

Much to celebrate, but challenges are mounting

At the time of writing, we have just completed the 2023 Diabetes Awareness Week, which ran from 12–18 June. This year's theme was "celebrating you". Although the focus was for people with diabetes to celebrate all that makes them unique, and to appreciate and demonstrate that they are so much more than an "endless stream of numbers", I would like to take the opportunity to celebrate the remarkable Dr Sheila Reith who, in recognition of her contribution to medicine, has been appointed Commander of the Order of the British Empire (CBE) in the King's Birthday Honours List.

Dr Reith practised as a doctor in Glasgow and had a child with type 1 diabetes. Whilst coping with the constant need to draw up insulin into a syringe, she had the inspirational idea of creating an insulin-filled pen. She embarked on working with colleagues to develop the first prototype insulin pen. In 1981, Diabetes UK helped fund a sufficient number of prototypes for a cohort of 76 people with diabetes to trial, which subsequently demonstrated that accuracy and reliability could be achieved with them. The launch of the first insulin pen followed in 1983. Their use was a game changer for people living with diabetes who required insulin.

This was also the year that I began my nursing career; little did I know then that the year would feature such a poignant event and one that was to become the focus of my entire career. So, massive congratulations to Dr Reith – a CBE so well deserved!

Who could have foreseen that, 40 years on, we would be confronted with the current pen and device shortages? We are all facing an incredibly challenging time, with endless, worrying stock shortages not only in the GLP-1 receptor agonist (RA) class (where we first started to see supply issues), but also in some insulins and GlucaGen®.

Current shortages or discontinuation involve:

- Tresiba® U100 FlexTouch® pens.

- All Insuman® insulins: discontinued and stocks exhausted as of June 2023.
- Semglee® insulin: first a recall, now a shortage.
- GlucaGen: no availability for the month of mid-June to mid-July (at present).
- Dulaglutide: shortage in all doses and, as such, we should not be offering for new starts.
- Semaglutide: all doses of injectables (Ozempic®) no supply, and now oral (Rybelsus®) in short supply.

It is becoming apparent that, for the whole GLP-1 RA class, we may very soon be left with little or no availability, and this includes the oral preparation. These are such concerning times, as there are potentially tens of thousands of people with type 2 diabetes who rely on this medication across the UK.

The options for these people are now very limited. If we follow NICE (NG28) guidance for the management of adults with type 2 diabetes, they should be offered an SGLT2 inhibitor, a gliptin, pioglitazone, a sulfonylurea or insulin. Often, they will require a combination of these medications.

One of the benefits of the GLP-1 RA class is its weight-loss potential. The alternatives listed above, with the exception of SGLT2 inhibitors, are either weight neutral or weight gaining. Additionally, the SGLT2 inhibitors require an eGFR of ≥ 45 mL/min/1.73 m² to have any glucose-lowering benefit, and so may not be effective in glucose control for a cohort of patients with renal impairment. The impact of stopping a weight-reducing medication is highly likely to be weight regain, let alone the potential additional weight gain seen from the alternatives of insulin, sulfonylureas or pioglitazone.

The wider concern, however, must be in the growing uncertainty as to whether, if all the people currently on a GLP-1 RA or the insulins in short supply were converted to another medication or insulin type, the current UK stocks would cope



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“If all the people currently on a GLP-1 receptor agonist or the insulins in short supply were converted to another medication or insulin type, would the current UK stocks cope with such an uplift?”

with such an uplift. Many of these patients would likely require insulin, but can we be certain that there would be enough (either pens or the actual insulin) to cope with many thousands of new starts or switches.

These stock supply issues are something that we have never faced before in this magnitude, and they are extremely concerning. Advice will be coming shortly from leading bodies in collaboration with the Department of Health and Social Care, and, hopefully, this will provide greater clarity, direction and guidance. We are, however, facing these issues today and, sadly, confidence has never been lower.

To finish on a more upbeat and positive note, I want to highlight some of the latest research

into type 1 diabetes. A study by Iakovliev et al (2023), which was supported by Diabetes UK, has identified nine core genes linked to the development of type 1 diabetes. This opens the door for a treatment to either prevent, delay, or treat type 1 diabetes. This is ground-breaking, indeed. Whilst reading this research article, I was reminded of the article by Melanie Burcham included in this issue. She discusses the impact of a type 1 diagnosis in the child of a parent with type 1 – a thoroughly thought-provoking, [must-read article](#). ■

Iakovliev A, McGurnaghan SJ, Hayward C et al (2023) Genome-wide aggregated trans-effects on risk of type 1 diabetes: A test of the “omnigenic” sparse effector hypothesis of complex trait genetics. *Am J Hum Genet* **110**: 913–26; <https://doi.org/10.1016/j.ajhg.2023.04.003>