adults in England (12%) equating to around 5.1 million adults. The prevalence continues to increase worldwide, now affecting those with a low risk of the developing type 2 diabetes. HbA_{1c} is a blood test that gives an average

blood glucose for the previous two to three months. The utilisation of a Continuous Glucose Monitor (CGM) is used mainly for those with type 1 diabetes and in some cases, type 2 diabetes. The "flash glucose monitor" allows for glucose level checking without the need for multiple finger punctures. The research undertaken utilised a CGM in patients that were diagnosed as "prediabetic". A group of 12 patients that had a HbA_{1c} within the previous three months within the range of 42 to 47 mmol/L were identified. Patients wore the CGM for a total of two weeks. The first week allowed an exploration of all food types including alcohol and the impact on their glucose levels. The aim of the second week introduced a controlled diet using the individual dataset and general education on nutrition and exercise. The study concluded with discussions around individual learning, group education, visual analysis of individual data and a planned repeat HbA_{1c} after three months. The study found that 84% of the participants on their repeat HbA_{1c} three months later, were no longer in the prediabetic range and the other 16% lowered their HbA_{1c}, the study also found that participants felt in control of their health and keen to further improve. ■

P30

The development of age and maturity appropriate resources for young people up to the age of 25, who are pregnant or planning pregnancy, and living with type 2 diabetes

Submitting author: Salma Mehar

There are 122 780 children and young adults under the age of 40 years with type 2 diabetes; of whom 1560 (around 1.3 per cent) are under the age of 19 years (NDA). Following the integration of youngtype2.org to 256 diabetes centres, DigiBete have identified a pressing need to support young people up to 25 living with type 2 diabetes who become pregnant to help prevent the risks of pre-eclampsia and hypoglycaemia whilst reducing the risks to the baby such as heart and Spinal defects abnormalities, Miscarriage, Stillbirth, Macrosomia, Birth injury, Hypoglycaemia, Jaundice, Obesity in later life. **Method:** A series of 6 co-design sessions with young adults and a multi-disciplinary team at Leeds Children's Hospital supported the development and filming of targeted educational resources covering Unplanned Pregnancy, Planning a safe pregnancy with diabetes and Pregnant with Diabetes. **Results:** A total of 3 new topics with 13 new video modules have now been co-produced and are freely available globally to any young person living with type 2 diabetes on youngtype2.org. These resources can also be accessed via DigiBete's type 2 clinic support App which is available across 256 clinics in the UK and Ireland. **Conclusions:** The benefits of these comprehensive open access pregnancy resources have been recognised and are now being embedded as part of standard care through the adoption of DigiBete and the youngtype2.org resources in Secondary Care Clinics. Although there is open access to these resources via the youngtype2.org website, DigiBete are now developing a primary care tool kit to support the adoption within GP services to maximise the investment in these resources and reach the widest possible cohort of young people in the UK. ■

P31

The association between sitting accumulation and markers of cardiometabolic health in individuals at high risk of type 2 diabetes

Submitting author: Roy Hamilton

Aim: To examine associations between accelerometer-assessed sitting time accumulation and cardiometabolic health in an ethnically diverse population at high risk of type 2 diabetes (T2DM). **Methods:** This analysis used baseline data from the PROPELS trial which recruited a multi-ethnic population with non-diabetic hyperglycaemia. Patterns of daily sitting time were captured using the activPAL accelerometer and calculated using three metrics: Gini (lower value = more interrupted sitting pattern), alpha (lower value = frequent long sitting bouts with few short bouts) and usual bout duration (UBD; the bout duration above which half of all sitting time is accumulated. Lower value = sitting time accumulated in shorter bouts). Multiple linear regression examined associations between the three sitting pattern metrics and cardiometabolic markers (HbA_{1c}, total cholesterol, high-density lipoprotein (HDL) cholesterol, low-density lipoprotein (LDL) cholesterol, triglycerides, blood pressure, waist circumference (WC) and body mass index (BMI)). **Results:** 1008 participants (mean age: 59.28 years (SD ±9.16); 49.9% female; 70.1% white European) were included. After adjustment for confounders, significant associations ($p<0.05$) were found between all three sitting pattern metrics (Gini index, alpha, and UBD) and HDL, WC, and BMI. Alpha and UBD were also significantly associated with triglycerides. No associations were observed for HbA_{1c} or other health markers. **Conclusion:** This study has showed that accumulating sitting time in frequently interrupted patterns was beneficially associated with some markers of cardiometabolic health, whilst accumulating sitting time in longer, less interrupted bouts was adversely associated with some markers of cardiometabolic health in participants at high risk of T2DM. ■

