

From the
desk of the
Chairman,
Dipesh Patel



This year, as we have moved out of the immediate crisis of the COVID-19 pandemic, ABCD has been eager to return to hosting our in-person events, providing a much needed opportunity to connect with colleagues once again. With the challenges brought by the pandemic still reverberating throughout our personal and professional lives, the chance to spend time together has not only given us an opportunity to share experiences and learning but, importantly, to be inspired and motivated. This has been reflected in the high attendance at all our events and the positive feedback we have received from delegates.

We have challenging times ahead; NHS backlogs, workforce strikes and even more winter pressures. However, we should reflect and look back at our individual and collective achievements with pride. Kindness and compassion will always guide our professional lives.

Our meeting in July 2022 to celebrate the centenary of the first administration of Insulin was a huge success. The event was recorded, and these recordings are available on our website exclusively for ABCD members. The feedback from delegates was incredibly positive, including comments such as "The selection of wide range of topics was awesome. Great lectures and great presentation" and "This really was an excellent meeting – and I don't say this lightly. The programme of lectures and the delivery of those talks knitted together perfectly, and the networking opportunities (post-COVID) were much appreciated. **Well done, Bob Ryder and well done, ABCD**".

Both the ABCD and DTN annual meetings returned to in-person events very successfully, and were an opportunity to raise a glass to celebrate the 25th Anniversary of ABCD. We also delivered a short virtual celebration on 13th June, which included archived footage from Professor Richard Greenwood, Dr Peter Winocour and Professor Ken Shaw.

As part of the ongoing evolution of ABCD and to reflect our growing importance and credibility, and our desire to attract new and

early career specialists, we will be undertaking a refresh of our brand and website. Look out for this in 2023.

We are continuing to plan events for the remainder of 2022 and into 2023, with more partnerships with other organisations to help bring you superior diabetes-related learning. Many of our courses are booking up fast and have long waiting lists, reflecting the value of these high-quality learning opportunities.

Research and audit are at the heart of what we do. We were delighted to have the latest data from the ABCD worldwide EndoBarrier registry presented at EASD in Stockholm to a packed audience. You can find out about all the audits being delivered. by ABCD directly through our website - <https://abcd.care/abcd-nationwide-audits>. We encourage all members to participate.

The Joint British Diabetes Societies for Inpatient Care Group (JBDS-IP) continue to work tirelessly to ensure that their valuable guidelines are always up to date. JBDS-IP is also embarking on an ambitious project of identifying the right number of staff to deliver an ideal, 'state of the art' inpatient diabetes service in the UK. They want to try and determine the optimal staffing levels for everyone involved in the team and details of what the team does, or should be doing. We look forward to the results of this ambitious survey. This year, Dr Omar Mustafa has been appointed as co-Chair of the JBDS-IP.

I am delighted to report that our membership continues to grow and thrive and we have a strong voice and presence with policy makers and stakeholders in the diabetes community. We are keen to encourage and support SpR membership and are in the process of developing an exciting new programme, Diabetes Update, specifically around the diabetes curriculum and exclusively for SpRs. This will take place **1st-3rd February 2023** so book your place quickly.

We continue to work with and provide input to other diabetes organisations, the NHS, the RCP, NICE, JBDS and many more. Our participation with these organisations helps us ensure that the voice and expertise of the specialist diabetologist is considered in new guidance and reports.

Our flagship journal, *The British Journal of Diabetes* continues to grow and mature. Make sure you follow our dedicated BJD twitter account (@BJDiabetes) to be the first to hear about publication of our ahead of print articles. Do consider sending us your original research,

audits and case studies to help support us.

The amazing collection of resources available via the ABCD Diabetes Technology Network (DTN) web pages continues to grow. Take some time to have a look at the educational resources on offer - from a virtual showroom demonstrating devices and their use, expert views on devices, educational resources for patients, a virtual academy and a series of videos on virtual consulting. Our thanks go to Professor Pratik Choudhary and the DTN team or the vision and enthusiasm required to maintain a thriving network.

We hope you continue to enjoy our fortnightly newsletters which help keep you abreast of new developments, news, events and other diabetes-related information. If you have news to share with the membership please drop us a line at info@abcd.care.

Recently, we welcomed Dr Moulinath Banerjee and Dr Koteswara Muralidhara as ABCD Professional Development Leads. The Professional Development Leads will support Keith Whitfield, current Faculty Lead, in the delivery, oversight and governance of our successful National Diabetes Consultant Mentorship and Consultant Development Programmes.

As chair of the ABCD committee I would like to take this opportunity to thank all the corporate sponsors of both ABCD and DTN, without whom none of these programmes and supporting activities would be possible. Sponsors include AstraZeneca, Boehringer Ingelheim & Eli Lilly & Co Alliance, Lilly, Novo Nordisk Ltd, Sanofi, Abbott Laboratories Ltd, Dexcom, GlucoRx Limited, Insulet International Ltd, Medtronic Ltd, Medtrum Ltd, Air Liquide Healthcare Ltd, CamDiab, and Roche Diabetes Care.

I complete my term as chair of the organisation in 2023. We have held an election and I am thrilled to report Professor Ketan Dhatariya has been successfully elected to lead our Association for the next 3 years, I am in no doubt he will do a fantastic job. Exciting times! I am wholeheartedly grateful to the ABCD executive and committee colleagues for their unwavering support during my term.

As this year draws to a close, I hope you have the opportunity to spend some well-deserved time with friends and family and move into 2023 with a renewed sense of gratitude for the opportunities to connect in person again.

Dipesh Patel, ABCD Chair

From the desk of the News Editor, Umesh Dashora

My recollections from the ABCD meeting 08.09.2022 (what I thought was either important or new for me)

I enjoyed the recent ABCD meeting and learned a lot. Following are the bullet points which I found significant or important, and easy enough for me to grasp to share with readers. I have added any relevant papers that I could find.

The year in diabetes (Professor Steve Bain)

- Looking at all the available evidence, on balance there is no convincing evidence that people with diabetes are at increased risk of SARS-CoV-2 infection.
- The DARE-19 trial result was negative. There was no benefit in hospitalised COVID patients treated with SGLT-2 inhibitors but dapagliflozin was well tolerated, with fewer adverse events than placebo.

DARE-19: Dapagliflozin in High-Risk Patients Hospitalized With COVID-19 - American College of Cardiology (acc.org)

- On balance, metformin does not improve outcomes in patients with COVID-19.
- Icodec U700 is a new once-weekly insulin at a strength of 700 units/mL. Here is one of the clinical trials on it.

Switching to Once-Weekly Insulin Icodec Versus Once-Daily Insulin Glargine U100 in Type 2 Diabetes Inadequately Controlled on Daily Basal Insulin: A Phase 2 Randomized Controlled Trial - PubMed (nih.gov)

- The EMPEROR-Preserved Trial was designed to see the effect of empagliflozin in patients with heart failure with preserved ejection fraction. Hospitalisation was reduced (21% reduction in composite end point of cardiovascular death or hospitalisation for heart failure). The benefit was seen in people with and without diabetes.

Anker SD, Butler J, Filippatos G, et al. Empagliflozin in heart failure with a preserved ejection fraction. *N Engl J Med* 2021;385(16):1451-61. <https://doi.org/10.1056/NEJMoa2107038>

- The DELIVER trial was designed to assess the effect of dapagliflozin in obese people with heart failure with preserved ejection fraction. Body mass index (BMI) of participants ranged from 15.2 to 50 kg/m². The primary outcome of worsening heart failure or CV death was reduced by 11%-28% depending upon the grade of obesity but benefit was seen in all BMI groups.
- The new NICE guidelines 28 on chronic kidney disease recommend considering or offering SGLT-2 inhibitors in addition to

ACE/ARB if urine albumin to creatinine ratio (ACR) is >3 mg /mmol or >30 mg/mmol within the marketing authorisation of the individual agents.

