Restructuring of diabetes care in a district general hospital

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Article points

1. Ensuring people with diabetes are referred to staff appropriate to their main problem improves satisfaction.
2. Care restructuring can benefit both healthcare professionals and people with diabetes.
3. Relationships between the healthcare professionals have been enhanced.
4. The changes made have been an effective way of developing the service and providing care.

Key words

- Teamwork
- Service development
- Improved quality
- Cancelled clinics

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There are an estimated 2.2 million people with diabetes in the UK (Diabetes UK, 2007). This number is set to continue rising and with this we can expect to see an increase in the prevalence of diabetes-related complications. The annual diabetes review is essential for the person with diabetes and their primary care practitioner as it enables the best course of management to be decided upon and provides an opportunity to identify, and perhaps slow, the progress of these complications. This article presents an example of how a hospital-based diabetes clinic has been restructured to improve the care offered to people with diabetes and make the best use of healthcare professionals' time.

Wharfedale Diabetes Centre is situated in Wharfedale Hospital, Otley, a peripheral site and part of Leeds Teaching Hospitals NHS Trust. The centre provides multidisciplinary diabetes care to a population that includes people from rural farming areas, affluent suburbs and the inner city. Leeds had five PCTs at the time of the study and the diabetes centre was closely linked with the Leeds North West PCT. The population of this PCT was 200604, of which 4375 (2.2%) had been diagnosed with diabetes.

The diabetes centre provides retinal screening, shared care and general advice to approximately 2500 people (predominantly Caucasian) with diabetes and their primary care teams. Since the opening of the diabetes centre in 1991, local GPs have referred most of the people with diabetes under their care to the secondary care services as they believed that it was important to have a comprehensive package of education from diagnosis and, as it was necessary for individuals to attend for retinal screening, a 'one-stop' approach was seen to be an advantage. The centre offers structured diabetes clinics as well as providing a drop-in service. The service is staffed by a multidisciplinary team consisting of a consultant diabetologist, hospital practitioner, junior doctors, DSNs, clinic nurses, dietitians, podiatrists, an orthotist, a retinal screening technician and administrative support.

Reasons for restructuring

There were three medical clinics per week led by the consultant and staffed by the hospital practitioner and junior doctors. Much of the work done in these clinics was routine and left little time to devote to the more complex cases.

The DSNs also ran follow-up clinics in addition to trouble-shooting sessions. Dietetic time was limited with only three sessions possible per week.

By 2004, it was becoming clear that there was a need to redesign the way that the South Staffordshire PCT diabetes service was delivered. The reasons for this are as follows.

- The recent government-led reduction in junior doctors' hours and the introduction of shift patterns of working meant that while junior doctors were in the diabetes clinic in Otley, the wards in Leeds General Infirmary were left short staffed.
- Shift patterns of working had led to an increase in the number of clinics cancelled owing to other commitments such as nights on call, study leave and annual leave.
- An increase in the number of different junior doctors had led to less continuity of care in clinics. As the junior doctors were rotating every 3 months, they were not able to gain adequate specialist training in diabetes in this short time. It was felt unacceptable by people with diabetes and their GPs that the diabetes clinics in secondary care were not staffed by diabetes specialists.
- With the introduction of new targets (for example, the QOF and the NSF) and various guidelines (such as those from NICE), there was a need for a greater number of medical clinic slots to address complex medical interventions and urgent problems as the doctor-led clinics were full of routine cases.
- The DSNs were keen to expand their expertise and take on new roles within the team.
- With limited dietetic time available, the dietetic service needed to be rationalised to allow dietetic care for all those who needed it.

The team embarked on a process of change and development to improve care provision.

Methods

Discussions were held with all members of the multidisciplinary team, looking at their current roles and practice and how these could be improved. All staff agreed that changes were needed and were keen to develop their own roles in a positive way. The doctors were keen to carry out more specialised work, the dietitians to develop group education programmes and the DSNs to expand and develop their role. This demanded a complete change in clinic structure.

The working week was reconfigured so that nurses' time was structured around booked clinic appointments; plus there was clarification regarding which patient education groups would run on which day. The DSNs took over the running of the routine diabetes annual review clinics in addition to running trouble-shooting clinics and group education sessions. Additional doctor-led clinics were set up for people with glycaemic control issues and those with diabetes-related complications.

The new clinic computer templates were set up in January 2005 ready for the change to commence in April 2005; this meant that appointments could be planned with no need to cancel and re-book them.

Education sessions and dietetic issues

Discussions revealed that there was a need to provide a wider variety of options for people using the clinic, within the limited amount of dietetic and nursing time available. At the time, the dietetic input into the diabetes centre consisted of three sessions per week. The dietitians agreed that they could not increase the number of sessions owing to funding and other clinical commitments; however, they did spend their time on very similar cases and, as a result, there was scope for developing the use of group education.

It was agreed that four group education sessions would be useful for the multidisciplinary team. These are as follows:

- carbohydrate counting (fortnightly)
- newly diagnosed type 2 diabetes (monthly)
- transfer to insulin (monthly)
- the at-risk foot (monthly).

Each of the four DSNs took control of one of the groups. In collaboration with the dietitians they looked at current practice and what resources were utilised, revising these as necessary. As a team they produced new presentations and information packs to be distributed to those attending the sessions. All staff were involved with this process. Some had limited experience of developing this kind of information and while

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3. The DSNs took over running the routine diabetes annual review clinics.