P32

Experience of diabetes stigma during established adulthood: Unpacking the source and impact of stigma in people living with type 1 and type 2 diabetes

Submitting author: Megan Peck

Background: Psychosocial research on diabetes-related stigma has focused primarily on either type 1 diabetes (T1D) or type 2 diabetes (T2D), despite similarities in experiences such as blame, shame, rejection and misunderstanding. There is limited research focused on middle-aged adulthood and the impact of diabetes stigma on self-management, along with emerging intersections with weight stigma. **Aim:** To explore the lived experience of diabetes and weight stigma in established adults (25–45) with both type 1 diabetes and types 2 diabetes, to better understand the nature of diabetes-related stigma. **Method:** A large-scale cross-sectional survey using participant-generated text design was conducted from February to April 2024. Data were analysed using inductive reflexive thematic analysis. **Result:** The study identified 91 respondents (79 T1D; 84 female; mean age 31.9; SD 4.7 years) in the established adulthood stage. Experiences are reflected in three themes: (1) Same yet different: people with diabetes (PWD) experience stigma in similar ways, as the stigma targets from those without diabetes. However, people with T2D face additional stigma marking from those with T1D. (2) Stigma consequences: The intersection of diabetes and weight stigma was observed to result in detrimental psychological and diabetes-management consequences. Some PWD responded by educating others and showing resilience. (3) Weight over health prioritisation: Healthcare professionals and social networks often prioritise weight concerns resulting in PWD feeling their diabetes health and management is overlooked. **Conclusions:** PWD share stigma experiences; comparing both highlights complexities in the intersectionality between diabetes and weight-related stigma that has important implications for psychological and diabetes health. ■

P33

Real world effectiveness of REWIND, a tailored type 2 diabetes remission lifestyle intervention in North West London

Submitting author: Salma Mehar

Aim: We aimed to assess the real-world effectiveness of REWIND, an intensive weight management programme in North West London delivered within routine primary care, on weight loss, glycaemic control, prescribed diabetes medications, and type 2 diabetes (T2D) remission. **Methods:** We performed an observational pre-post quasi-experimental analysis using electronic health records from the Discover-NOW platform. Patients who participated in REWIND with 12 months' follow-up time (n=1051), who received total diet replacement (TDR) (<800 kcal/day) or carbohydrate restriction (<130 g/day), were compared with a control group who were eligible but not referred to the programme (n=66,376). Inverse probability weighting was used to adjust for differences between participants and the control group. Estimated differences in outcomes were calculated as average treatment effects on the treated. **Results:** At 12 months, REWIND participants had significant reductions in weight (–2.1 kg [95% CI –2.7, –1.5]) and number of prescribed diabetes medications (–0.28 [–0.3, –0.2]), with no change in HbA_{1c}. REWIND also resulted in significantly more patients in diabetes remission (+4.2% [3.9, 4.5]), with TDR showing greater effectiveness in achieving T2D remission (+6.4% [6.1, 6.8]) compared to carbohydrate restriction (+2.9% [2.6, 3.2]). Effectiveness was greater for completers of REWIND with larger reductions in weight (–3.1 kg [–3.8, –2.4]), prescribed medications (–0.4 [–0.4, –0.4]), HbA_{1c} (–2.3 mmol/mol [–3.3, –1.4]), and remission (+8.1% [7.8, 8.5]). **Conclusion:** REWIND had statistically significant but modest impacts on the management of T2D that increased with completion of the programme. Diabetes remission was more likely in REWIND compared to usual care, with remission rates largely driven by the total diet replacement pathway. ■

