



## From the desk of the chairman, Ketan Dhatariya

2024 is already promising to be a fantastic year for ABCD, with new programmes, events and activities. I am delighted to announce that we have extended associate membership to all healthcare professionals who represent the multidisciplinary team which provides care for people with diabetes. Associate members receive all the benefits of membership except voting rights at the AGM, which helps to ensure that our purpose, goals and ambitions remain led **by** and **for** consultant diabetologists. This last issue has been debated repeatedly over the years; each time we come back to our core membership – <https://abcd.care/join#associate>



In this, my first year as chair of the committee and ABCD Executive, we have strengthened our governance and reporting responsibilities.

We have been working to strengthen and enhance our external relationships with partner organisations such as DUK and YDEF and our representation on national bodies.

In collaboration with our parent charity, Diabetes Care Trust, we have once again been able to successfully award two research grants totalling £50,000. The first grant was awarded to Gordon Sloan at the University of Sheffield, who will be investigating the efficacy of cerebral bioenergetics as a biomarker for neuropathic pain in diabetic peripheral neuropathy. The second grant will be awarded to Lauren Quinn at the University of Birmingham, who will be testing the acceptability of adult screening for T1DM. Look out for announcements on how to apply for this year's grant.

We also introduced an exciting new “Dragons’ Den” style research grant programme where researchers presented their proposals to a panel of experts. We were delighted to award a total of £20,000 between Emma Johns at NHS Glasgow and Clyde for her project on hybrid closed-loop systems to prevent recurrent DKA in high-risk people with diabetes, and Oluwaseun Anyiam at University Hospitals of Derby and Burton for his project exploring whether high-intensity interval training can improve maintenance of T2DM remission. Please take the time to read about Emma and Oluwaseun’s experience of the Diabetes “Dragons’ Den” in our interviews with the successful applicants – <https://abcd.care/dragons-den>.

I would like to thank all those who applied for grants and to especially thank all those involved in the review of the applications, which was a huge commitment led by Susan Wong and the research committee. Please feel free to apply when the initiative is launched again later this year.

2024 has kicked off with several events. Our extremely popular and well-respected Diabetes Update programme was held in January. This three-day meeting for SpRs provided a fantastic opportunity for networking and learning. Delegate feedback has again been excellent. I am very grateful to all those who contributed their time and expertise in developing this important programme. Later in the year the dates for 2025 will be announced, so please let your trainees know to look out for them.

We have also delivered an event to support those looking to achieve CESR (Certificate of Eligibility for Specialist Registration, now known as the portfolio pathway) in diabetes and endocrinology and two Diabetes Technology Network educators meetings.

We have a packed programme for the rest of the year, including our Consultant Development Programme (CDP) from the 14th to 18th October 2024 in Birmingham and the annual conference for DTN and ABCD on the 4th and 5th September in Bristol. Featuring inspiring sessions, highly relevant presentations, professional education, expert speakers and networking for clinicians working in diabetes and endocrinology, the ABCD and DTN annual conference is not to be missed and we encourage you to register early. Check out our events pages for more information on regional and national ABCD and DTN meetings – <https://abcd.care/events>.



In addition to our in-person events we are running a quarterly webinar programme. The first was held in February, covering the topic of Diabetes and Ramadan. The next session in June, on the Re:Mission study, explored learning from staff and service user insights from the NHS Low Calorie Diet pilot. You can watch previous webinars on demand and register for upcoming webinars via the ABCD website – <https://abcd.care/abcd-webinars>.



I am also delighted to announce that we will shortly be supplementing our webinar programme with a new Podcast channel featuring regular interviews with experts in the field discussing the topics that matter to you.

I am thrilled to let you know that *The*

*British Journal of Diabetes* has been accepted for membership by the Committee of Publishing Ethics (COPE). This is a big step forward in our preparations for PubMed application. Marie-France Kong and Chris Walton have been working very hard behind the scenes to get this done. From this issue onwards, all journal articles will be published under a Creative Commons licence, ensuring we truly operate an open access Journal.

Our education programme continues, and we are delighted to continue to host the Joint British Diabetes Societies for Inpatient Care Group, the Obesity Management Collaborative and the Diabetes Technology Network.

With membership numbers touching 800 we have a strong, vibrant, and active membership and a powerful voice representing diabetes specialists and the patients for whom we care. There is always room for growth, however, and it

is important that we are welcoming and inclusive in our membership. I encourage those who have yet to join ABCD to consider signing up at <https://abcd.care/join>. There are many benefits of membership, including discounted delegate rates for events and access to mentoring, grant programmes and member-exclusive resources.



We are working with international partner organisations from around the world who have expressed an interest in associating and affiliating with us. If you have links with national organisations in different parts of the world who you think might like to talk to us about how ABCD can help them (or equally how they can help us!), then get in touch.

As chair of the ABCD committee I

would like to take this opportunity to thank all our corporate sponsors of both ABCD and DTN, without whom none of these programmes and supporting activities would be possible. Sponsors include: A Menarini Farmaceutica Internazionale SRL, Abbott, Air Liquide Healthcare Ltd, AstraZeneca UK, Boehringer Ingelheim and Lilly Alliance, Dexcom, Eli Lilly and Company, Insulet International, Medtronic Limited, Sanofi, and Ypsomed Ltd.

As always, if you think of something that you feel ABCD should be doing, then please let us know. We are your organisation, and we represent and advocate for you.

I look forward to seeing you all at this year's conference.

**Ketan Dhatariya,  
ABCD Chair, Norwich.**

## From the desk of the News Editor, Umesh Dashora

### JBDS-IP news (Omar Mustafa)

The Joint British Diabetes Societies for Inpatient Care (JBDS-IP) group published two new guidelines this month. The first is on using technology to support diabetes care in hospital. The guidelines, produced jointly with Diabetes Technology Network UK (DTN-UK), are the first comprehensive document in the UK to address use of diabetes technology in hospital. The guidelines focus on care in hospital for people wearing diabetes technology (pump, glucose sensors and hybrid closed-loops), networked point of care glucose/ketones meters, electronic prescribing and medicines administration systems and electronic health records. Also included is a set of audit standards.