Recommendations | Type 2 diabetes in adults: management | Guidance | NICE

These medications may be useful in type 1 diabetes (T1DM) also but are out of licence at the moment.

- Semaglutide 2.4 mg SC once-weekly results in weight loss of 10% to 15%. NICE has recommended that semaglutide can be offered as an option for weight management along with diet and exercise provided there is one weight-related comorbidity and the BMI is at least 35 kg/m²
- Tirzepatide is a dual GIP/GLP agonist. It is more GIP than GLP agonist. It causes less nausea but weight reduction (vs 1 mg semaglutide) is similar or better. NICE is preparing its appraisal on this drug.

NICE recommends new drug for people living with obesity | News | News | NICE

Project information | Tirzepatide for treating type 2 diabetes [ID3938] | Guidance | NICE

In the SURMOUNT-1 trial on people without diabetes, tirzepatide achieved up to 21% weight loss.

Tirzepatide Once Weekly for the Treatment of Obesity - PubMed (nih.gov) Jastreboff AM, Aronne LJ, Ahmad NN et al. <https://doi.org/10.1056/NEJMoa2206038>

Screening for type 1 DM (Dr Lauren Quinn)

In type 1 diabetes antibodies develop in the first two years of life. 90% of people with T1DM are antibody-positive. Three in 1,000 children will have subclinical type 1 diabetes. Stage 1 to 3 is a new classification of type 1 diabetes.

Staging Presymptomatic Type 1 Diabetes: A Scientific Statement of JDRF, the Endocrine Society, and the American Diabetes Association | Diabetes Care | American Diabetes Association (diabetesjournals.org) Insel RA, Dunne JL, Atkinson MM, et al. <https://doi.org/10.2337/dc15-1419>

- The risk of developing diabetes increases from no antibody (0% risk) to the presence of one antibody (15% risk) to the presence of multiple antibodies (60% risk)
- Genetic risk, including scoring, should be considered when predicting the chance of developing diabetes
- Diabetic ketoacidosis (DKA) has 0.3% mortality. DKA reduces from 20 or 30% to 5% with a screening programme for T1DM. The times to screen the child are at 2 and 6 years.
- Early identification may help as an immunoprevention trial was positive with teplizumab.

Treatment of type 1 diabetes with teplizumab: clinical and

immunological follow-up after 7 years from diagnosis - PubMed (nih.gov) Perdigoto AL, Preston-Hurlburt P, Clark P, et al. <https://doi.org/10.1007/s00125-018-4786-9>

FDA Advisory Committee Votes 10-7 To Recommend Approval of Teplizumab For Delay Of Type 1 Diabetes (beyond-type1.org)

Compassion without burnout (Dr Stefan Gleeson)

- Proportionate empathy is good enough
- Do not always try to be a perfectionist
- Eye contact, smile, tone, touch, pause, acknowledge, personalise, praise, encourage when talking or communicating
- Half a billion pounds are lost each year due to absence from work. 30% of these absences are due to stress
- One in 8 health professionals during the COVID pandemic thought of suicide
- "Where am I on the stress curve?" is a good test to assess yourself. Initially stress increases productivity but after a point the curve crashes down
- An energy and emotions graph also helps (best performance is when high in both)
- Coping strategies are different for different people
- Resilience is useful but needs training to develop
- Some useful tips to maintain morale: Ask: How are you? Share vulnerability Say thanks when appropriate

Pregnancy and hybrid close loop workshop (Dr Anna Brackenridge and Dr Kate Hunt)

Cam APS

- Is licensed in pregnancy
- More time in range (TIR), especially at night, would be helpful
- If blood glucose (BG) is high and remaining high then come off pump
- Boost or easeoff functions in some pumps help to increase or reduce insulin delivery
- Once the pump is set up it is easy for health professionals to monitor the woman
- Best algorithm is Cam APS according to some participants
- DANA pump is a bit fiddly according to some participants

Medtronic 780

- Auto correction may not be enough at night
- Pre-bolus should not be over 20 minutes
- System may underbolus sometimes

Control-IQ

- Does basal modulation and correction
- Sleep mode reduces upper target

- Person has to download the data
- Don't use if over 100 units at night are needed

Sex differences in diabetes and heart disease (Dr Rita Kalyani)

- The cardiovascular risk in women with diabetes becomes the same as that for men but with a 10-year lag
- Cardiovascular mortality relative risk is higher in women with diabetes compared to men
- Diabetes is a coronary heart disease (CHD) risk equivalent, especially in women
- Fatal CHD rate is same in women and men
- Women with diabetes have greater risk for myocardial infarction (MI) than men. The differences may be because of uptake of medicines

Unique cardiovascular risk factors in women | Heart (bmj.com) Young L, Cho L. <http://dx.doi.org/10.1136/heartjnl-2018-314268>

Hyperglycaemia in hospital (Prof Guillermo Umpierrez)

Management of diabetes and hyperglycaemia in the hospital. The Lancet Diabetes & Endocrinology. [https://doi.org/10.1016/S2213-8587\(20\)30381-8](https://doi.org/10.1016/S2213-8587(20)30381-8)

- A target capillary blood glucose of 7.8 to 10 mmol/mol is reasonable for patients in hospital
- The RABBIT 2 trial compared basal-bolus insulin therapy with subcutaneous sliding scale regular insulin in the US and showed better control in non-intensive care unit patients without any increase in complications (RABBIT-2-Trial-07.pdf (diabetesed.net))
- All types of insulin used in the basal bolus regimen were comparable, but NPH caused more hypos
- No real difference in control of glucose levels with any type of insulin
- U300 may have fewer hypos
- 0.25 units of basal insulin per kg is a good option for hyperglycaemia control in hospitalised patients
- If BG is over 10 persistently then it may be better to use intravenous insulin
- Basal insulin can be offered at discharge
- Only start insulin at discharge if glycosylated haemoglobin (HbA1c) is above 8%. Basal bolus regimen may be needed for those patients who have HbA1c above 9%

Continuous glucose monitoring system (CGMS) in hospital:

- CGM may pick up hypoglycaemic

episodes which would have otherwise been missed

- Dexcom G4 sensor with telemetry is an option
- GLP1 agonists may be used more often for hospitalised patients

JBDS News (Ketan Dhatariya)

- ABCD, DISN group and Diabetes UK interviewed and selected Dr Omar Mustafa of King's College Hospital as a co-chair for JBDS
- JBDS presented six sessions at DPC on various aspects of inpatient care
- JBDS is embarking on a questionnaire survey of ABCD members to ascertain the right number of health professionals required to deliver safe inpatient care for people with diabetes
- JBDS renal guidelines are now out for colleagues

JBDS_11_Management_of_adults_with_diabetes_on_dialysis_Summary_of_recommendations_September_2022.pdf (abcd.care)

Results of the Rowan Hillson inpatients Safety Award 2022

'The Rowan Hillson Inpatient Safety Award – The best interventions: Redesigning, rebuilding and maintaining safe inpatient diabetes care during COVID.' This JBDS – IP award for 2022 attracted many innovative entries from all over the country. The project was led by Umesh Dashora and Erwin Castro.

- The winner was the DEKODE team from University Hospitals Birmingham NHS Foundation Trust led by Dr Punith Kempgowda for their innovative quality improvement project across hospitals during COVID to improve diabetes-related ketoacidosis management and study diabetic ketoacidosis in people with COVID. Adherence to national guidance improved in some hospitals, with falls in hypoglycaemia, and overall significant improvement in awareness about DKA amongst junior doctors.
- The King's College Hospital NHS Foundation Trust team led by Adrian Li and colleagues received the highly commended award for their innovative project of remote blood glucose (BG) monitoring across healthcare boundaries, which improved diabetes control and tackled health inequalities.