P34

Correlation between effective management of type 1 diabetes and

patient knowledge, self-management practices, and socioeconomic status

Submitting author: Yahya Ur Rehman

Objective: The aim of this study was to critically analyze the relationship between effective management of type 1 diabetes with patient's knowledge, self-management practices and socioeconomic status. **Methodology:** An analytical and observational study was conducted on 100 diabetes patients at LUMHS Hospital, Jamshoro. We concluded this study to collect data on the patient's dietary intake, insulin dosage intake, and their opinion towards the disease. Study was also aimed to determine the effect of the patient's knowledge on the management of the disease which was based on a questionnaire while also factoring in common myths and wrong facts which may hinder the prevention, treatment, and management of the disease. Lastly, we assessed the relation between patient's blood sugar control with their financial status with the bases of whether they could afford the expenses associated with sugar control. **Result:** Subjects who possessed proper knowledge and awareness of the disease were found to be more capable of managing and preventing the disease, while patients who believed more in myths and generally lacked awareness tended to be affected more, with management and preventive measures hindered by their own beliefs and dietary intake. A statistically significant correlation was found between lower socioeconomic status and poor control of blood sugar, contributing to the costly treatments and drugs. **Conclusion:** Subjects with proper knowledge, awareness, and socioeconomic status were associated with low morbidity and mortality whereas, subjects with lack of awareness, lack of financial means of management of disease, and heavy sugar intake were associated with high morbidity and mortality. Therefore, an urgent need for spreading of awareness regarding healthy diet, nullifying myths as well as research into reducing the cost of insulin and other necessary drugs needed to control blood sugar and the disease is required to curb the burden of this disease on the population. ■

P35

Hypoglycaemia audit for a community rehabilitation hospital

Submitting author: Jesina Kirby

The article explains the findings of a clinical audit carried out at a community rehabilitation hospital to identify the incidence of hypoglycaemia of this specific cohort of people. Its aim was to assess the incidence and severity of hypoglycaemia experienced by inpatients with a known diagnosis of diabetes, review local hypoglycaemia protocols, as well as referral processes in order to establish where improvements could be made. **Key successes:** High number of patients offered real time flash monitoring. High number of staff referring to DSN for appropriately. Good awareness of hypoglycaemia guidelines amongst ward staff. Good target BG control, limited number of hypoglycaemia events in patients with insulin/medications that can cause hypoglycaemia. Reviews post hypoglycaemia was completed and medication reviewed in a timely manner. **Key concerns:** Low use of AGP reports/data from Libreview. Variability in how many times each day a BG is checked for a patient on insulin. Multiple different methods of referral to DSN, long paper forms which could result in delay in referral being reviewed. ■

P36

End diabetes stigma and discrimination

Submitting author: Michelle Turner

Aims: To raise awareness of stigma and discrimination PWD experience and the affect this has on them. Provide statistics on wide spread stigma felt by people. Story telling of a person with diabetes who feels blamed and ashamed for their condition. Statistics on how this affects people's ability to self care and their attendance at health appointments. Narrative on other conditions that also have stigma attached, depression, chronic fatigue, chronic pain and how these relate to diabetes. Signposting to sign the global campaign to end stigma and discrimination. Take home messages on how we can reduce this. ■