The second document addresses glycaemic management during enteral feeding for people with diabetes in hospital. This document expands the scope of the previous document that focused on management of blood glucose in people receiving enteral

feeding in the context of stroke care, which has been widely used and adapted. The new document provides advice to the diabetes multidisciplinary team and the non-specialist team on how to manage and when to escalate care. A systematic review of the evidence base is currently under way to inform the update and future directions of research in this field. This document is a collaboration between JBDS-IP, Diabetes UK, the Association of British Clinical Diabetologists (ABCD) and the Diabetes Inpatient Specialist Nurse (DISN) UK Group.

Whilst both documents address gaps in care, there are many unanswered research questions that have been included in the documents. These will hopefully drive groups nationally to collaborate and drive improvements and generation of an evidence base.

### Rowan Hillson Award (Umesh Dashora)

The Rowan Hillson Award competition is open for submissions. Please submit your entry if you want to highlight any innovation from your team that improves inpatient diabetes care. The project may

cover any or all aspects of empowering people with diabetes, demonstrating value for money, encouraging collaboration, scalability and sustainability. The winning team will be invited to present their innovation at the next ABCD/DTN conference in Bristol (4-5th September, 2024). ABCD will offer free conference registration, complimentary places at the conference dinner, accommodation for one night and travel expenses for two team members from the winning and runner-up teams. The winning entries will also have the chance to publish their work on our website and in our journal. The project is being led by Prof Umesh Dashora.

<https://abcd.care/announcement/rowan-hillson-inpatient-diabetes-award-2024>

### News from ABCD audits (Bob Ryder)

At the Diabetes UK annual professional conference at ExCel London, 17-19th April 2024, Dr Tom Crabtree presented data from the ABCD NHS England pilot audit of hybrid closed-loop therapy (HCL), which was launched in 2021. His examination of factors predicting

achievement of recommended time in range (TIR) and HbA<sub>1c</sub> 12 months following HCL in individuals with elevated baseline HbA<sub>1c</sub> levels showed that only baseline TIR predicted achievement of either 70% TIR or HbA<sub>1c</sub> at target after 1.3 years of follow-up in the multivariate model. He concluded that all users in the real world benefit equally, irrespective of ethnicity, gender and deprivation status. His oral presentation of these data was joint winner of the Young Diabetologists and Endocrinologists Forum Travel Award. In a separate poster from the same audit, Dr Emma Wilmot demonstrated that significant HbA<sub>1c</sub> reductions and improvements in sensor glucometrics are seen with HCL therapy. These occur by six months and are sustained out to 1.3 years' follow-up.

In his poster EndoBarrier treatment for longstanding type 2 diabetes and obesity: outcomes two years after EndoBarrier in 90 consecutively treated patients from the Birmingham Centre of the ABCD EndoBarrier Worldwide Registry, Dr Bob Ryder demonstrated that in patients with refractory diabetes, EndoBarrier resulted in considerable weight loss, improvement in glycaemic control, reduction in a marker of fatty liver (ALT) and reduction in the need for insulin; and that there continued to be significant improvement two years after removal in 80% of patients. DUK issued a press release about the findings, which led to articles in the Daily Mail and in Medscape Diabetes & Endocrinology.

In a poster looking at predictors of response to injectable once-weekly semaglutide in the ABCD Semaglutide Audit, Dr Ben Field demonstrated in this real-world study that baseline HbA<sub>1c</sub> and weight are predictors of the respective outcomes following initiation of semaglutide. Individuals who are younger may derive more glycaemic benefit from semaglutide, and individuals switching to semaglutide from alternative GLPIRAs had smaller additional HbA<sub>1c</sub> and weight reductions.

<https://abcd.care/announcement/abcd-audits-win-prizes-and-found-newsworthy-recent-duk-meeting-london>

The ABCD audit programme featured at the 17th International Conference on

Advanced Technologies & Treatments for Diabetes (ATTD 2024), which was held on 6-9 March 2024 in Florence, Italy.

In an oral presentation, Dr Tom Crabtree presented data showing that in the ABCD NHS England pilot audit of HCL, which was launched in 2021, the improvements in HbA<sub>1c</sub> and sensor glucometrics were sustained to 12 months' follow-up. In a poster presentation he showed that mild weight increases are observed six months following HCL, which then plateau, and that the weight gain correlates with increased total daily insulin dose. In another poster presentation he demonstrated that HCL is associated with reductions in diabetes distress and with positive impacts on quality of life.

In an oral presentation, Dr Bob Ryder presented data from the ABCD worldwide EndoBarrier registry suggesting that the considerable benefits of EndoBarrier on weight and HbA<sub>1c</sub> are achieved in nine months and that a reduction in the recommended implantation period from 12 to nine months would reduce serious adverse events (SAE). More than 60% of liver abscess SAEs would be avoided if the implantation period was reduced to nine months.

<https://abcd.care/announcement/abcd-audits-recent-attd-meeting-florence>

### Update on diabetic renal disease (Andrew Frankel)

There is significant concern that over the next 10 years there will be a dramatic increase in the number of people requiring dialysis in the UK, driven predominantly by the growth in number of people with diabetic kidney disease. Because of this, NHS specialist commissioning services in London have invested £10 million over the next two years on a range of projects across the five Integrated Care Systems to pilot potential solutions to reduce the long-term requirement for in-centre haemodialysis.

In North West London (NWL) several programmes are currently being set up which will have an impact on the care of people with diabetes.

1. Working together teams based in Harrow primary care, together with secondary care nephrology, diabetes

and cardiac failure services, are establishing a model of care based around a cardiorenal metabolic hub within the community. This is aimed at ensuring that all people with early cardiorenal metabolic disease (predominantly individuals with diabetes) are managed according to best practice guidelines by clinicians trained in their care, thus reducing progression of their underlying disorder.

2. The NWL nephrology team have developed a range of utilities in conjunction with partners in primary care and people with lived experience to improve the pathway for people with early kidney disease (again, a significant number of these will be individuals with diabetes). This project aims to increase screening of kidney disease, coding of kidney disease and then clinical optimisation. In Ealing Borough these utilities are being rolled out in conjunction with a communication and educational programme for both staff and people with the underlying condition, and with financial incentivization.
3. NWL has a high incidence of end-stage kidney failure driven by the large number of people in the region with diabetes. Indeed, more than 50% of people on dialysis in West London have diabetes. These individuals are often isolated and do not receive the quality of care that a person with diabetes should expect. A project is being undertaken to improve the care of people with diabetes on dialysis in NWL built around the 2022 Joint British Diabetes Society guidelines. The aim is to ensure that these individuals are both more likely to receive a kidney transplant and, if they are transplanted, to have better diabetes control and therefore better outcomes.