The winners were applauded and received their certificate during the national ABCD meeting.

The title for next year's award was agreed at the recent JBDS meeting as 'Best innovation to improve patient safety when discharging from hospital'. The final date for entries will be 28th February, 2023 and the winner will be announced in March 2023. Presentation of the Rowan Hillson Safety Award will be at the ABCD Spring meeting.

Remote DAFNE Doctor Programme (RDDP) and the new Endocrinology/Diabetes Specialist curriculum (Gillian Thompson, National Director - DAFNE Programme)

The updated Joint Royal Colleges of Physicians Training Board (JRCPTB) curriculum for Endocrinology and Diabetes training will be implemented this month.

In section 3.4 of the curriculum, being involved in a structured education programme, demonstrating an ethos of patient-centred care and shared decision-making is one of the descriptors of the speciality capabilities in practice around diagnosis and management of diabetes as a long-term condition. Clearly dose adjustment for normal eating (DAFNE) will fulfil this requirement for trainees.

In addition, the curriculum highlights patient education and empowerment with the following expectations of the trainee:

- Participation in accredited patient education programmes to improve outcomes
- Obtain formal qualification to lead/teach on an accredited patient education and empowerment programme such as DAFNE or equivalent
- Use of patient-centred language in verbal and written communications

The RDDP will fulfil all these expectations. The RDDP is free and accredited by the Royal College of Physicians (RCP) for 53 learning hours. It will provide trainees with a thorough understanding of DAFNE.

The RDDP is highly rated by doctors who have completed the programme: 87% rate it as excellent and 13% as good. Here are examples of comments received from doctors.

"I wish I had done this as an F3, I would have approached all my patients very differently."

"I really like the methodical approach to insulin dose adjustment. I'm more confident now when I look at someone's BG diary!"

"I wasn't confident with giving advice about type 1 diabetes and exercise before the Remote DAFNE Doctor Programme."

"I have started to talk with my patients in a different way, asking them what is going well before asking them what they think is the problem."

We would encourage all specialist trainees to complete the RDDP training. For further information please contact us at dafne@nhct.nhs.uk

New structured education programme for type 1 and type 2 diabetes (National Diabetes Programme)

Healthy Living (for short) is a free, online NHS service designed to help users learn more about diabetes.

Healthy Living has been clinically proven and can help users to improve their health and support them to live well with T2DM. The service can help users:

- Feel confident in managing T2DM
- Improve their mental wellbeing
- Make and maintain healthy lifestyle choices, and more
- The programme is for people over the age of 18, living in England with T2DM and for people who care for someone living with T2DM

MyType1Diabetes is a free online resource with tailored support to help adults live well with their type 1 diabetes.

MyType1Diabetes can:

- Help users to understand more about T1DM and increase their confidence in how to manage it
- Signpost users to content created by other expert organisations
- Offer resources in up to 10 other languages, including Polish, Spanish and Urdu
- Support users to set achievable goals for their diabetes self-care
- The programme is for people over the age of 18 with T1DM. Families, carers and healthcare professionals can also sign up

DTN and Technology update (Professor Pratik Choudhary)

We had a successful DTN national meeting, which sold out very quickly. Highlights of the meeting were the preliminary results from the national Hybrid Closed Loop pilot and results from the Diabetes UK-funded FLASH-UK study led by Dr

Leelarathna.

- We also had dedicated sessions talking about implementing CGM in primary care and the use of diabetes technology in hospitals alone, with interactive case studies around connected pens and closed loops.
- The YDEF tech course for SpRs will run for the second time this year in Nottingham in December 2022. As usual it sold out in minutes.
- An additional DTN tech course where people can get their hands on the latest tech will run at King's College London in November.
- The DTN is working on updating its Diabetes Technology Pathway in conjunction with Diabetes UK and hopes to release this soon.
- We are also working to bring you more consolidated information about the world of diabetes and diabetes technology from Close Concerns.

EndoBarrier results presented at EASD (Dr Bob Ryder)

During the week of the 19th to 23rd September 2022, the latest data from the ABCD worldwide EndoBarrier registry were presented orally to a packed audience in a session chaired by Professor Les Zech Czupryniak entitled "fighting diabetes with tubes, scanners, and catheters". The registry now contains data from 1,022 patients from 34 centres in 10 countries worldwide and demonstrated that EndoBarrier is associated with major improvements in weight, HbA1c, blood pressure and cholesterol. It was noteworthy that the higher the HbA1c the greater the fall such that if baseline HbA1c was ≥ 86 mmol/mol ($\geq 10\%$) there was a fall of 34.9 mmol/mol (3.2%). The serious adverse event rate was 4.2% and it was noteworthy that the rate of hepatic abscess was 1.1%, noticeably different from the 3.5% found in the FDA pivotal study which led to that study being halted. The presentation (12½ minutes long), including a very informative question and answer session and the viewing of an actual EndoBarrier, can be seen at the following link: https://youtu.be_Vf1oaMn4GQ

New study planned for SGLT-2i in type 1 diabetes with kidney disease (Dr Peter Winocour)

ABCD and the UKKA have agreed to carry out a joint observational review of the

safety and efficacy of SGLT-2i therapy in T1DM associated with kidney disease based on reduced estimated glomerular filtration rate (eGFR) and/or raised albuminuria.

A detailed protocol will be finalised and made available to all interested specialist units. For further information please contact Dr Peter Winocour, at ENHIDE, Welwyn GC, Herts AL7 4HQ or at peter.winocour@nhs.net

From the desk of Rebecca Reeve

NHS Worst Staffing Crisis in history

A report released by the Health and Social Care Committee states that the large number of unfilled NHS job vacancies is posing a serious risk to patient safety. The report found that England is now short of 12,000 hospital doctors and more than 50,000 nurses and midwives, calling this the worst workforce crisis in NHS history. The cross-party committee saw evidence that, on current projections, almost a million new jobs will need to be filled in health and social care by the early part of the next decade. Similar staffing pressures are also seen in health services in Scotland, Wales and Northern Ireland. This report has called on HM Revenue and Customs to be more proactive in enforcing the minimum wage, amid concerns that 17,000 care workers were paid below the legal rate of £9.50 an hour.

<https://www.openaccessgovernment.org/a-national-scandal-worst-nhs-staffing-crisis-in-history/140269/>

NHS Long COVID action plan

The NHS has set out a long COVID action plan for thousands of people with persistent symptoms, giving them access to more convenient tests and checks closer to home. Specialist clinics dedicated to long COVID will now be able to send people for tests at local one-stop shops and mobile clinics, rather than people going back to their general practice. This new plan is backed by £90 million investment, the first stage includes ambitions for all patients to have an initial assessment within six weeks to ensure they are diagnosed and treated quickly. The plan highlights the steps the NHS has already made on delivering the 10 commitments it set out for long COVID services just over one year ago, which included establishing a nationwide network of 90 specialist long COVID clinics, 14 hubs for children and young people, and investment in training and

guidance to support GP teams in managing the condition.

<https://www.england.nhs.uk/2022/07/nhs-sets-out-long-covid-action-plan-for-thousands-of-people-with-persistent-symptom/>

Access to IAPT services increases by 21.5%

The new Psychological Therapies: Annual Report on the use of IAPT services, England 2021-22 publication provides information on the Improving Access to Psychological Therapies (IAPT) programme. In 2021-22, a total of 1.24 million referrals accessed IAPT services, compared to 1.02 million in 2020-21, an increase of 21.5%. In 2019-20, a total of 1.17 million referrals accessed therapies through IAPT services.