P37

Local audit of ACEi/ARB prescribing for diabetic nephropathy

Submitting author: Clara Chen

This clinical audit was undertaken to increase adherence to the clinical guidelines for treating diabetic nephropathy, as highlighted by the Quality and Outcomes Framework (QOF) guidance for 2023/24. Specifically, focus was on evaluating and improving the outcome of indicator DM006: "The percentage of patients with diabetes, on the register, with a diagnosis of nephropathy (clinical proteinuria) or micro-albuminuria who are currently treated with an ACE-I (or ARBs)". The average for the UK and NHS England were approximately 93% in 2023, with the goal of >97%. This was an indicator that the local practice were underperforming on, with 52 out of 71 patients treated, giving 73.2%. In order to evaluate the reasons for this and to improve adherence, this audit was conducted to identify causes and implement changes. All patients with diabetes as well as a diagnosis of nephropathy (clinical proteinuria) or micro-albuminuria on the GP records, up until the end of the financial QOF year, from 1st April 2023 to 1st April 2024, were included in the audit. This required either an albumin-creatine ratio (ACR) of >30 for proteinuria, or ACR >2.5 male or ACR >3.5 for female for microalbuminaemia. Following filtering of GP medical records, this yielded a total sample size of 71 patients for inclusion in the clinical audit (*N*=71). This clinical audit was effective in improving compliance to QOF indicator DM006, with changes implemented allowing a change from initial audit to re-audit of 73.2% (52.71) treated to 96% (53.55) treated. This was a beneficial change, prior to end of the QOF year 2023/24, which allowed closer compliance to the target of >97% and hence improving the quantitative markers of performance of the GP practice in line with national guidelines. Identification of reasons for remaining untreated was useful in learning how to continue improving compliance going forwards. For instance a large majority of those untreated were lacking a recent ACR and/or eGFR. Hence, many from this group were no longer indicated or even contra-indicated for starting on ACEi/ARBs treatment, significantly affecting the indicator performance. Of the minority where ACEi/ARBs were indicated, patients were booked in for appointments with clinical pharmacists for a medication review, where ACEi/ARBs were/will be started. Areas for improvement include the value of regular monitoring via renal function tests, including ACRs and eGFRs, both to diagnose new onset nephropathy in the diabetic cohort, and equally to identify patients where renal function had recovered and hence no longer indicated for treatment. This will ensure that the most up-to-date investigations are used to assess indication for treatment and appropriate medications are started as and when is required. Going forwards, DM006 is an important indicator for which progress can be measured to assess continuing compliance, and sharing and learning from results can help benefit all patients at the practice with or vulnerable to diabetic nephropathy. This demonstrates a closed-loop clinical audit, which sought to improve patient care and outcomes through systematic review of care against QOF criteria outlined under indicator DM006. Change was implemented, including identification of reasons for non-compliance, request repeat investigations for renal function, and organisation of medication reviews to start indicated treatment. This highlighted areas such as more regular renal function monitoring for diabetic patients and the value of regular medication reviews to ensure appropriate treatment is provided. This in turn safeguards high quality of clinical care for patients and is part of an ongoing process that improves practice-based healthcare service in line with QOF guidelines in the primary care setting. ■

P38

Structured diabetes education: Virtual access was as effective as face-to-face access to a structured diabetes education programme (EMPOWER T2n) for people with type 2 diabetes in England

Submitting author: Donna Sutton

Structured diabetes education (SDE) is an evidence-based intervention for type 2 diabetes. The goal of this study was to compare SDE whether accessed face to face or virtually and determine if any differences existed in key endpoint attainment. This study helps address the absence of evaluations comparing these access modalities. **Research design and methods:** All data were sourced from English SDE participants themselves, and their General Practices and routinely collected for service evaluation between 2016 and 2023. All data were observational, and all participants accessed usual care. The primary endpoint was the increase in the percentage of patients with glycated haemoglobin (HbA_{1c}) at target 48 mmol/mol (6.5%) in virtually accessed SDE participants (V-SDE) versus face-to-face accessed SDE participants (F2F-SDE) on unchanged medicines for glycaemia. All data were non-normally distributed. Wilcoxon signed rank tests were used to analyse paired data, Mann-Whitney U-tests used for independent data and Chi-square tests used for observed versus expected data. **Results:** The 3493 SDE participants with pre and post HbA_{1c} data had a 10.2 mmol/mol (16.4%) reduction in HbA_{1c}, 389 days post their pre-SDE HbA_{1c} measure. In the 2334 (66.8%) participants who remained