These programmes will run over the next two years and are being fully evaluated by the NHS specialty commissioning service.

### Diabetes in the elderly (Giuseppe Maltese)

These are seven key messages from a

talk delivered at the recent Diabetes UK conference.

1. Globally, we are witnessing ageing of the population and a rapid increase in the prevalence of diabetes among older individuals
2. In the UK, as of 2020, nearly three-quarters of individuals registered with a practice and diagnosed with T2DM were aged 60 and above. Just over a quarter of those with T1DM were in the same age group
3. The emerging challenge lies in managing diabetes alongside geriatric syndromes (e.g. cognitive impairment, depression and disability), a group of conditions commonly observed in older adults which can significantly impact diabetes self-management and overall quality of life
4. Community diabetes services, employing a multidisciplinary team (MDT) approach, are increasingly responsible for the care of older individuals with diabetes, regardless of their living situation, and should proactively identify frail older individuals and promptly recognize signs of early cognitive impairment and depression
5. Treatment objectives should be tailored to individual patients based on their level of frailty, number of co-morbidities and life expectancy
6. Hypoglycaemia poses a significant threat to frail older individuals but can be mitigated through the integration of technology (e.g. CGM) into diabetes management strategies
7. Diabetes care in care homes remains a neglected area and needs improvement, especially in several specific areas such as diabetes screening, hypoglycaemia treatment, managing diabetes during illnesses, assessing foot risk and educating care home staff.

### **Diabetic ketoacidosis (Punith Kempegowda)**

The increasing incidence of diabetic ketoacidosis (DKA) in the UK underscores the critical need for interventions to enhance care and lower expenses. Local audits often lack the scope for collaboration among hospitals.

The DEKODE (Digital Evaluation of Ketosis and Other Diabetes Emergencies) initiative is designed to standardize DKA management practices with no additional costs.

Participating hospitals stand to gain significantly from DEKODE's approach, receiving regular feedback on key performance indicators of DKA care compared to the median of all participating hospitals. This feedback loop aids in pinpointing areas for improvement, ultimately leading to reduced DKA duration and a more consistent standard of patient care.

Moreover, DEKODE presents an opportunity to involve medical students and junior doctors in its model. By engaging them, the initiative not only taps into fresh perspectives but also nurtures their ability to contribute to research, evidence-based guidelines and leadership development. For more information, please visit the DEKODE website.

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### **From the desk of Rebecca Reeve (Sanofi)**

#### **Qic**

Quality in Care Diabetes (Qic), now in its 14th year, was launched at the 2024 Diabetes UK professional conference. A new category for 2024 might be evaluating whether you have been using data to improve your diabetes service. You might, for example, have used data-led prioritisation to prioritise your diabetes patients so that you can focus your resources on the patients with a reduced clinical risk to create capacity for a Hybrid Closed-Loop Clinic. Check out the categories you could enter here <https://qualityincare.org/diabetes/categories/> and submit your entry by 5th July 2024.

#### **The New Hospital Programme**

The New Hospital Programme team has faced issues recruiting to internal roles and recently had a 50 per cent vacancy rate, the government has admitted. Around two-thirds of its workforce were outsourced at the end of last year, according to a letter sent to MPs. This

was a similar workforce split to the previous year. Department of Health and Social Care official Shona Dunn said the programme planned to spend more than £800m on “external specialist expertise” in the seven years until 2030-2031. She said this would be around 4% of total expenditure. The team is responsible for building 40 “new hospitals” by the end of the decade, as well as a promised rolling programme of capital investment beyond this date.

Five hospitals constructed using mostly reinforced autoclaved aerated concrete (RAAC) will be rebuilt by 2030 as part of the New Hospital Programme, a measure expected to be backed by over £20 billion of investment in hospital infrastructure. The five hospitals are Airedale in West Yorkshire, Queen Elizabeth King's Lynn in Norfolk, Hinchingsbrooke in Cambridgeshire, Mid Cheshire Leighton in Cheshire, and Frimley Park in Surrey. This is in addition to two of the worst affected hospitals - West Suffolk Hospital in Bury St Edmunds and James Paget Hospital in Norfolk. The NHS has asked the government to prioritise the rebuilding of these hospitals given the risks they pose to patients and staff: the full extent has come to light since the New Hospital Programme was first announced in 2020. New Hospital Programme – media fact sheet – Department of Health and Social Care Media Centre ([blog.gov.uk](http://blog.gov.uk))

#### **The IRP**

Launched in January 2024, the International Recognition Procedure (IRP) aims to help bring life-saving new medicines to UK patients without delay. The IRP allows the Medicines and Healthcare products Regulatory Authority (MHRA) to accelerate the assessment of new medicines by considering the expertise and decision-making of trusted regulatory partners in the authorisation process. As a result, medicines that have been approved in other countries with stringent regulators will reach UK patients without delay, resulting in a more rapid, efficient and cost-effective process. The first product through this process (a formulation of denosumab, a treatment used in adults

to prevent serious bone-related complications caused by bone metastases and to treat giant cell tumours of bone in adults and adolescents) was authorised in 30 days, providing UK patients with earlier access to this treatment thanks to international recognition. IRP is open to applicants that have already received an authorisation for the same product from one of MHRA's specified trusted regulators. These are the regulatory authorities from Australia, Canada, the EU, Japan, Switzerland, Singapore and the US. As a sovereign regulator, the MHRA retains ultimate authority to accept or reject applications submitted under the IRP, ensuring that all products meet safety, quality and effectiveness standards to be licensed in the UK. MHRA grants first approval via the new International Recognition Procedure in 30 days - GOV.UK ([www.gov.uk](http://www.gov.uk))

### Genetic links between diabetes and cancers

The study by the University of Surrey examined the DNA of 36,000 people to see whether genetics could help to

explain why some people with T2DM also develop cancer. The research focused on the three cancer types that people with T2DM are at higher risk of developing – post-menopausal breast cancer, colorectal (bowel) cancer and pancreatic cancer. For the first time, two specific genetic variants were pinpointed as key contributors to people developing both T2DM and some cancers. One variant was linked to the risk of developing both breast cancer and T2DM. The other affected T2DM and breast, colorectal and pancreatic cancer risk. A further 17 variants which increase the risk of developing T2DM and change the body in ways which increase the risk of cancer – such as through higher blood sugar and insulin levels, inflammation and hormonal changes – were also identified. The findings of the study, led by Prof Inga Prokopenko, were presented at the Diabetes UK Professional Conference in London.