The publication also shows:

- The overall number of referrals was up 24.5% from 1.46 million in 2020-21 to 1.81 million in 2021-22, higher than pre-pandemic levels of 1.69 million in 2019-2020.
- The number of referrals completing a course of treatment increased by 4.6%, from 634,649 in 2020-21 to 664,087 this year.
- People completing a course of treatment received on average 7.9 sessions in 2021-22, which was up from 7.5 in 2020-21.
- The figures also show that 50.2% of referrals moved to recovery in 2021-22, down 1.2 percentage points from 51.4% in 2020-21.

<https://digital.nhs.uk/data-and-information/publications/statistical/psychological-therapies-annual-reports-on-the-use-of-iapt-services/annual-report-2021-22>

Biggest-ever philanthropic gift to diabetes research might bring T1DM cure closer

A new partnership between the Steve

Morgan Foundation, Diabetes UK and JDRF has been announced to transform the lives of people with T1DM and lead the race towards a cure. With an unprecedented £50 million investment from the Steve Morgan Foundation, the partnership will fund game-changing T1DM research that will hopefully pave the way to the development of new treatments and a cure.

The Steve Morgan Foundation's £50 million donation is the largest ever single gift in the UK for diabetes research, and this is the first time that Diabetes UK and JDRF have partnered with a Foundation to deliver research at this scale. Over five years, the Foundation's donation will fund the Type 1 Diabetes Grand Challenge. The challenge will call on scientists to come up with research ideas that are big, bold and collaborative.

- Treatments to replace or rescue insulin-making beta cells in the pancreas
- Treatments to stop the immune system's attack that destroys insulin-making beta cells
- Next generation insulins, such as those that respond to changing blood sugar levels

Quality in Care Diabetes in its 12th year - QiC Results

NHS teams from Birmingham Women's and Children's Foundation Trust, De-app (Leics) and Bart's Health & East London Foundation Trust were among those recognised at the twelfth annual Quality in Care (QiC) Diabetes Awards at Sanofi's UK HQ in Reading. QiC Diabetes recognises initiatives that improve the quality of life for people living with diabetes, as judged by the NHS, patients and industry.

Assisting Bradford and Craven Beating Diabetes (ASSIST BCD) by Bradford District and Craven Health and Care Partnership

won a new for 2022 category, Using clinical pathways for new technologies, with Assist-BCD. This is an interactive, clinical decision-making tool designed locally with multidisciplinary collaboration. Its aim is to support healthcare professionals to provide evidence-based care to individuals at high risk of, or living with, diabetes. The tool is embedded in SystemOne, which is used by all practices and diabetes specialist teams within the Bradford district and Craven area. It is designed to reduce variability, increasing parity and equity in service delivery across the district, and to standardise and support evidence-based decision-making.

The DEVICE project team from Southampton NHS Trust and Oxford Medical Simulation collaborated to explore the feasibility of virtual reality (VR) as a means of delivering effective training in diabetes emergencies for non-specialist trainees. DEVICE (Diabetes Emergencies: Virtual Interactive Clinical Education) was developed to improve competence and reduce medical errors. Fully interactive immersive VR scenarios were created to simulate real-life diabetes emergencies. Users then received personalised feedback and performance metrics. Results revealed increased confidence in managing diabetes emergencies and demonstrated positive changes in behaviour. VR education is a safe, valuable and well-liked training tool for diabetes emergencies with great potential. This won the Diabetes Education Programmes for Health Care Professionals category.

For full results see QiC Diabetes 2022 Results - Quality In Care

https://www.qualityincare.org/diabetes/awards/results/qic_diabetes_2022_results

Interesting recent research

(Umesh Dashora, Mizanour Md Rahman, Sheena Gupta)

A rapid-fire collection (extract) of interesting recent developments in diabetes

Authors, Journal	Type of study	Main results
Andriessen <i>et al</i> , <i>Diabetologia</i>	Randomised crossover trial	<p>Three weeks of time-restricted eating (TRE) reduces glucose</p> <p>TRE patients had longer time spent in normoglycaemia range (15.1±0.8 vs 12.2±1.1 h per day, p=0.01), lower fasting glucose (7.6±0.4 vs 8.6±0.4 mmol/l, p=0.03) and lower 24-hour glucose levels compared to controls, making it a useful strategy to manage people with diabetes.</p> <p>Andriessen C, Fealy E, Veelen A. et al. Three weeks of time-restricted eating improves glucose homeostasis in adults with type 2 diabetes but does not improve insulin sensitivity: a randomised crossover trial. <i>Diabetologia</i> 2022; 65:1710–1720. https://doi.org/10.1007/s00125-022-05752-z</p>
Vergès, <i>Diabetologia</i>	Review	<p>Intestinal lipid absorption and transport in people with type 2 diabetes may be favourably influenced by medications like GLP-1 agonists</p> <p>Postprandial hyperlipidaemia is an important component of dyslipidaemia in people with T2DM and may contribute to cardiovascular disease. This hyperlipidaemia is secondary to increased chylomicron production by the enterocyte and delayed catabolism of chylomicron and chylomicron remnants, mostly mediated by lipoprotein lipase. Postprandial hyperlipidaemia is reduced by metformin, pioglitazone, alpha-glucosidase inhibitors, DPP 4 inhibitors and GLP-1 agonists, the most pronounced effect being from GLP-1 agonists.</p> <p>Vergès B. Intestinal lipid absorption and transport in type 2 diabetes. <i>Diabetologia</i> 2022; 65: 1587–1600. https://doi.org/10.1007/s00125-022-05765-8</p>
Eriksson <i>et al</i> , <i>Diabetologia</i>	Narrative review	<p>Registry-based randomised clinical trials can be low cost and highly reliable</p> <p>RCTs can be expensive and may be limited due to a number of factors. In this review the authors describe the Swedish SMARTEST trial as an example of a comparison between metformin and SGLT-2i as first-line treatment and the impact on cardiovascular and microvascular co-morbidities and mortality.</p> <p>Eriksson JW, Eliasson B, Bennet L, et al. Registry-based randomised clinical trials: a remedy for evidence-based diabetes care? <i>Diabetologia</i> 2022; 65: 1575–1586. https://doi.org/10.1007/s00125-022-05762-x</p>
Zucker <i>et al</i> , <i>Diabetologia</i>	Registry-based study	<p>Increased adolescent body weight is associated with doubling of the risk of type 1 diabetes</p> <p>In this study of Israeli adolescents aged 16-19 years, higher BMI was associated with incident type 1 diabetes, the hazard ratio ranging from 1.05 to 2.05 depending upon the degree of overweight. One increment in BMI SD was associated with 25% greater risk for incidence of T1DM.</p> <p>Zucker I, Zloof Y, Bardugo A, et al. Obesity in late adolescence and incident type 1 diabetes in young adulthood. <i>Diabetologia</i> 2022; 65: 1473–1482. https://doi.org/10.1007/s00125-022-05722-5</p>
Grauslund, <i>Diabetologia</i>	Review	<p>The role of artificial intelligence in diabetic retinopathy screening</p> <p>Deep learning by convolutional neural networks is an optimised branch of artificial intelligence that has the potential for automated image analysis. Some studies have shown high sensitivities and specificities for classifying and identifying diabetic macular oedema and advanced diabetic retinopathy. Handheld mobile devices for self-monitoring also hold promise. The uptake of such programmes has not been great due to problems with software integration and integration with the national screening programme running in different countries.</p> <p>Grauslund J. Diabetic retinopathy screening in the emerging era of artificial intelligence. <i>Diabetologia</i> 2022; 65: 1415–1423. https://doi.org/10.1007/s00125-022-05727-0</p>
Zou <i>et al</i> , <i>Diabetologia</i>	Post hoc analysis of clinical trials	<p>Efficacy of canagliflozin vs other medications in diabetes subgroups</p> <p>People with mild obesity-related diabetes (MOD) showed greatest reduction in HbA1c with canagliflozin (9.8 mmol/mol) compared to sitagliptin (6.6 mmol/mol) and glimepiride (7.1 mmol/mol) at week 52, persisting until week 104. The proportion of individuals who achieved HbA1c <53 mmol/mol was highest in sitagliptin-treated individuals with mild age-related diabetes (MARD) but similar among drugs in individuals with MOD. The effect of canagliflozin vs placebo on albuminuria progression differed significantly between high-risk and low-risk groups using machine learning models for HbA1c lowering and albuminuria progression.</p> <p>Zou X, Huang Q, Luo Y, et al. The efficacy of canagliflozin in diabetes subgroups stratified by data-driven clustering or a supervised machine learning method: a post hoc analysis of canagliflozin clinical trial data. <i>Diabetologia</i> 2022; 65: 1424–1435. https://doi.org/10.1007/s00125-022-05748-9</p>
EASD 2022	Conference presentations	<p>Updated ADA/EASD type 2 diabetes consensus</p> <ol style="list-style-type: none"> 1. More emphasis on managing weight loss, person-centred care (personal circumstances, language etc) and equality of care 2. More aggressive care, including combination therapy at the time of diagnosis and reduction of therapeutic inertia 3. Recommendation to achieve regular patterns of 6-9 hours of sleep each night, 150 minutes of moderate to vigorous physical activity per week combined with two sessions of resistance exercise, break up/sitting time at 30-minute intervals with light exercise or resistance training, 500 extra steps daily. 4. The update covers studies of oral GLP-1 agonists and combination of GLP-1 agonists with insulin

