What should we do when presented with a very high HbA_{1c}?

Jane Diggle
Specialist Diabetes Nurse Practitioner, West Yorkshire

I hope you have had a bit of time to relax over the festive period and I wish you the very best for 2025! The Autumn period is always busy, with many conferences taking place. In this issue, as promised previously, I highlight the key messages from the Scottish PCDS conference that took place in Glasgow on 29 October 2024. A few weeks later, the 20th National Conference of the PCDS was held in Birmingham, with both conferences welcoming a record number of attendees. Pam Brown's *Conference over Coffee* summarises important take-home messages from three of the keynote sessions on the agenda.

At the National Conference, I chaired a masterclass session on the diagnosis and classification of diabetes, delivered by Angus Jones, which proved to be very popular (standing room only!) and highlighted just how tricky it can be to determine the type of diabetes at the outset. Plans are already underway for the PCDS to develop a new educational resource focusing on this topic, so watch this space.

During the conference, the committee was delighted to welcome the new PCDS Chair, Professor Naresh Kanumilli, and the new Secretary, Dr Rahul Mohan – you can review their biographies here.

The future of prescribing

Over recent years, there has been an ever-expanding number of diabetes therapies available. Deciding which is the most appropriate option for an individual has become increasingly complex as we are encouraged to adopt a holistic, person-centred approach that considers the multiple conditions that so often coexist in people with diabetes. With many more innovative drugs, delivery systems and technologies in the pipeline, it doesn't look like the decision-making process will get any easier!

The advances on the horizon are exciting and promise significant benefits to those living with diabetes, but it will be a challenge navigating the expansive range of diabetes treatment options. Perhaps a helping hand in the form of artificial intelligence is the answer, particularly in terms of streamlining decision-making? Call me old-fashioned, but I'm not too sure about it; nonetheless, it seems likely that we will see more of this in the future. Without doubt, clinicians are going to have to get more tech-savvy – rather like the mechanics in garages who trained to assess and fix engines but who now need to understand software and computer programming with the advent of electric vehicles (an analogy that came to mind after a recent issue with my all-electric car!).

Managing high HbA_{1c}

I've noticed that the number of people presenting with very high HbA_{1c} levels has grown in recent weeks, including some of the highest results I have seen in my career – many in triple figures and a couple over 140 mmol/mol! Furthermore, I'm at a loss as to why. During the COVID-19 pandemic, and then as a result of GLP-1 receptor agonist shortages, high HbA_{1c} levels were not uncommon and prompted us to write an article on this very topic. This may be a useful resource to refer to if you are faced with very high HbA_{1c} levels yourself.

All of my recent cases have been different – some were new diagnoses, others occurring in individuals with established type 2 diabetes. Uppermost in our mind must always be the question of whether we are certain about the diagnosis of type 2 diabetes (click here for our *How to* on diagnosis and classification of diabetes) and how quickly we need to see the person (why do these results always seem to come in late on a Friday evening?!). We need to consider what additional information is needed and how soon, whether the person needs access to monitoring equipment, whether immediate rescue

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How to: Rescue therapy in the management of type 2 diabetes

How and when to use short-term rescue therapy to bring blood glucose levels down.

Diabetes & Primary Care **26**: 203–6

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therapy is required and possible, and whether we should be considering imaging to rule out a sinister aetiology.

Interestingly, as I reflect on some of these recent cases, I have been amazed by several aspects; for example how, when questioned, a person with an HbA_{1c} above 100 mmol/mol can report feeling fine with no obvious signs or symptoms to suggest that anything is amiss. In fact, with some careful questioning, you usually do uncover some signs, which I suspect many people just accommodate as their "new normal", such as getting up during the night to pass urine, being more thirsty than usual or feeling very tired.

Of course, for others, there are obvious osmotic signs that prompt them to seek advice, which leads to blood tests and the confirmation of hyperglycaemia. I often initiate self-monitoring of capillary glucose in these situations (albeit temporarily) to gather more information about their glucose levels throughout the day; where levels are very high, rescue therapy is often needed. While rescue therapy with sulfonylureas or insulin is recommended in the NICE NG28 guideline, there isn't much practical guidance on how to do so. We therefore tackle this in Vicki Alabraba's *How to* on rescue therapy.

However, the extent to which diet and lifestyle impact glycaemic control never ceases to amaze me. Several of those I have recently seen have achieved near-normal glucose levels within weeks by addressing their diet and lifestyle, with no requirement for glucose-lowering medication.