### UK medication shortages

Pharmacists have issued an updated warning over the UK medication shortage as a greater number of drugs

become less accessible to patients. A poll of 1,562 UK pharmacists for the *Pharmaceutical Journal* found that more than half (54%) believed patients have been put at risk in the last six months due to shortages. Unpublished figures reveal that the number of products in short supply has doubled in the past two years. The plummeting value of the pound since the Brexit referendum and government policies such as taxing manufacturers have exacerbated the crisis. Additionally, disruptions in global supply chains due to the war in Ukraine have further impacted medicine availability in the UK and other European countries. Patients' well-being is at stake, and urgent measures are needed to address this critical issue. The situation affects a wide range of treatments, from controlling epileptic seizures to managing conditions like cancer, schizophrenia and T2DM. Special report: the UK's medicines shortage crisis - *The Pharmaceutical Journal* (<https://pharmaceutical-journal.com/article/feature/special-report-the-uks-medicines-shortage-crisis>)

## Interesting recent research

### Umesh Dashora

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

Authors, Journal	Type of Study	Main results
Wu <i>et al</i> , <i>Diabetes Care</i>	Cohort study	<p><b>Genome-wide association study identifies pharmacogenomic variants associated with metformin glycemic response in African American patients with T2DM</b></p> <p>Metformin is the most common treatment for T2DM but no pharmacogenetic studies for T2DM have used African American patients in the discovery analysis. A considerable amount of treatment response for the change in HbA<sub>1c</sub> levels whilst on metformin is genetically determined. A novel genetic variant rs143276236 in gene ARFGEF3 is associated with change in HbA<sub>1c</sub> levels. This highlights the need for diversity in pharmacogenetic studies.</p> <p>Wu B, Yee SW, Xiao S, <i>et al</i>. Genome-wide association study identifies pharmacogenomic variants associated with metformin glycemic response in African American patients with type 2 diabetes. <i>Diabetes Care</i> 2024;47(2):208-15. <a href="https://doi.org/10.2337/dc22-2494">https://doi.org/10.2337/dc22-2494</a>. PMID: 37639712; PMCID: PMC10834390</p>
Tilden <i>et al</i> , <i>Diabetes Care</i>	Retrospective cohort study	<p><b>Disparities in CGM use between children with T1DM living in urban and rural areas</b></p> <p>Paediatric patients with T1DM have continuous glucose monitoring (CGM) to improve glycaemic outcomes. The use of CGM enables caregivers to make active decisions about daily insulin treatment. However, the use of CGM is minimal amongst those from a rural location. Alongside other risk factors such as socioeconomic status, racial and ethnic background, geographic place poses a barrier to care for T1DM patients. More effort is needed to identify and address the needs of families and children living in rural areas so that they can receive the same care as those living in urban areas.</p> <p>Tilden DR, French B, Datye KA, Jaser SS. Disparities in continuous glucose monitor use between children with type 1 diabetes living in urban and rural areas. <i>Diabetes Care</i> 2024;47(3):346-52. <a href="https://doi.org/10.2337/dc23-1564">https://doi.org/10.2337/dc23-1564</a>. PMID: 37906202; PMCID: PMC10909681</p>