Authors, Journal	Type of study	Main results
		<p>Triple-acting agent improves glycaemia and reduces weight By week 12, mean HbA1c reduced by 17.1 mmol/mol and weight reduction was 8.96 kg greater than placebo with a new agent LY3437943 which targets GLP-1, GIP and glucagon receptors in a phase 1 study presented. Increase in heart rate was noted.</p> <p>UKPDS legacy effect persists at year 44 Early intensive control group (with insulin and sulphonylureas) continues to show benefit after 44 years, with 11% fewer deaths and 26% fewer renal and retinal complications compared to conventional treatment. Early intensive control with metformin reduced MI by 31% and deaths by 25%.</p> <p>Reversal of Type 2 diabetes Upon Normalisation of Energy intake in the non-obese (ReTUNE) The results presented at the EASD conference showed that 70% of people who develop diabetes despite being of normal weight (mean BMI 24.8 kg/m²) can achieve remission of their diabetes by losing 10% of their body weight, with reduction in liver fat from 4.1% to 1.4% and pancreatic fat from 5.8% to 4.3%. The effect was maintained for 12 months. Beta cell function returned towards normal.</p>
Ikram <i>et al</i> , <i>Diabetes Care</i>	Viewpoint	<p>Preference for a son might lead to grand multiparity and resultant higher risk of incident diabetes The authors argue that one element contributing to diabetes is grand multiparity (3-4% of all births) which in turn is fuelled by sociocultural factors like son preference. The son preference is more common in low socioeconomic groups and very often has roots in health inequalities, land inheritance rules and dominant power being attached to male sex.</p> <p>Ikram A, Ikram S, Inam M. Is son preference a potential risk factor for diabetes? <i>Diabetes Care</i> 2022; 45: e165. https://doi.org/10.2337/dc22-1413</p>
Zhou <i>et al</i> , <i>Diabetes Care</i>	UK biobank based study	<p>In people with diabetes, levels of vitamin D are inversely related to new-onset chronic kidney disease Over a median follow-up duration of 12.1 years, the hazard ratio of protection from new-onset CKD was 0.77 with 25 OHD levels >50 nmol/L. There was no such association in people without diabetes.</p> <p>Zhou C, He P, Ye Z, et al. Relationships of serum 25-hydroxyvitamin D concentrations, diabetes, genetic susceptibility, and new-onset Chronic Kidney Disease. <i>Diabetes Care</i> 2022; 45: 2518-25. https://doi.org/10.2337/dc22-1194.</p>
Tougaard <i>et al</i> , <i>Diabetes Care</i>	Biochemical study	<p>Endotrophin may be a marker of complications in people with T2DM Doubling of serum endotrophin was associated with a composite kidney end point (Hazard Ratio 1.80), first Major adverse cardiovascular Event (MACE, HR 1.54), mortality (HR 1.69) and incident heart failure (HR 1.63). A doubling of urine endotrophin was associated with progression of albuminuria (HR 1.20).</p> <p>Tougaard NH, Møller AL, Rønn PF, et al. Endotrophin as a marker of complications in a type 2 diabetes cohort. <i>Diabetes Care</i> 2022; 45: 2746-8. https://doi.org/10.2337/dc22-0852</p>
Matejko <i>et al</i> , <i>Diabetes Care</i>	Randomized controlled trial	<p>People with T1DM showed significant improvement in glycaemic control, quality of life, psychological well-being when started with AHCL (Advanced hybrid closed loop) system who were naive to CSII and CSM 41 participants were recruited and randomised to either the AHCL (n = 20) or the MDI+BGM (n = 21) group, and 37 participants completed the study. Time spent with glucose levels in target range increased from 69.3 ± 12.3% at baseline to 85.0 ± 6.3% at three months in the AHCL group, while remaining unchanged in the control group (treatment effect 21.5% [95% CI 15.7, 27.3]; P < 0.001). The time with levels below range (<70 mg/dL) decreased in the AHCL group and remained unchanged in the MDI+BGM group. Participants from the AHCL group also had significant improvements in HbA1c levels.</p> <p>Matejko B, Juza A, Kieć-Wilk B, et al. Transitioning of people with T1D from multiple daily injections and self-monitoring of blood glucose directly to MiniMed 780G Advanced Hybrid Closed Loop System: a two-center, randomized, controlled study. <i>Diabetes Care</i> 2022; 45: 2628-35. https://doi.org/10.2337/dc22-0470</p>
Thirunavukarasu <i>et al</i> , <i>Diabetes Care</i>	Research	<p>Women with obesity and GDM (no prior history of diabetes) manifest impaired myocardial contractility associated with reductions in myocardial energetics in late pregnancy, compared with lean women with healthy pregnancies The women with gestational diabetes (GDM) had higher BMI and systolic and diastolic blood pressures. The women with GDM had lower myocardial PCr to ATP ratio, accompanied by lower LV end-diastolic volumes. Although ventricular ejection fractions were similar, the global longitudinal shortening (GLS) was reduced in women with GDM</p> <p>Thirunavukarasu S, Ansari F, Cubbon R, et al. Maternal cardiac changes in women with obesity and gestational diabetes mellitus. <i>Diabetes Care</i> 2022; 45(12):3007-15. https://doi.org/10.2337/dc22-0401</p>
Pradhan <i>et al</i> , <i>Diabetes Care</i>	Active-comparator Cohort	<p>DPP-4 inhibitors were associated with an increased risk of acute liver injury compared with SGLT-2 inhibitors in patients with T2DM. Compared with SGLT-2 inhibitors, DPP-4 inhibitors were associated with a 53% increased risk of acute liver injury (HR 1.53, 95% CI 1.02–2.30). In contrast, GLP-1 RAs were not associated with an overall increased risk of acute liver injury (HR 1.11, 95% CI 0.57–2.16). However, an increased risk was observed among female users of both DPP-4 inhibitors and GLP-1 RAs</p> <p>Pradhan R, Yin H, Yu OH, Azoulay L. Incretin-based drugs and the risk of acute liver injury among patients with type 2 diabetes. <i>Diabetes Care</i> 2022; 45(10):2289-98. https://doi.org/10.2337/dc22-0712</p>