on the same medicines regime, the mean reduction in HbA_{1c} was 9.1 mmol/mol (15.2%), (p<0.001). All 617 V-SDE participants had a mean reduction in HbA_{1c} of 13.6 mmol/mol (20.9%) vs. 9.5 mmol/mol (15.3%) in all 2876 F2F-SDE participants, (p<0.001). The V-SDE on unchanged medicines had superior reductions in HbA_{1c} to F2F-SDE (11.6 [n=404] vs. 8.6 mmol/mol [n=1930], p=0.019), respectively. The overall increase in medicines for glycaemia was +12.45% F2F-SDE versus +4.21% V-SDE, (p<0.001). The primary endpoint was the increase in the percentage of patients with HbA_{1c} to target in V-SDE versus F2F-SDE in patients with unchanged medicines for glycaemia. Previous database analyses found a 30% increase in F2F-SDE patients at target who were on the same medicines regime. A non-inferiority limit was set at 10% for V-SDE versus F2F-SDE and required 360 patients per arm. The primary endpoint was attained with 52.2% of V-SDEs at target (+33.7%), versus the F2F-SDE gain of 29.6%. VSDE was not superior to F2F-SDE (p=0.16). Blood pressure, total cholesterol and weight were improved (all endpoints, p<0.001) with no differences between the interventions. Medicines use was unrecorded for these health endpoints. **Conclusions:** V-SDE met its non-inferiority goal, which was set in a population in which fewer V-SDE patients required increased medicines for glycaemia. These endpoints were subject to the limitations of unlinked, and routinely collected observational data. ■

P39

Evaluation of psychological impact of food reintroduction, following a period of total diet replacement, on the LCD diabetes remission programme.

Submitting author: *Sukhvinder Bhakar*

Background: Xyla Health and Wellbeing (Xyla) has provided the Low Calorie Diet (LCD) diabetes remission pilot since 2020 and continues provision of the national roll-out under its new title Type 2 Diabetes Path to Remission (T2DR). The year-long programme begins with 12 weeks of total diet replacement (TDR), followed by 4 weeks of food re-introduction (FR), and finishes with the weight maintenance phase. **Objectives:** To understand the psychological implications of FR following the TDR phase of the LCD programme, and subsequently carry out improvements to the service to mitigate against this. **Methods:** Surveys were sent out via email to all service users (SU's) upon completion of the FR phase. Responses were evaluated. **Results:** The results showed that FR had an overall positive impact, with SU's enjoying eating meals with family again. 89% would recommend the programme to a friend or family member. 78% stated that the speed of FR was "about right", however 22% reported that the speed was "too fast". When asked: "How did you feel about weight change during FR?", 39% of SU's had a positive response, however, 44% of SU's expressed negative feelings such as being "extremely terrified" and "disappointed" (n=18). **Conclusions:** Re-introducing food can be psychologically challenging for some. Therefore, our updated provision allows for greater choice for SU's, including the option for a slower re-introduction, and many more recipes to support practically and help alleviate worries about weight re-gain. Future evaluation is needed to assess the efficacy of these changes. ■

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Low-calories diet patient session

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Aim: To encourage patients with type 2 diabetes eligible for the NHS low calorie diet to attend an engagement session learning how to manage their diabetes, with a patient choice of being referred to the low-calorie diet programme. ■

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Managing type 2 diabetes in the prison setting: What's occurring?

Submitting author: *Diana Buck*

Type 2 Diabetes: the rising problem, related to diabetes and care in 8 local prisons. The issues: can patients in prison manage their diabetes effectively? Restrictions on mealtimes, medication times, prison diet, access to exercise. Actions: What we can and have achieved. Conclusion: Improved standards of care. ■