Authors, Journal	Type of Study	Main results
Thorius <i>et al</i> , <i>Diabetes Care</i>	Real-world study	<p><b>Fetal overgrowth and preterm delivery in women with type 1 diabetes using insulin pumps or multiple daily injections: a post hoc analysis of the EVOLVE study cohort</b></p> <p>This study focused on the risks of fetal overgrowth and preterm delivery in pregnant women with T1DM who were treated with two different modalities. They focused on the outcomes on treatment with insulin pumps compared to treatment with multiple daily injections. Findings suggested that the use of insulin pumps had negative consequences as these women had a higher risk of large for gestational age offspring and preterm deliveries, compared to the cohort who used multiple daily injections.</p> <p>Thorius IH, Husemoen LLN, Nordsborg RB, et al. Fetal overgrowth and preterm delivery in women with type 1 diabetes using insulin pumps or multiple daily injections: a post hoc analysis of the EVOLVE study cohort. <i>Diabetes Care</i> 2024;47(3):384-92. <a href="https://doi.org/10.2337/dc23-1281">https://doi.org/10.2337/dc23-1281</a>. PMID: 38128075</p>
Zuraikat <i>et al</i> , <i>Diabetes Care</i>	Randomised control study	<p><b>Chronic insufficient sleep in women impairs insulin sensitivity independent of adiposity changes: results of a randomised trial</b></p> <p>Prolonged insufficient sleep of 6.2 hours per night for six consecutive weeks led to impaired glucose metabolism in women. Fasting insulin levels were increased in the sleep-restricted group versus the adequate sleep group.</p> <p>This study reinforces the idea that insufficient sleep is a modifiable risk factor for insulin resistance in women.</p> <p>Zuraikat FM, Laferrère B, Cheng B, et al. Chronic insufficient sleep in women impairs insulin sensitivity independent of adiposity changes: results of a randomized trial. <i>Diabetes Care</i> 2024;47(1):117-25. <a href="https://doi.org/10.2337/dc23-1156">https://doi.org/10.2337/dc23-1156</a>. PMID: 37955852; PMCID: PMC10733650</p>
Anthony <i>et al</i> , <i>Diabetes Care</i>	Real-world study	<p><b>Risk of anaphylaxis among new users of GLP-1 receptor agonists</b></p> <p>GLP-1 receptor agonists are an important class of drug for treatment of DM and obesity. Anaphylaxis was defined as skin or mucosal lesion of acute onset, associated with involvement of at least one other organ system. The study outcome confirmed that anaphylaxis is rare with GLP-1s. There was a total of 188 anaphylactic events amongst 696,089 individuals.</p> <p>Anthony MS, Aroda VR, Parlett LE, et al. Risk of anaphylaxis among new users of GLP-1 receptor agonists: a cohort study. <i>Diabetes Care</i> 2024;47(4):712-719. <a href="https://doi.org/10.2337/dc23-1911">https://doi.org/10.2337/dc23-1911</a>. PMID: 38363873; PMCID: PMC10973896</p> <p>Longitudinal changes in SHBG and risk of incident diabetes: the study of women's health across the nation (SWAN)</p>
Hedderson <i>et al</i> , <i>Diabetes Care</i>	Real-world study	<p><b>This study explored the link between changes in sex hormone binding globulins (SHBG) and testosterone throughout menopause with the likelihood of developing diabetes.</b></p> <p>2,952 participants who were premenopausal and who were non-diabetics were followed for up to 17 years. Diabetes developed in 376 women. Increasing levels of SHBG over the menopause transition were associated with decreased risk of diabetes. This study highlights the likelihood of SHBG affecting glucose through various mechanisms.</p> <p>Hedderson MM, Capra A, Lee C, et al. Longitudinal changes in Sex Hormone Binding Globulin (SHBG) and risk of incident diabetes: the Study of Women's Health Across the Nation (SWAN). <i>Diabetes Care</i> 2024;47(4):676-82. <a href="https://doi.org/10.2337/dc23-1630">https://doi.org/10.2337/dc23-1630</a>. PMID: 38320264; PMCID: PMC10973900</p>
Besser <i>et al</i> , <i>Diabetes Care</i>	Real-World Study	<p><b>Transdermal blood sampling for C-peptide is a minimally invasive, reliable alternative to venous sampling in children and adults with T1DM</b></p> <p>C-peptide and islet autoantibodies are T1DM biomarkers. The use of transdermal capillary blood collection is a practical alternative to using venous sampling.</p> <p>Transdermal sampling took a mean time of 2.35mins. Transdermal capillary blood showed 100% sensitivity in detecting venous C-peptide &gt;200pmol/L. It was also preferred when compared to venous sampling, with 63% of T1DM patients preferring transdermal capillary blood testing compared to 7% who disagreed and 30% who were undecided.</p> <p>Besser REJ, Long AE, Owen KR, et al. Transdermal blood sampling for C-peptide is a minimally invasive, reliable alternative to venous sampling in children and adults with type 1 diabetes. <i>Diabetes Care</i> 2024;47(2):239-45. <a href="https://doi.org/10.2337/dc23-1379">https://doi.org/10.2337/dc23-1379</a>. PMID: 38087932</p>
Jafar <i>et al</i> , <i>Diabetes, Obesity and Metabolism</i>	Review article	<p><b>Postprandial glucose control in people with T1DM</b></p> <p>In this review the authors suggest that postprandial glucose control can be improved by providing personalized recommendations for meal macronutrients and postprandial activity, including behavioural recommendations, using other personalized therapeutic approaches (e.g. glucagon-like peptide-1 receptor agonists, sodium-glucose co-transporter inhibitors, amylin analogues, inhaled insulin) in addition to insulin therapy, and integrating an interpretability report to explain to individuals about changes in treatment therapy and behavioural recommendations. It was also recommended to implement precision recommendations for individuals with T1DM utilizing the potential of deep reinforcement learning and foundation models (such as GPT and BERT) and employing different modalities of data including diabetes-related and external background factors (behavioural, environmental, biological and abnormal events).</p> <p>Jafar A, Pasqua MR. Postprandial glucose-management strategies in type 1 diabetes: current approaches and prospects with precision medicine and artificial intelligence. <i>Diabetes Obes Metab</i> 2024;26(5):1555-66. <a href="https://doi.org/10.1111/dom.15463">https://doi.org/10.1111/dom.15463</a>. Epub 2024 Jan 23. PMID: 38263540</p>

