establishing a pharmacist-led diabetes clinic

Daljinder Singh Sidhu, senior pharmacist at Sandwell Primary Care Trust, describes his journey to competence in initiating insulin and setting up a pharmacist-led diabetes clinic.

In February 2008, I was working as a practice-based pharmacist for Sandwell Primary Care Trust when I received an email from within the medicines management team, asking for expressions of interest for a course on intensive management in type 2 diabetes accredited by the University of Warwick. I had an interest in diabetes and thought the course would support my aspirations to provide a complete package of care for patients in my planned diabetic clinics.

In Sandwell, practices that have no clinician available to initiate insulin would refer patients to the community diabetic specialist nurse (DSN) service or to secondary care, where they would see a DSN or consultant. For GPs and practice nurses, who are usually linked to a single practice, it can be difficult to remain competent in insulin initiation because there are a limited number of patients to work with. The idea behind practice-based pharmacists, who are not employed by practices, initiating insulin is that they can move around and provide this service wherever it is needed, particularly in smaller practices. The next email I received was one informing me that I had been selected for the course. This was a bit daunting because I view myself as a follower not a pioneer, but the thought of being a pioneer was exciting.

The course was run locally over three days, two in April and the final one in September 2008, and delivered by a variety of specialists, including DSNS, a consultant diabetologist, a diettian and a pharmacist. It covered several aspects of diabetes and insulin therapy; I was not out of my depth among the group, which predominantly consisted of practice nurses but also some GPs. (In fact, compared with the diploma in primary care pharmacy I had completed, it was a walk in the park.)

But then came the catch. To become accredited, we had to initiate insulin in six patients and review the treatment of a further four with the view of optimising therapy, within 12 months. There would be support available from a DSN who would sit in at clinics and advise where necessary. Ultimately, he or she would need to be confident in our ability to initiate insulin before we could be accredited.

For GPs or practice nurses, who see patients every day, meeting the requirement would appear relatively easy. For me, however, things were different. Even though I was practice-based, I was not seeing patients on a regular basis and I had to nominate a practice where I would be initiating insulin. This resulted in one clinic a week but, because there was only one DSN to mentor 14 people, it was not easy to fit into her busy clinic schedule.

Getting signed off

My inaugural clinic was in June 2008, which now seems like such a long time ago. During that first clinic with the DSN, Louise Gordon, I managed to start two patients on insulin. All went well and I managed to cover the cat that got the cream.

I soon came back to earth with a bump when I could not manage to convince further patients to start insulin treatment. In retrospect, this simply emphasised that every patient is different and that we need to treat the individual and not the disease but, at the time, it felt as though I would never be able to complete the course. In addition, given that a day before those first insulin initiations I had accepted the position of senior pharmacist at Sandwell PCT, I was not even sure whether I should continue because visiting different surgeries and initiating insulin would not be possible in my new role. A couple of months went by and still no luck. I persevered, however, because I believed I should finish what I had started. Then an opportunity arose to start a diabetes clinic at another practice in September 2008.

This clinic gave me the impetus to succeed. I was seeing a larger number of patients with diabetes and not just focusing on potential insulin initiations. The first few clinics provided another three insulin initiations and I now had more than the required four patients for whom I had modified treatment. Further information about initiating insulin in my clinic is given in Panel 1.

By October 2008, I had fulfilled the requirements of the course and informed my mentor. The problem now was that since the start of the course I had only been observed in clinic once and the DSN wanted to arrange another joint clinic. During this joint clinic, in November 2008, I performed a
Experiences so far

I now run just one clinic a week due to the constraints of my new role at the PCT. The practice in which I run the clinic has 247 people with diabetes registered and, since September 2008, I have seen 71 (29 per cent) of these patients, 14 of whom have had insulin-related interventions. These ranged from insulin initiation to dosage adjustments. Interventions for the other patients have included general diet and lifestyle advice and optimisation of, or changes to, oral hypoglycaemic therapy. A summary of the results to date in relation to HbA1c changes is presented in Panel 2.