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3. Three specialist clinics are run each week. These clinics are staffed by a consultant diabetologist and a hospital practitioner with an interest in diabetes.

they found the process challenging, they enjoyed the experience. The nursing team met regularly during this time; firstly to support each other but also to gain familiarity with all the presentations. This allowed any one of them to cover a session when needed.

While the need for group work was recognised, it was clear that it was important to maintain one-to-one appointments. These were offered as needed.

A simple evaluation form was developed and distributed at the end of each of the education sessions to ascertain whether or not individuals were planning on changing anything as a result of the session.

Annual review clinics

The annual review clinics are now structured so that all necessary information is gathered on a single screening form. The information collected includes that needed by primary care colleagues to help achieve their QOF targets; for example, recording BMI, blood pressure, HbA_{1c} and so on. The screening form is inputted into the computer system and a letter is then generated for the GP. The DSNs now run the annual review clinics so that the doctors may spend more time looking at more complex cases.

In order to facilitate this, a team approach was taken to teach the skills and screening techniques needed to appropriately assess diabetes complications. This included diabetic foot screening, interpretation of albumin:creatinine ratios and assessment of cardiovascular risk. The DSNs spent a good deal of time developing foot-screening skills, particularly with regard to performing reflex tests and palpating foot pulses. Both the team podiatrist and doctors were involved with the training.

Protocols were developed by the consultant diabetologist for use in the annual review clinic. These included guidance for the following:

- microalbuminuria and proteinuria
- hypertension
- screening at-risk feet
- cardiovascular risk assessment and lipids
- use of oral hypoglycaemic agents
- referral to more specialist doctor-led clinics.

There are now four annual review clinics per week with approximately nine individuals attending each clinic. There is a weekly clinical case conference held between the DSNs and the consultant diabetologist, where each nurse will bring cases for team discussion. This provides a forum for learning and interaction between team members in addition to enabling the formulation of complex treatment plans. This 'case conference' also provides support and facilitates quality control.

These annual review clinics were previously staffed by the consultant and junior doctors. With the DSNs taking over this role, the junior doctors have been able to take up further ward duties. However, some choose to attend for additional training.

Specialist clinics

Three specialist clinics are run each week. These clinics are staffed by a consultant diabetologist and a hospital practitioner with an interest in diabetes. One clinic targets individuals with poor glycaemic control, weight issues and lipid management. The other clinic is aimed at those with more complex diabetes, often involving multiple complications. As the doctors no longer carry out the routine annual review visits, they are able to use their time dealing with potentially more problematic cases. People with diabetes are referred through to these clinics by the DSNs on the basis of their annual review.

Results

Changes in the provision of services began in April 2005. The changes have been well received by people with diabetes and staff alike and several advantages have arisen from these changes.

The provision of more group education sessions has provided better peer support between individuals with diabetes in addition to utilising limited human resources to their full potential.

> *'It was helpful listening to the answers to other peoples' questions as well as my own.'*
> *(Patient with diabetes)*

All people with diabetes are now seen by a member of the diabetes specialist multidisciplinary team where previously junior doctors with little

diabetes experience saw patients in the diabetes clinic. This change has enhanced the continuity of care throughout the clinic.

The role of the DSN has developed through involvement in the annual review clinics. Their area of expertise now includes detection of diabetes-related complications and management of cardiovascular risk. There has also been an increased understanding across the multidisciplinary team of what each member's role entails. This means that there can now be more appropriate use of medical staff time as the doctors are able to focus on the more complex cases identified at the annual review clinic.

Prior to the restructuring at least 16 clinics were cancelled annually by junior doctors owing to night shifts, being on-call, study leave and holidays. However, the restructuring means that there have been fewer cancellations of the clinics as annual leave is better planned and the number of people with diabetes attending clinics can be reduced if necessary and nurses can cover each others' clinics. There has also been a reduction in the number of people not attending their clinic appointments: from 238 to 150 people per year.

The development of protocols for use in the annual review clinic has improved the early detection of problems as well as placing more emphasis on attaining targets for glycaemic control, blood pressure and lipid levels.

The information gained from the annual review appointments is conveyed to GPs in a useful and structured format that enables them to achieve their QOF targets and thus improve the care received by the person with diabetes.

Overall, the restructuring of the annual review clinics has improved the service and has been welcomed by all of those involved, including the healthcare professional and the individual with diabetes.

'Very informative, reminded me of things I had been told and forgotten.'
(Patient with diabetes)

'Very useful for an old hand (27 years with diabetes), it has kick-started my motivation to be more aware of carbohydrate content in meals, especially fast food and ready meals.'
(Patient with diabetes)

Conclusion

The team recognise that a more formal evaluation of the changes is required in order to quantify the benefits gleaned from the restructuring. Plans are being made to carry out such an audit. Anecdotal feedback from the people using the service has been very positive and staff feel that their own particular skills and knowledge are being put to better use. There is also a greater understanding of each of the other team members' roles and the difficulties each professional encounters. Relationships between the healthcare professionals have been enhanced by the discussions at the clinical case conferences.

In the opinion of the authors, the implemented changes have been an effective way of developing the service as no additional staff are needed and junior doctors are able to use their time more effectively on the acute wards to provide the care that people with diabetes require and should expect. A more formal evaluation should indicate that the restructuring has been cost effective and has improved the efficiency of the service. The emergence of practice-based commissioning and payment-by-results may lead to further changes to the service in the future. ■

Diabetes UK (2007) *Diabetes: State of the Nations 2006: Progress made in delivering the national diabetes frameworks*. Diabetes UK, London