Authors, Journal	Type of Study	Main results
Vora <i>et al</i> , <i>Diabetes, Obesity and Metabolism</i>	Review article	<b>Integrated management of cardiovascular, renal and metabolic (CaReMe) diseases</b> In this review the authors emphasize the need to have an integrated approach, including drug and non-drug approaches, to offer cardiac, renal and metabolic benefits. It is recognised that interdisciplinary work and integrated care models involving cardiac, renal, metabolic and primary care physicians can improve early diagnosis, increase better adherence to guidelines, save money, optimize resources and improve patient outcomes. <i>Vora J, Cherney D, Kosiborod MN, et al; CaReMe Global Alliance. Inter-relationships between cardiovascular, renal, and metabolic diseases: underlying evidence and implications for integrated interdisciplinary care and management. Diabetes Obes Metab. 2024;26(5):1567-81. <a href="https://doi.org/10.1111/dom.15485">https://doi.org/10.1111/dom.15485</a>. Epub 2024 Feb 8. PMID: 38328853</i>
Malin <i>et al</i> , <i>Diabetes, Obesity and Metabolism</i>	Experimental research	<b>Intermediate chronotypes (INT) have lower insulin sensitivity than morning chronotypes (MORN)</b> The authors of this study have published the results of this euglycaemic-hyperinsulinaemic pump study. The results show MORN had higher aerobic fitness (VO <sub>2</sub> max) compared with INT ( $p < .01$ ), although there was no difference in fat mass. While fasting flow-mediated dilatation of brachial artery (FMD) was similar between groups, insulin lowered FMD in INT compared with MORN. INT also had a lower fasting nitrate ( $p = 0.03$ ) and arginine ( $p = 0.07$ ). The authors concluded: 'When measured during the morning, INT had a lower vascular insulin sensitivity than MORN. Additional work is needed to understand endothelial function differences among chronotypes to optimize cardiovascular disease risk reduction.' <i>Malin SK, Remchak ME, Heiston EM, et al. Intermediate versus morning chronotype has lower vascular insulin sensitivity in adults with obesity. Diabetes Obes Metab 2024;26(5):1582-92. <a href="https://doi.org/10.1111/dom.15456">https://doi.org/10.1111/dom.15456</a>. Epub 2024 Jan 21. PMID: 38246697; PMCID: PMC11001524</i>
Vernstrøm <i>et al</i> , <i>Diabetes, Obesity and Metabolism</i>	32-week randomised trial	<b>Combined treatment with semaglutide and empagliflozin reduces blood pressure and increases time in range</b> In this clinical trial the authors compared the effect of semaglutide, empagliflozin and the combination of the two against placebo. Twenty-four-hour systolic BP was reduced by 10 mmHg (95% CI 6–14 mmHg, $p < 0.001$ ) in the combination group, significantly superior to both placebo and monotherapy ( $p < 0.05$ ). Combination treatment also increased glycaemic time in range from 72% at baseline to 91% at week 32, $p < 0.001$ , without increasing time below range. The urinary albumin to creatinine ratio decreased by 36% (95% CI 4–57), $p = 0.03$ in the combination group compared with placebo. The authors conclude that 'the combination of empagliflozin and semaglutide reduces BP more than either treatment alone. Combination treatment also increased glycaemic time in range without increasing the risk of hypoglycaemia.' <i>Vernstrøm L, Gullaksen S, Sorensen SS, et al. Separate, and combined effects of empagliflozin and semaglutide on vascular function: a 32-week randomized trial. Diabetes Obes Metab 2024;26(5):1624-35. <a href="https://doi.org/10.1111/dom.15466">https://doi.org/10.1111/dom.15466</a>. Epub 2024 Jan 19. PMID: 38240066</i>
Chan <i>et al</i> , <i>Diabetes, Obesity and Metabolism</i>	NIPPeR study	<b>Higher early pregnancy myo-inositol is associated with increased postprandial glycaemia later in pregnancy</b> The authors published the results of this study on insulin indices using linear regression and adjusting for covariates. The results showed that higher 7-week myo-inositol, but not 28-week myo-inositol, was associated with higher 1-hour plasma glucose and higher 2-hour plasma glucose. The authors clarify, however, that the clinical significance of a 7-week myo-inositol-related increase in glycaemia was limited as there was no association with gestational diabetes risk, birthweight or cord C-peptide levels. The authors conclude that the optimal timing of myo-inositol supplementation needs further investigation. <i>Chan SY, Zhang H, Wong JT, et al; NIPPeR Study Group. Higher early pregnancy plasma myo-inositol associates with increased postprandial glycaemia later in pregnancy: secondary analyses of the NIPPeR randomized controlled trial. Diabetes Obes Metab 2024;26(5):1658-69. <a href="https://doi.org/10.1111/dom.15468">https://doi.org/10.1111/dom.15468</a>. Epub 2024 Feb 5. PMID: 38312016</i>
Kersten <i>et al</i> , <i>Diabetes, Obesity and Metabolism</i>	Prospective cohort study	<b>Metabolic alterations are relevant to taste bud density (TBD), taste and smell functions</b> In this study the authors present the study design and initial results. The preliminary results show that HbA <sub>1c</sub> and age are negatively associated with TBD, while an unfavourable metabolic profile, current dieting and vegan diet are related to taste perception. Olfactory function negatively correlates with age and high-density lipoprotein cholesterol. Initial findings suggest that metabolic alterations are relevant for taste and smell function and TBD. By combining data related to taste perception and eating behaviour, the Obese Taste Bud (OTB) study aims to strengthen our understanding of taste perception in obesity. <i>Kersten A, Lorenz A, Nottmeier C, et al. The Obese Taste Bud study: objectives and study design. Diabetes Obes Metab 2024. <a href="https://doi.org/10.1111/dom.15563">https://doi.org/10.1111/dom.15563</a>. Epub ahead of print. PMID: 38618969</i>
Hald, <i>et al</i> , <i>Diabetic Medicine</i>	Clinic-based prospective study	<b>High mortality in people with diabetic foot ulcers</b> In this study the authors reported high mortality rates in people with diabetic foot ulcer attending Salford podiatry clinic. They compared the expected mortality with the observed mortality in their foot clinic. They reported that of the 98 individuals attending the foot clinic 35 had died within three years, giving a standardised mortality ratio (SMR) of 5.0. Up to the

Authors, Journal	Type of Study	Main results
		<p>end of a further four years, 33 more had died with an SMR of 8.4. At end of follow-up 68/98 individuals had died. The cause of death was sepsis or pneumonia in (35%), renal failure (13%) or cardiac complications (15%) and multi-organ failure in (12%).</p> <p><i>Heald A, Lu W, Robinson A, et al. Mortality in people with a diabetes foot ulcer: an update from the Salford podiatry clinic follow-up study. Diabet Med 2024 ;e15328. <a href="https://doi.org/10.1111/dme.15328">https://doi.org/10.1111/dme.15328</a>. Epub ahead of print. PMID: 38594820</i></p>
Yamato, et al. <i>Diabetes</i>	Animal study	<p><b>SGLT-2 inhibitors may protect against diabetic retinopathy</b></p> <p>In this animal study the authors have reported on the possible effect of SGLT-2 inhibitors on the pathological changes seen in diabetic retinopathy in streptozotocin-induced diabetic mice. SGLT2 inhibitors (luseogliflozin and ibragliflozin) had a significant protective effect on a number of early pathological changes seen in diabetic retinopathy. SGLT2i may therefore be helpful in preventing diabetic retinopathy.</p> <p><i>Yamato M, Kato N, Yamada K, Inoguchi T. The early pathogenesis of diabetic retinopathy and its attenuation by sodium-glucose transporter 2 inhibitors. Diabetes 2024; db220970. <a href="https://doi.org/10.2337/db22-0970">https://doi.org/10.2337/db22-0970</a></i></p>
Ali et al, <i>Clinical Medicine Insights: Endocrinology and Diabetes</i>	Review	<p><b>Gut-derived peptide hormone agonists may be helpful in the management of bone disorders in people with diabetes and obesity</b></p> <p>Both obesity and diabetes are associated with reduced bone mineral density (BMD) and increased risk of fractures. Some of the gastrointestinal (GIT)- derived peptide hormones are used in the management of diabetes and obesity. These hormones, specifically glucagon-like-peptide-1 (GLP-1) agonists and glucose-dependent insulinotropic polypeptide (GIP) as well as glucagon-like peptide -2 (GLP-2), have positive effects on bone remodelling and bone microarchitecture to reduce fracture risk. These medications therefore may be helpful for improving bone health in obesity and diabetes.</p> <p><i>Ali A, Flatt PR, Irwin N. Gut-derived peptide hormone analogues and potential treatment of bone disorders in obesity and diabetes mellitus. Clin Med Insights Endocrinol Diabetes 2024 13;17:11795514241238059. <a href="https://doi.org/10.1177/11795514241238059">https://doi.org/10.1177/11795514241238059</a>. PMID: 38486712; PMCID: PMC10938612</i></p>
Yorke <i>Clinical Medicine Insights: Endocrinology and Diabetes</i>	Review	<p><b>Liver dysfunction can be a feature of hyperthyroidism</b></p> <p>Biochemical abnormalities of liver function can occur in 15% to 76% of people with untreated thyrotoxicosis. Suggested mechanisms include direct liver injury, co-morbid heart failure, associated autoimmune liver disease, pre-existing liver disease and drugs, including antithyroid drugs. Fulminant hepatitis can occur in 1% to 2% of people. Liver enzymes can return to normal in as many as 77% to 83% of patients.</p> <p><i>Yorke E. Hyperthyroidism and liver dysfunction: a review of a common comorbidity. Clin Med Insights Endocrinol Diabetes 2022 7;15:11795514221074672. <a href="https://doi.org/10.1177/11795514221074672">https://doi.org/10.1177/11795514221074672</a>. PMID: 35153522; PMCID: PMC8829710</i></p>
Alasdair Cooper	Diabetes UK (DUK) Conference presentation	<p><b>Structured education reduces HbA1c in people with T1DM</b></p> <p>NHS Forth Valley presented the results of their Scottish Type 1 Education Programme (STEP) at the recent DUK conference. 206 people with T1DM enrolled in the programme, that consisted of 8 to 10 sessions of education delivered by a specialist team. The percentage of people achieving HbA1c &lt; 58 mmol/mol was higher (60%) in those who attended the programme compared to those before the programme was started (42%) or those in Scotland as a whole (48%).</p>
Richard Holt	Diabetes UK (DUK) Conference presentation	<p><b>People with diabetes are at double the risk of depression compared to those without diabetes</b></p> <p>At this year's Diabetes UK annual professional conference Arnold Bloom lecture, Prof Richard Holt from the University of Southampton discussed the fascinating and complex interaction between diabetes and mental illness. People with diabetes have an increased risk of a wide range of mental disorders, while people with mental illness have an increase in the risk of diabetes. When diabetes and mental illness co-exists, the outcomes of both conditions are worse. Prof Holt used psychotic illnesses as an example of a mental illness where the rates of diabetes are doubled and discussed the strategies to prevent diabetes and the special considerations for diabetes management. He then went on to describe the more common association between diabetes and depression, highlighting how to identify depression in people with diabetes and how diabetes healthcare professionals need to be prepared to engage with treatment as well as signpost patients to mental health services.</p>
Inga Prokopenko	Diabetes UK (DUK) Conference presentation	<p><b>The genetic link between T2DM and cancer</b></p> <p>Professor Prokopenko presented important research at the recent DUK conference showing a genetic link between T2DM and cancer. Figures from 2018 show that 28% of deaths in people with diabetes in England were due to cancer, up from 22% in 2001. Prof Prokopenko's research team analysed DNA from 36,000 individuals and identified two specific genetic variants as key links to people with diabetes and some cancers. One variant is associated with breast cancer and the other one with breast, colorectal and pancreatic cancer.</p>