A patient who lowers their HbA1c fill me with a sense of achievement but there is one patient for whom the results have been particularly rewarding: a 54-year old Asian patient for whom the results have been particularly rewarding: a 54-year old Asian patient for whom the results have been particularly rewarding: a 54-year old Asian patient for whom the results have been particularly rewarding: a 54-year old Asian patient for whom the results have been particularly rewarding: a 54-year old Asian patient for whom the results have been particularly rewarding: a 54-year old Asian patient who I first saw in November 2008. Her HbA1c was 13.3 per cent (122mmol/mol), her total cholesterol was 7.5mmol/L, her blood pressure was 205/103mmHg and her weight was 68kg. She was adamant that she was taking her medicines as prescribed. She said she felt fine and pleased not to be started on insulin. But after a trial of dose optimisation of her oral medicines and lifestyle advice it was apparent that insulin would be required and she agreed. She was also referred to a dietician because three antihypertensives failed to reduce her blood pressure. The patient is now on a basal-bolus insulin regimen and her HbA1c is 6.8 per cent (51mmol/mol), her total cholesterol is 3.6mmol/L and her weight has dropped by 11kg. Her blood pressure is still high but this case study shows that empowering patients to take control of their diabetes pays dividends.

Most things have gone well — increases in HbA1c in five patients I have seen is not disheartening because three failed to attend a second appointment. One patient has seen an increase in her HbA1c, from 7.5 per cent (58mmol/mol) to 7.9 per cent (63mmol/mol) after a change in her oral medicines but this has resulted in an improvement in her quality of life because she is no longer experiencing frequent hypoglycaemic episodes. I guess these results show you can not win them all.

The HbA1c results of all patients are given to me to review. Based on the result, the number of oral hypoglycaemic agents already been taken and other comorbidities (eg, raised blood pressure or cholesterol), I need to see and the surgery sends a letter inviting them to a 30-minute appointment with me.

I would usually consider starting insulin if the HbA1c is >7.5 per cent despite the use of three oral hypoglycaemics at their maximum tolerated dose and after ensuring that the patient is taking all medicines as prescribed and that there is no further diet and lifestyle advice (eg, alcohol moderation, smoking cessation, exercise) that could help.

Some of the factors I think about when considering insulin for a patient are:

- Fears or misconceptions regarding to insulin therapy
- Prevention of hypoglycaemia
- Convenient dosing
- Frequency of injection regimen
- Patient’s confidence with injecting and understanding of insulin therapy
- Patient preference of injecting device and my opinion on the suitability of the device for the individual
- Individualised regimen to suit the patient’s lifestyle and blood glucose profile
- Previous history of insulin use

Patients can be reluctant to use insulin for many reasons, ranging from needle phobia and fear of weight gain to past bad experiences with insulin use (either their own or that of friends or family) and denial that insulin is now the only way to manage their condition. Using insulin can also be considered as failure to control diabetes and some patients may not want to accept failure. In some cultures, there is also still a stigma attached to having diabetes — one Asian patient said she had not told her employer about her diabetes for fear of losing her job. The consultation will include a general discussion around fears and anxieties in relation to insulin use.

Once a patient becomes familiar with insulin and sees positive results this not only results in an increase in their confidence in injecting but also in me as a clinician, which are paramount if patients are to persevere with their regimens.

The National Institute for Health and Clinical Excellence targets for HbA1c are used as a point of reference. So, if 100 per cent of one oral agent or insulin1 but I try not to be too strict because that can put undue pressure on the patient and lead to disappointment if targets are not reached. NICE concedes that any reduction in HbA1c towards an agreed target is advantageous to future health so I take a pragmatic approach.

The products I tend to recommend to patients requiring insulin are once daily, long-acting insulin analogues (basal) initially, followed by short-acting insulin analogues (bolus) just before or with meals (if postprandial hyperglycaemia occurs despite the use of the basal insulin). An alternative regimen may be a twice daily premixed insulin preparation. In my experience, this regimen is not as effective as the basal-bolus regimen although I have used it where patient preference dictates.