Of course, not every person with type 2 diabetes is overweight, with around one in ten people having a normal or even low BMI. It is important that we recognise this, consider the differential diagnosis of diabetes in these individuals and agree the most appropriate approach to managing their diabetes. However, there are no specific guidelines on this, which makes this issue's case report by David Morris particularly useful.

Long-awaited guidance on tirzepatide for weight management

NICE published its long-awaited Technology Appraisal on *Tirzepatide for the management of overweight and obesity* on 23 December 2024. It recommends tirzepatide alongside a reduced-calorie diet and increased physical activity in adults, only if they have an initial BMI of at least 35 kg/m^2 and one or more weight-related comorbidity. Lower BMI thresholds are proposed for people of ethnic backgrounds associated with higher cardiovascular risk. Importantly, and unlike in previous guidance for injectable weight management drugs, NICE recommends that tirzepatide can be used in primary care or in specialist weight management services, and prescribing is not limited to 2 years' use.

These criteria mean that an estimated 3.4 million people would currently be eligible to receive tirzepatide for this indication. Therefore, understandably, a long implementation period has been proposed – up to 12 years – and NHS England is currently developing an interim commissioning policy to guide implementation across England, providing guidance on which cohorts to prioritise based on clinical need. In *Diabetes Distilled*, Pam Brown details the new Technology Appraisal and what we know so far about the plans for delivery.

Like so many aspects of care, there is huge geographical variation, and quite different approaches are being adopted across the UK Nations. The Scottish Government and NHS Scotland have published their own advice to inform the process of making injectable weight management drugs available and to prevent variation between Health Boards across Scotland. We review the suggested phased approach to introduction in *Around the Nations*.

With around 9 months' experience of using tirzepatide in the management of type 2 diabetes, with support from medicines management colleagues, I have recently developed an audit tool to review outcomes. I plan to share our learnings from this audit in a future issue of the journal.

Microvascular complications

A summary of the ABCD and UKKA guidance on the management of chronic kidney disease (CKD) in type 2 diabetes was published in October in *Diabetic Medicine*. The proposed four tiers of intervention clarify where it would be appropriate to seek specialist advice and guidance. Read our *Diabetes Distilled* summary here.

Having covered cardiovascular risk assessment extensively in the journal and emphasising situations and circumstances where risk may be underestimated – an example being in those with CKD – I was interested to read in the guidelines about CKD Patch, a calculator that incorporates the kidney disease measures of eGFR and urine albumin:creatinine ratio to enhance the prediction for cardiovascular risk.

When we think about the nerve damage that is caused by diabetes, most of us would tend to think about peripheral neuropathy, and assessing for this in the lower extremities is firmly embedded in the annual foot examination that all people with diabetes should receive. However, damage can also affect the autonomic systems, which control involuntary processes within the body. We may enquire about sexual dysfunction, gastrointestinal symptoms such as gastroparesis, and impaired hypoglycaemia awareness, all of which may be the result of autonomic neuropathy; however, we might perhaps pay less attention to the impact that neuropathy can have on the cardiovascular system.

Cardiovascular autonomic neuropathy (CAN) occurs when the nerves controlling the heart and circulation are damaged, and is a common and potentially serious condition, but one which I suspect is not so actively looked for. Given the potentially devastating adverse effects, it is of great importance to minimise risk factors, recognise the key clinical signs and optimise early interventions. Read more about CAN here.

New e-Learning modules: Continuous glucose monitoring

Finally, I am proud, along with my co-authors Su Down and Nicola Milne, to introduce a new suite of e-Learning modules from the PCDS. ***Make it simple, keep it safe*** is our free resource to support the implementation of continuous glucose monitoring (CGM) technology in primary care. It comprises five, 30-minute, interactive modules which can be completed in any order, at any time, covering everything from prescribing fundamentals to advanced data interpretation:

- **Module 1:** What is CGM and who is eligible?
- **Module 2:** Initiating CGM in primary care.
- **Module 3:** Introduction to Time in Range.
- **Module 4:** Interpreting glucose profiles.
- **Module 5:** Advanced interpretation of ambulatory glucose profiles – case studies.

You can learn all you need to know about CGM in primary care, or refresh your knowledge, and earn up to 5 CPD points by completing each module and their accompanying assessments, available here.

I hope you find the modules, and this issue of the journal, very helpful! ■

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