Authors, Journal	Type of Study	Main results
Elliot <i>et al</i> , <i>Diabetologia</i>	Prospective study	<p><b>Female sex is a risk factor for painful diabetic peripheral neuropathy: the EURODIAB prospective diabetes complications study</b></p> <p>The EURODIAB prospective complications study demonstrated female sex as a risk factor for painful diabetic peripheral neuropathy (DPN) (73% vs 48% painless) after adjustment for duration of diabetes and HbA1c. Psychological, genetic and other factors need to be evaluated in the development of painful DPN.</p> <p><i>Elliott J, Sloan G, Stevens L, et al; EURODIAB Prospective Complications Study Group. Female sex is a risk factor for painful diabetic peripheral neuropathy: the EURODIAB prospective diabetes complications study. Diabetologia 2024 ;67(1):190-8. <a href="https://doi.org/10.1007/s00125-023-06025-z">https://doi.org/10.1007/s00125-023-06025-z</a>. Epub 2023 Oct 23. PMID: 37870649; PMCID: PMC10709240</i></p>
Emanuelsson <i>et al</i> , <i>Diabetologia</i>	Observational and Mendelian randomisation study	<p><b>Hyperglycaemia, diabetes and risk of fragility fractures: observational and Mendelian randomisation studies</b></p> <p>Hyperglycaemia is a risk factor for fragility fractures (HR 1.50 in T1DM and 1.22 in T2DM). Diabetes and fragility fracture in combination are responsible for the highest risk of death in the general population (at age 80, cumulative death was 27% in individuals with fragility fracture only, 54% in those with diabetes only and 67% with both conditions but 17% in those with neither).</p> <p><i>Emanuelsson F, Afzal S, Jørgensen NR, Nordestgaard BG, Benn M. Hyperglycaemia, diabetes, and risk of fragility fractures: observational and Mendelian randomisation studies. Diabetologia 2024;67(2):301-11. <a href="https://doi.org/10.1007/s00125-023-06054-8">https://doi.org/10.1007/s00125-023-06054-8</a>. Epub 2023 Dec 14. PMID: 38095658; PMCID: PMC10789835</i></p>
Gregg <i>et al</i> , <i>Diabetologia</i>	Randomised control trial	<p><b>Impact of remission from T2DM on long-term health outcomes: findings from the Look AHEAD study</b></p> <p>Diabetes remission is associated with significant reduction of CKD (33% lower) and composite CVD measures (40% lower) in multivariate analyses adjusting for HbA1c, BP, lipid levels, CVD history and duration of diabetes in the intervention arm compared to participants without remission. Risk reduction was highest in longer-term remission.</p> <p><i>Gregg EW, Chen H, Bancks MP, et al; Look AHEAD Research Group. Impact of remission from type 2 diabetes on long-term health outcomes: findings from the Look AHEAD study. Diabetologia 2024 ;67(3):459-69. <a href="https://doi.org/10.1007/s00125-023-06048-6">https://doi.org/10.1007/s00125-023-06048-6</a>. Epub 2024 Jan 18. PMID: 38233592; PMCID: PMC10844408</i></p>
Regnault <i>et al</i> , <i>Diabetologia</i>	Cross-sectional study	<p><b>Maternal and neonatal outcomes according to the timing of diagnosis of hyperglycaemia in pregnancy: a nationwide cross-sectional study of 695,912 deliveries in France in 2018</b></p> <p>Women diagnosed with gestational diabetes earlier than 22 weeks or after 30 weeks have poorer maternal and foetal outcomes. Caesarean section (HR 1.54), large for gestational age (LGA) infants (HR 2.0), Erb's palsy or clavicular fracture (HR 6.38), pre-term birth (HR 1.84) and neonatal hypoglycaemia (HR 1.98) were more frequent in women with overt diabetes compared to gestational diabetes diagnosed at 22-30 weeks (reference group). Similarly, LGA infants (HR 1.10) and Erb's palsy or clavicular fracture (HR 1.55) were more frequent if GDM was diagnosed before 22 weeks compared to the reference group. LGA infants were more frequent in GDM diagnosed after 30 weeks compared to the reference group. Women without hyperglycaemia were less likely to have preeclampsia or eclampsia (HR 0.74), caesarean section (HR 0.80), pregnancy and postpartum haemorrhage (HR 0.93), an LGA neonate (HR 0.67), a premature neonate (HR 0.80) or a neonate with neonatal hypoglycaemia (HR 0.73)</p> <p><i>Regnault N, Lebreton E, Tang L, et al. Maternal and neonatal outcomes according to the timing of diagnosis of hyperglycaemia in pregnancy: a nationwide cross-sectional study of 695,912 deliveries in France in 2018. Diabetologia 2024 ;67(3):516-27. <a href="https://doi.org/10.1007/s00125-023-06066-4">https://doi.org/10.1007/s00125-023-06066-4</a>. Epub 2024 Jan 5. PMID: 38182910; PMCID: PMC10844424</i></p>
Roshan Dhanapalaratnam <i>et al</i> , <i>Diabetologia</i>	Before and after study	<p><b>Glucagon-like peptide-1 receptor agonists reverse nerve morphological abnormalities in diabetic peripheral neuropathy</b></p> <p>GLP-1 agonist treatment in T2DM improved nerve size in 86% of participants at one month and 93% of participants at three months, accompanied by reduced severity of neuropathy and improved sural nerve conduction amplitude. Further studies, incorporating quantitative sensory testing and measurement of intraepidermal nerve fibre density, are needed.</p> <p><i>Dhanapalaratnam R, Issar T, Lee ATK, et al. Glucagon-like peptide-1 receptor agonists reverse nerve morphological abnormalities in diabetic peripheral neuropathy. Diabetologia 2024;67(3):561-6. <a href="https://doi.org/10.1007/s00125-023-06072-6">https://doi.org/10.1007/s00125-023-06072-6</a>. Epub 2024 Jan 8. PMID: 38189936</i></p>