I educate patients in relation to their choice of insulin, how to inject and where. They are shown how to use the injecting device and given the opportunity to try it for themselves. They also told what to do if hypoglycaemia (ie, blood sugar <4mmol/L) occurs and how to monitor their blood sugar levels.

For the first few weeks, patients initiated on insulin are seen in clinic weekly. They are also telephoned between appointments to titrate doses, if needed, and to address any further questions they may have. Once the patient consistently attains his or her target fasting and postprandial blood sugar levels (ie, 4–6mmol/L and 5–8mmol/L, respectively, or thereabouts) he or she is seen routinely if HbA1c starts to rise again. Patients are told to have their HbA1c checked every three months and are welcome to contact me at any time if they have any concerns relating to their diabetes.

It must be noted that HbA1c is not the only parameter I focus on when dealing with my patients. I take a holistic approach. For example, blood pressure and cholesterol levels are monitored and the importance of regular diabetic retinopathy screening and foot health is emphasised.
Panel 2: Summary of changes in HbA1c for patients seen*

### Insulin related interventions (12 patients)*

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<th>Average initial</th>
<th>Average current</th>
<th>Best individual HbA1c reduction</th>
<th>Worst individual HbA1c reduction</th>
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<td>HbA1c (%)</td>
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### Diet and lifestyle advice and optimisation or change of oral hypoglycaemic agents (27 patients)*

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<th>Average initial</th>
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<td>8.5%</td>
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*Results for 39 patients (the remaining 32 have not had a follow-up HbA1c test since initial appointment)

Further reflections

There is, albeit limited, established evidence highlighting the pharmacist’s role in improving outcomes for patients with diabetes but this is not an established model of care within NHS trusts. There is also a paucity of evidence relating specifically to outcomes attributable to pharmacist-led diabetes interventions involving initiation of insulin therapy. I was only able to find one small US-based study in which pharmacists were involved with insulin initiation or adjustments, or both, and this did show the pharmacist’s intervention in a positive light.

The Warwick Medical School insulin for life programme, which includes the intensive management in type 2 diabetes course, has been running since May 2003 and since then over 1,900 certificates of extended practice have been awarded by the university. How many primary care pharmacists have been accredited via this course to date? The answer is just one — me.

The Warwick course is supported by Sanofi Aventis and it was through the company that I found out that my colleagues and I were the first three primary care pharmacists in England to enrol on it. In a climate of ever-expanding pharmacists’ roles why have more pharmacists not undertaken this accreditation already? There could be many reasons but the most probable is a lack of awareness that the course exists.

On reflection, being the first is not as important as being the best. My goal now is to strive to be the best that I can be and to provide the best service I can to my patients within the confines of my competence. I now believe that I can and do make a difference to patients and if I can, so can others.

References


Learning & development for April

- What are the three phases of management of bipolar disorder, what drugs are used in its treatment and what precautions are advised? Continuing a series on mental health, Stephen Bleakley turns his attention to bipolar disorder, a condition that affects about one in 100 people. The article aims to give a basic understanding of the condition, discusses specific drug considerations and looks at how pharmacists can support these patients. This CPD article is exclusive to PJ Online and available now.

- In the next issue of Pharmacy Professional (to be sent out with The Journal on 24 April) The Journal’s Learning & development pages deal with the topic of diabetic emergencies, which include hyperglycaemia, diabetic ketoacidosis and hyperglycaemic hyperosmolar state. These emergencies can occur in patients known to have diabetes or as an initial presentation of the disease. The authors, from University Hospital Aintree, Liverpool, discuss the management of all these conditions, according to the latest guidelines from the Joint British Diabetes Societies and the NHS. This CPD article will be available on PJ Online from 21 April 2010.

- Look out next week for another “Question from practice”, this time about the prescribing of thiazide diuretics for ear problems.

- Readers who would like to be notified of new L&D material by e-mail can sign up for the PJ Online newsletter, “Editor’s choice”. 