Authors, Journal	Type of study	Main results
Mosenzon <i>et al</i> , <i>Diabetes Care</i>	Post hoc analyses from (DECLARE-TIMI 58) trial	Dapagliflozin slows kidney function decline in patients with T2DM at high cardiovascular risk Risks for categorical eGFR reductions ($\geq 57\%$ [in those with baseline eGFR ≥ 60 mL/min/1.73 m ²], $\geq 50\%$, $\geq 40\%$, and $\geq 30\%$) were lower with dapagliflozin (HRs 0.52, 0.57, 0.55, and 0.70, respectively; $P < 0.05$) Mosenzon O, Raz I, Wiviott SD, et al. Dapagliflozin and prevention of kidney disease among patients with type 2 diabetes—post hoc analyses from the DECLARE-TIMI 58 Trial. <i>Diabetes Care</i> 2022; 45 (10): 2350-9. https://doi.org/10.2337/dc22-0382
Mangelis <i>et al</i> , <i>Diabetes Care</i>	Cohort study	Significant decline in kidney function was observed in African Caribbean ethnicity compared to others in people with T1DM The incidence rate for the primary end point in African Caribbean people was double that in non-African Caribbean people (16 vs. 7.7 per 1000 patient-years, $P < 0.001$). (The primary end point was an eGFR decline of $\geq 50\%$ from baseline with a final eGFR < 30 mL/min/1.73 m ² .) Mangelis A, Fountoulakis N, Corcillo A, et al. African Caribbean ethnicity is an independent predictor of significant decline in kidney function in people with type 1 diabetes. <i>Diabetes Care</i> 2022;45(9):2095-102. https://doi.org/10.2337/dc22-0815
Vellanki <i>et al</i> , <i>Diabetes Care</i>	Randomised clinical study	Intensive and non-intensive supplemental insulin in hospitalised patients with diabetes are equally effective The mean daily BG in the non-intensive group (target BG 260 mg/dL) was non-inferior to BG in the intensive group (BG target 140 mg/dL) with no difference in insulin doses or use of SC sliding scale insulin. Vellanki P, Cardona S, Galindo RJ, et al. Efficacy and safety of intensive versus nonintensive supplemental insulin with a basal-bolus insulin regimen in hospitalized patients with type 2 diabetes: a randomized clinical study. <i>Diabetes Care</i> 2022; 45(10): 2217-23. https://doi.org/10.2337/dc21-1606
Spanakis <i>et al</i> , <i>Diabetes Care</i>	Randomised clinical trial	Continuous Glucose Monitoring (CGM) reduces the incidence of hypoglycaemia in hospitalised patients compared to point of care testing There were no significant differences in Time in Range (TIR), mean daily blood glucose or percent of patients with CGM values < 70 mg/dL, but among patients with one or more hypoglycaemic events, the CGM group had significantly lower number of hypoglycaemia events, lower percentage of time below range < 70 mg/dL and lower incidence rate ratio < 70 mg/dL and < 54 mg/dL. Spanakis EK, Urrutia A, Galindo RJ, et al. Continuous Glucose Monitoring-guided insulin administration in hospitalized patients with diabetes: a randomized clinical trial. <i>Diabetes Care</i> 2022; 45 (10):2369-75. https://doi.org/10.2337/dc22-0716
Lachin <i>et al</i> , <i>Diabetes Care</i>	Analysis of data for DCCT/EDIC	HbA1c and not estimated time in range (eTIR) remains more strongly associated with diabetes complications Adjusted for HbA1c and covariates, eTIR was marginally significantly associated with retinopathy in the full cohort but HbA1c was significantly associated with both outcomes in 5 of 6 adjusted analyses. Lachin JM, Bebu I, Gao X, et al. Association of estimated time-in-range capillary glucose levels versus HbA1c with progression of microvascular complications in the Diabetes Control and Complications Trial. <i>Diabetes Care</i> 2022; 45(10): 2445-8. https://doi.org/10.2337/dc21-2298
Galvez-Fernandez M, <i>Diabetes Care</i>	Cohort study (Strong Heart Study)	Urine zinc may be associated with higher risk of type 2 diabetes After adjustment for sex, site, education, smoking status, BMI and estimated glomerular filtration rate, the hazard ratio of T2DM and prediabetes remained higher in people with higher urine zinc excretion Galvez-Fernandez M, Powers M, Grau-Perez M, et al. Urinary zinc and incident type 2 diabetes: prospective evidence from the Strong Heart Study. <i>Diabetes Care</i> 2022; 45 (11): 2561-9. https://doi.org/10.2337/dc22-1152 . Epub ahead of print. PMID: 36134919.
Tison <i>et al</i> , <i>Diabetes Care</i>	Questionnaire based study	Different types of diets may have different risk of incident type 2 diabetes Adherence to Southern dietary pattern was most strongly associated with the risk of incident T2DM after adjustment for demographics and lifestyle (risk ratio 1.95). Among other diet scores, dietary inflammatory scores and Mediterranean-dietary approaches to stop hypertension intervention for neurodegenerative delay (MIND) demonstrated anti-inflammatory diets have the strongest association with lower diabetes incidence. Tison SE, Shikany JM, Long DL, et al. Differences in the association of select dietary measures with risk of incident type 2 diabetes. <i>Diabetes Care</i> 2022; 45(11): 2602-10. https://doi.org/10.2337/dc22-0217
Khunti <i>et al</i> , <i>Diabetes Care</i>	Retrospective cohort study	SGLT-2 inhibitors were not associated with DKA in patients admitted with COVID-19 In this cohort of 3,067 people with T2DM who were admitted to hospital with COVID-19, 2.8% had DKA and 35.6% of people died. The adjusted odds of DKA were not significantly different between those prescribed SGLT-2is and those who were not. Khunti K, Ruan Y, Davies J, et al. Association between SGLT2 inhibitor treatment and diabetic ketoacidosis and mortality in people with type 2 diabetes admitted to hospital with COVID-19. <i>Diabetes Care</i> 2022; dc220357. https://doi.org/10.2337/dc22-0357 . Online ahead of print.
Wong <i>et al</i> , <i>Diabetes Care</i>	Retrospective cohort study	Long-term impact on HbA1c and body weight of people with T2DM after infection with SARS-CoV-2 After adjustment for demographic characteristics, co-morbidities and medications for diabetes, there was no significant change in the longer-term average HbA1c 1 year after infection or body weight. Mechanical ventilation was associated with a decrease in HbA1c after COVID-19. Wong R, Vaddavalli R, Hall MA, et al. Effect of SARS-CoV-2 infection and infection severity on longer-term glycemic control and weight in people with type 2 diabetes. <i>Diabetes Care</i> 2022 Aug 31.

