TYPE 1
PATIENTS MISSING OUT ON INSULIN PUMP THERAPY

The first-ever audit of insulin pump therapy in the UK reveals that take-up is much lower than recommended, at six per cent of those with Type 1 diabetes. A lack of funded healthcare professional time for training and support may be the underlying cause and this needs to be addressed.

Although continuous subcutaneous insulin infusion (pump) therapy has been around for more than 25 years, its use in the UK only became widespread following the publication of a National Institute for Health and Care Excellence (NICE) technology appraisal in 2003 (updated in 2008). Recommendations for initiating pump therapy in adults with Type 1 diabetes consists of patient and service provider-specific guidance. Patients with HbA1c > 69mmol/mol (8.5 per cent) or recurrent hypoglycaemia, despite optimised multi-dose injections (MDI), are eligible. Service providers must offer initiation of therapy by a specialist team, including a consultant diabetologist, diabetes specialist nurse (DSN) and dietitian, and provision of structured education.

Pump therapy benefits glycaemic control, compared with MDI. However, a study in 2010 showed that only two per cent of those with Type 1 diabetes in England use insulin pumps. This falls significantly short of the 15–20 per cent of patients who fulfil NICE criteria. It is also much lower than utilisation in the rest of Europe (> 15 per cent) and in the USA (around 40 per cent). This research was limited in its scope, so there was a need for a more accurate assessment to address concerns about the UK’s underuse of pump therapy.

First UK pump audit
Dr Helen White of Aintree University Hospital NHS Trust, and colleagues, carried out the first-ever UK-wide audit of insulin pump use by contacting all hospital trusts to ascertain which centres offer the technology and who was responsible. Thereafter, all centres offering an insulin pump service were asked to participate, and 97.3 per cent took up the offer.

The audit identified 13,428 adults using an insulin pump in the UK, of whom 2,505 had started in the previous 12 months. Diabetes UK estimates there are 221,000 people with Type 1 in the UK, so the audit data show that six per cent of these used a pump at the time of the audit. The median number of pump users supported by centres was 75, including 14 ‘new starts’. Eight centres had fewer than 10 users, while five had not started pump therapy in the previous year and 40 had started it in five, or fewer, patients. Overall, the audit revealed that 3,260 patients had been offered pump therapy in the previous year, and 519 had declined the offer. Since 2,505 ‘new starts’ were actually recorded, this means that there were 202 patients who had been offered a pump, but had not actually started on it. One centre had a waiting list of up to three years for patients to start on their pumps.

Staffing issues
Mean duration of the insulin pump service provided by centres was seven years. Nearly half had only one consultant involved in delivery of insulin pump services. Three per cent of centres had no consultant involved.

The mean number of consultant-delivered activities devoted to pump therapy was 0.96 (61 per cent formally funded). The mean number of whole-time equivalent DSNs dedicated to insulin pump therapy was 0.62 (39 per cent funded) and the dietitian equivalent was 0.3 (40 per cent funded). Most (88 per cent) of centres had one or more consultant who had received formal training in pump therapy, and 97 per cent and 82 per cent, respectively, had one or more DSN or dietitian with such training. However, three per cent of centres had no staff with formal training in insulin pump therapy.

Written guidelines for management of insulin pump users admitted to hospital were in place in 37 per cent of centres, while 27 per cent had guidelines for pump users undergoing surgery. Lack of guidelines was not a barrier to users continuing on their pump in hospital, because these were present in 74 per cent of centres. There were guidelines for pregnant pump users in 34 per cent of centres and 60 per cent said there was provision for continuing pump therapy during labour.

Most centres (89 per cent) had access to structured education for their Type 1 patients, with programmes meeting NICE/Diabetes UK guidelines in 80 per cent of cases. But, only 40 per cent of centres provided insulin pump therapy structured education. One-to-one patient training was available in 90 per cent of centres and 71 per cent offered group therapy, while both approaches were available in 60 per cent. Pump company representatives were involved in training in 72 per cent of centres, although reliance on this has been decreasing.

Funding
Three centres in England, four in Scotland and two in Northern Ireland said they had had problems obtaining funding for pump therapy. For patients who fulfil NICE criteria, funding should be automatic, but over half of centres said they had to write individual funding applications to commissioning bodies. In 18 per cent of centres, there was a fixed quota of insulin pump starts, although only two per cent said that it caused real problems in access for their patients. Five per cent of centres reported actually being denied funding, even though the 47 patients involved met NICE criteria.

The main brands of pumps used were: Animas, Roche, Medtronic and Omnipod. Nine per cent of centres offered just one brand, owing to restriction by commissioning bodies, while 30 per cent offered two and 61 per cent offered three or more.

In some cases, restrictions were not attributed to commissioners but more to lack of time for training on other brands. Concern about quality of care, it staff experience was split between brands, and existence of procurement contracts with specific manufacturers. Several centres said they were going to expand their portfolio of pump brands, while others intended to shrink theirs to just one or two, via a tender process,

On reflection
One of the key findings of this audit is a formal recognition that healthcare professional time dedicated to running an insulin pump service for those with Type 1 is drastically underfunded. Diabetic Medicine Editor, Professor Graham Hitman, said: “This audit clearly identifies that, if we want the best clinical care for our patients with Type 1 diabetes, then dedicated funding is required for pump services to develop the care appropriate to meet the needs of people with Type 1 diabetes.”


Two free people with Type 1 in the UK are offered an insulin pump