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# DTN-UK NEWS

Collaborate • Evolve • Support

2024 has already been a busy year for the Diabetes Technology Network (DTN) committee. We have been working closely with the team from NHS England to support the rollout of hybrid closed-loop (HCL) systems in line with the National Institute for Health and Care Excellence (NICE) technology appraisal (TA) 943. We have some new videos on our website which introduce people to essential elements of support for individuals using these systems, with more videos to come in the near future. We have also partnered with DAFNE to support the development of their “Hybrid Closed Loop Essentials” online course and to help make this available to non-DAFNE centres as well. In addition, we have been developing resources such as HCL training slides and an HCL competency framework, and collating useful documents from centres across the country. These will be shared via our website for local services to adapt and use. We are developing guidance to support services with the provision of HCL in pregnancy, alongside other key stakeholders such as Diabetes UK. We will soon be launching a survey of people’s current confidence in using HCL systems to guide ongoing training provision.

We are also starting to work on the development of support materials translated into the most commonly used languages other than English, to ensure that access to these life-changing diabetes technologies is available to all who qualify under NICE criteria.

A new HCL psychology guidance can be found on our website. This guidance was produced in collaboration with the diabetes psychology network led by Dr Rose Stewart. The guidance document has been developed to support teams to work collaboratively with people living with diabetes to ensure the best possible outcomes before, during and after moving on to HCL therapy. <https://abcd.care/resource/current/hybrid-closed-loop-hcl-psychology-guidance>

We continue to provide in-person training too. The educator team of Geraldine Gallen, Amy Jolley and Anne Marie Frohock developed and presented two extremely successful DTN Educator Days, which took place in London and Manchester. We have an exciting programme in place for the DTN Day in Bristol on 4 September, 2024. Please register via the ABCD website – we will look forward to seeing you there! <https://abcd.care/events/abcd-dtn-uk-meeting-2024>

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<https://abcd.care/dtn/about-dtn-uk>

# YDEF NEWS

EDUCATION • ADVOCACY • SUPPORT

The YDEF committee continue to strive to provide learning opportunities for, advocate for and support Diabetes and Endocrinology (D&E) trainees. We have worked hard over the last six months, with much going on.

The second Diabetes Technology course of the year was run alongside ABC of D&E in Nottingham, which has been the hosting venue for the last few years. This was incredibly successful, with excellent attendance, excellent speakers and fantastic feedback from our attendees. The next Diabetes Technology course is being moved to Leicester, and is due to be held in July 2024. Golden tickets to the course sold out in seven minutes! We will continue to run the course twice a year, with the aim to maximise spaces to ensure that all attendees have the opportunity to go once during training. So have no fear about missing out!

The turn of 2024 saw the YDEF Wales course go without a hitch. As with all our courses, it was very popular, with world-renowned speakers discussing key topics. The debut of the Diabetes Foot Course in Sheffield was a fantastic addition to our course repertoire. Given the feedback, we are excited to offer this opportunity again next year, as this is often a difficult curriculum topic for trainees.

Last month, we hosted our YDEF day. Attendance was fantastic and we had great speakers, discussing exciting topics such as technology in T2DM and emerging lipidology treatments. Earlier in the year we had opened the Marjorie Prize competition, with the discussion topic ‘building a brighter future for the specialty of Diabetes and Endocrinology’. The candidates with the most innovative ideas presented their ideas at the YDEF day and we had two prize winners. The next YDEF day will be planned in due course: watch this space!

Following the YDEF day came the prestigious Diabetes UK professional conference in London, where we also awarded the YDEF Travel award, with a prize of £500 to the two lucky winners.

Coming up, we have a busy summer. July will see both the Diabetes Technology course (in the new Leicester venue) and the obesity course. They are shaping up to be maximally attended, and participants will hear from our national experts. Later in the year, we will be further advertising our second brand-new course of the year, on maternal medicine, which will cover aspects of management pre-conception and during pregnancy for both diabetes and endocrine conditions. We hope to join our obstetric colleagues to make this the first joint specialty course offered by YDEF.

Please ensure you stay up-to-date with our upcoming courses by following us on Twitter @youngdiab and visiting our website <https://www.youngdiabetologists.org.uk>. If you have not done so already, be sure to sign up to our YDEF newsletter!

**Amy Coulden**  
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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!

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