Authors, Journal	Type of study	Main results
Lombardi <i>et al</i> , <i>Diabetes Care</i>	Retrospective study	Hyperglycaemia during in-hospital stay is associated with poorer outcome in patients admitted with COVID-19 Patients who were hyperglycaemic (68%) were more likely to have higher mortality and to require mechanical ventilation compared to patients who were normoglycaemic (32%). After adjustment for age, sex, race, BMI, HbA1c, comorbidities, inflammatory markers and corticosteroid therapy the risk of dying remained higher in patients with hyperglycaemia. Lombardi A, Agarwal S, Schechter C, et al. In-hospital hyperglycemia is associated with worse outcomes in patients admitted with COVID-19. <i>Diabetes Care</i> 2022; 45(11):2683-8. https://doi.org/10.2337/dc22-0708
Rossing <i>et al</i> , <i>Diabetes Care</i>	Prespecified pooled analysis of FIDELIO_DKD and FIGARO-DKD study Fidelity analysis	The beneficial effect of finerenone on DKA was independent of use of SGLT-2 inhibitors Baseline SGLT2i use did not affect the risk reduction for cardiovascular or renal composites with finerenone, neither did SGLT2i use concomitant with the study treatment Rossing P, Anker SD, Filippatos G, et al. Finerenone in patients with chronic kidney disease and type 2 diabetes by sodium–glucose cotransporter 2 inhibitor treatment: The FIDELITY Analysis. <i>Diabetes Care</i> 2022; dc220294. https://doi.org/10.2337/dc22=0294 . Online ahead of print.
Li <i>et al</i> , <i>Diabetes, Obes Metab</i>	Post-hoc analysis of randomised controlled trial	SGLT-2 inhibitors may reduce the risk of developing atrial fibrillation/flutter and reduce the risk of associated complications Meta-analysis of five SGLT-2 inhibitor trials demonstrated a 19% reduction in AF/AFL events. Post-hoc analysis of the CANVAS and CREDENCE trials demonstrated that canagliflozin is associated with a reduction in AF/AFL-related complications such as ischaemic stroke, transient ischaemic attacks and hospitalisation for heart failure. Li C, Yu J, Hockham, C, et al. Canagliflozin and atrial fibrillation in type 2 diabetes mellitus: A secondary analysis from the CANVAS Program and CREDENCE trial and meta-analysis. <i>Diabetes Obes Metab</i> . 2022; 24(10): 1927- 1938. https://doi.org/10.1111/dom.14772
Choudhary <i>et al</i> , <i>Diabetes, Obes Metab</i>	Retrospective cohort study	Time in range improved during the COVID-19 lockdown period amongst Freestyle Libre users 8,914 Libreview accounts were analysed in January 2020 (prior to the pandemic) until June 2020. The time in range increased in all age groups. It increased by 1.7% (26-49 years) to 3.1% (≥65 years). Time below range significantly reduced in the 26-49 year age group, and time above range reduced by 1.5% (26-249 years) to 3% (≥65 years). Choudhary P, Kao K, Dunn TC, et al. Glycaemic measures for 8914 adult FreeStyle Libre users during routine care, segmented by age group and observed changes during the COVID-19 pandemic. <i>Diabetes Obes Metab</i> 2022; 24(10): 1976- 1982. https://doi.org/10.1111/dom.14782
Liu <i>et al</i> , <i>Diabetes, Obes Metab</i>	Research study	Fluoxetine may increase beta cell proliferation and induce glucose-stimulated insulin secretion In vitro studies showed that therapeutic levels of fluoxetine increased beta cell proliferation and protected islet cells from cytokine-induced apoptosis in MIN6 cells and human and mouse islet cells. It also stimulated glucose-mediated insulin secretion from mouse and human islet cells. Intraperitoneal administration to mice improved glucose tolerance and increased beta cell proliferation and insulin-secreting capacity. Liu B, Ruz-Maldonado I, Toczyska K, et al. The selective serotonin reuptake inhibitor fluoxetine has direct effects on beta cells, promoting insulin secretion and increasing beta-cell mass. <i>Diabetes Obes Metab</i> 2022; 24(10): 2038- 2050. https://doi.org/10.1111/dom.14791
Yuan <i>et al</i> , <i>Diabetes, Obes Metab</i>	Meta-analysis of randomised controlled trials	GLP-1RAs reduce albuminuria in adult patients with type 2 diabetes mellitus GLP-1RAs are associated with a significant reduction in albuminuria compared to placebo. This may be mediated by reducing systolic blood pressure as well as decreasing renal oxidative stress. Yuan D, Sharma H, Krishnan A, et al. Effect of glucagon-like peptide 1 receptor agonists on albuminuria in adult patients with type 2 diabetes mellitus: A systematic review and meta-analysis. <i>Diabetes Obes Metab</i> 2022; 24(9): 1869-1881. https://doi.org/10.1111/dom.14776
Heise <i>et al</i> , <i>Diabetes, Obes Metab</i>	Review	Ultra rapid Lispro (URLi) should be considered in those with post-prandial hyperglycaemia According to several randomised controlled studies, URLi shows the fastest onset of action, shortest exposure duration and greatest reduction in post-prandial glucose levels compared to all the other available insulins. The rate of hypoglycaemia is similar between URLi and Lispro. There is a slight increase in frequency of injection/infusion site reactions compared to Lispro. Heise T, Piras de Oliveira C, Juneja R, et al. What is the value of faster acting prandial insulin? Focus on ultra rapid lispro. <i>Diabetes Obes Metab</i> 2022; 24(9): 1689-1701. https://doi.org/10.1111/dom.14773
Ono <i>et al</i> , <i>Bone Research</i>	Sequential screening for a drug	Locamidazole can provide the benefits of exercise A new drug, locamidazole (LAMZ) promotes myogenesis and osteoblastogenesis while suppressing osteoclastogenesis, thus enhancing locomotor function, with muscles and bones significantly strengthened. Mechanistically, LAMZ induced Mef2c and PGC-1 alpha in a calcium signalling-dependent manner. LAMZ is a promising therapeutic drug for locomotor diseases, including sarcopenia and osteoporosis. Ono T, Denda R, Tsukahara Y, et al. Simultaneous augmentation of muscle and bone by locomomimeticism through calcium-PGC-1α signaling. <i>Bone Research</i> 2022 3;10(1):1-4. https://doi.org/10.1038/s41413-022-00225-w
Byrne, <i>Diabetic Medicine</i>	Banting Memorial Lecture 2022	Type 2 diabetes and non-alcoholic fatty liver disease (NAFLD): partners in crime 1. NAFLD occurs in up to 70% of people with T2DM 2. NAFLD not only increases the risk of cirrhosis, primary liver cancer and end-stage liver disease, but NAFLD is also an important multisystem disease that has major complications beyond liver (incident T2DM, cardiovascular disease, chronic kidney disease and certain extra-hepatic cancers). 3. It is now possible to diagnose liver fibrosis with non-invasive tools. Byrne CD. Banting memorial lecture 2022: 'Type 2 diabetes and nonalcoholic fatty liver disease: Partners in crime'. <i>Diabetic Medicine</i> 2022 Jul 5:e14912. https://doi.org/10.1111/dme.14912

Authors, Journal	Type of study	Main results
Misra <i>et al</i> , <i>Diabetic Medicine</i>	Review	<p>Developing services for people who develop diabetes early Early-onset T2DM carries significantly more disease and complication burden than late-onset T2DM. In the UK 122,780 individuals under the age of 40 are currently living with type 2 diabetes, with an over-representation from ethnic minorities and deprived groups. The challenges in this group include correct diagnosis, balancing work and full-time studies with the diagnosis of diabetes, lower attainment of treatment targets and supporting pregnancies for best possible outcomes. The challenges in preventing T2DM in younger people include difficulty in identification of those at risk, poorer attendance at lifestyle interventions and less weight loss when attempted.</p> <p>Misra S, Gable D, Khunti K, et al. Developing services to support the delivery of care to people with early onset type 2 diabetes. <i>Diabetic Medicine</i> 2022 Oct;39(10):e14927. https://doi.org/10.1111/dme.14927</p>
Fallon <i>et al</i> , <i>Diabetic Medicine</i>	Retrospective observational analysis	<p>The impact of socio-economic deprivation on access to diabetes technology in adults with T1DM The highest use of technology was in the least deprived quintile compared to the most deprived quintile (67% vs 45%) but there was no association with HbA1c outcome in the data available. Participation in structured education was almost twice as high in the least deprived group compared to the most deprived group (43% vs 23%). People with mixed ethnicity was more likely to use technology compared to black ethnicity (60% vs 40%).</p> <p>Fallon C, Jones E, Oliver N, et al. The impact of socio-economic deprivation on access to diabetes technology in adults with type 1 diabetes. <i>Diabetic Medicine</i> 2022 Oct;39(10):e14906. https://doi.org/10.1111/dme.14906</p>
Stafi <i>et al</i> , <i>Diabetic Medicine</i>	Retrospective live birth cohort study	<p>Association of missed antenatal clinic appointment and diabetes pregnancy outcome Women with T1DM who missed at least one appointment were more likely to have a caesarean section (OR 1.95) and their babies were more likely to be admitted to the neonatal intensive care unit (OR 2.25). Women with T2DM who missed an appointment were more likely to have a large-for-gestational-age infant (OR 1.61) and an extreme large-for-gestational-age infant (OR 1.69) compared with women who did not miss any appointments. The association was linked with above-target HbA1c.</p> <p>Stafi L, Benham JL, Frehlich L et al. Missed antenatal diabetes care appointments and neonatal outcomes for pregnancies with type 1 and type 2 diabetes. <i>Diabetic Medicine</i> 2022 Sep 1. https://doi.org/10.1111/dme.14960. Online ahead of print</p>
Tehan <i>et al</i> , <i>Diabetic Medicine</i>	Prospective cohort study	<p>Factors affecting diabetic foot ulcer healing In this Australian study dietary supplementation (OR 4.36) and socio-economic advantage (OR 1.01) were associated with increased odds of healing.</p> <p>Tehan PE, Burrows T, Hawes MB, et al. Factors influencing diabetes-related foot ulcer healing in Australian adults: a prospective cohort study. <i>Diabetic Medicine</i> 2022 Sep 1:e14951. https://doi.org/10.1111/dme.14951</p>



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News editor: Dr Umesh Dashora
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YDEF NEWS

EDUCATION • ADVOCACY • SUPPORT

Young Diabetologists and Endocrinologists' Forum (YDEF) has continued to run a series of training courses and events based on our aims of education, advocacy and support. Designing activities tailored to the needs of D&E trainees who face the recent changes in curriculum and the new Annual Review of Competency Progression (ARCP) decision aid remains one of the main priorities of YDEF. As ever, we are truly grateful to the speakers who attend and give their insights and to our sponsors for their support throughout the years.

YDEF has recently welcomed its new committee members, including Alexandros Liarakos (ST4 trainee in

Oxford Deanery), Amy Couden (Clinical Lecturer/ST4 trainee in Birmingham), David Williams (Clinical Research Fellow in Swansea), Gordon Sloan (Clinical Lecturer in Sheffield) and Lauren Quinn (Clinical Research Fellow in Birmingham).

Several activities have taken place in the last few months. In May, the UK trainees selected by YDEF to attend the annual three-day North European Young Diabetologist (NEYD) conference travelled to the Netherlands to present and discuss their research with world-renowned senior discussants. NEYD is a joint meeting among the trainee wings of the UK, the Netherlands and Denmark which allows delegates who are contemplating or starting out in their research careers to meet their peers from Northern

Europe. We would like to congratulate Nick Thomas from Exeter on winning the NEYD 2022 best presentation.

June was a very busy and productive month during which we were delighted to lead two popular courses. Working directly with DTN UK, we organised the YDEF Technology course, which was heavily oversubscribed once more. The course allowed participants to increase their knowledge and confidence in the use of technology in T1DM. A few days later, the two-day YDEF Obesity course took place. It was very well received by the trainees, who participated in interactive talks given by renowned professionals in the field. The feedback from the attendees was very positive for both events.

Continued...

On 6th July, we organised the YDEF Day at the Royal College of Physicians in London. Delegates had the opportunity to attend a talk about the implications of the 4-year higher specialty training programme and the introduction of IMT3, as well as some very interesting sessions on diabetes & endocrine updates, and to participate in interactive workshops. Also, the YDEF Marjorie Prize winners were given the opportunity to present their projects on health-care inequalities in diabetes and to receive constructive feedback.

In the past months, we have successfully launched bursaries to support those who failed their first attempt at the Specialty Certificate

Examinations (SCE) and grants/scholarships to further support research and networking (DUK YDEF Travel Award, YDEF-Lilly Scholarship for EASD 2022).

Our upcoming popular events The YDEF ABC of D&E and The YDEF Technology course are taking place in December in Nottingham. These courses were instantly sold out. We look forward to welcoming the attendees. A Diabetic foot course, a Cardiometabolic course and podcasts are just some of the new initiatives planned for the future. Watch this space.

Finally, on behalf of the rest of the committee, I would like to thank our outgoing chair Giulia Argentesi for all her efforts, guidance

and leadership. We wish our new chair, Tom Crabtree, the best of luck taking over the role for the next year.

There are lots of exciting activities coming up in the future! You can always visit our website (<https://www.youngdiabetologists.org.uk/>) and follow us on Twitter @youngdiab so we stay connected and explore new opportunities together.

Dr Alexandros Liarakos
on behalf of YDEF Committee
Contact: alexandros.liarakos@gmail.com

YDEF is dedicated to all diabetes and endocrine trainees and is open for new members to register on our website. Take advantage of our regular newsletters and up-to-date advertising of a wide variety of courses and meetings to complement your training. As always, we are continuously looking to develop and propagate our specialty so do not hesitate to contact us if you have any suggestions or questions!

www.youngdiabetologists.org.uk @youngdiab on twitter



We have had a productive year this year in the DTN.

1. Membership

Membership of the DTN is different to that of ABCD as it includes educators and nurses. We currently have 1,454 members 24% of whom are consultants, and increasing numbers of registrars who are members (currently 112) by making closer ties with YDEF.

2. Meetings DTN day

We had a very successful DTN day in September with >150 delegates and with a high level of feedback. We also ran two 3-day courses for trainees, an educators day in June in Manchester and have another training day in December at King's College London (this has just been moved to February 2023 due to a rail strike).

3. Organisation and Membership

The DTN Committee also discussed and agreed changes in its membership. There will be a wider membership with defined representation that will feed into this.

We aim to organise the committee so that we will have four regional representatives from the four nations, three elected members and some co-opted members that will include the ABCD chair, and representatives from ABCD, PCDS, YDEF and DAFNE. We will also have three lived experience representatives.

Advertisements for people with lived experience as well as for educators will be put out shortly. Please do make informal enquiries to Alistair or me if you are interested.

4. A best practice guide for closed loops

This guide is almost ready for release. We are also working on a revised version of the DTN technology pathway in collaboration with Diabetes UK and JDRF to support business cases for CGM across the country. We are looking to subscribe to the Close Concerns newsletter, see link at end of point 6, which will provide up-to-date information on the latest

news in the diabetes technology world to our membership. Emma Wilmot and Tom Crabtree have led on the ABCD audit on the NHS England closed-loop pilot; the data have been submitted to NICE and the paper has been submitted. ACADEMY continues to attract high levels of interaction, with more than 500 courses started per month over the last year.

5. NICE TA on closed loops

We have just seen the draft of the NICE TA on hybrid closed loops and we have provided stakeholder input into this draft. We hope that when this is finally released in Spring next year, it will lead to much wider access to closed-loop therapy for people living with Type 1 diabetes.

6. Close Concerns

Close Concerns is an organisation in the US that provides a daily and weekly update of all the latest news in the world of diabetes and technology. Although it is US-based, the organisation provide really good writeups of all the major conferences and all the major news and we are looking to provide access to their newsletter via ABCD membership for those who are interested. [<https://www.closeconcerns.com>]

7. Closed-loop education

We aim to set up some webinars and more hands-on face-to-face sessions working with industry partners to support all team members to help with rollout of closed-loop systems in time for the NICE TA early next year.

8. More videos

With wider access to diabetes technology and the latest NICE guidance supporting use of CGM in insulin-treated type 2 diabetes, we are going to film some more videos to be patient-facing as well as HCP-facing to support this. Keep your eyes on the Academy and DTN websites.

Professor Pratik Choudhary
Contact: pratik.choudhary@leicester.ac.uk