Integrated diabetes care in Derby: new NHS organisations for new challenges

In Derby, GPs and hospital-based clinicians have collaborated in an innovative way to form new NHS organisations which provide integrated diabetes care for their local population. First Diabetes is a partnership between First Provider Group and Derby Hospitals NHS Foundation Trust. First Provider Group represents five GP practices with a total practice population of 60 000 patients of whom just over 2300 were identified as having diabetes. The joint venture was set up as a company limited by shares with each of the partners having one share. Two directors have been appointed, one from the GP group and one from the acute trust, and a clinical board has been set up to run the operation of the company. A diabetologist and a GP co-chair the clinical board which is made up of consultant diabetologists, GPs, practice nurses, diabetes specialist nurses, dietitians, a service manager, a consultant ophthalmologist and patients.

The service was commissioned to provide more comprehensive diabetes care to the local population starting in June 2009. As a result, all patients at high risk of diabetes are now offered screening for diabetes over a three-year period. Education groups have been started for patients with impaired glucose regulation, as well as for patients with newly diagnosed type 2 diabetes and poorly controlled diabetes (both for patients prior to starting insulin and those already on insulin). Education for patients with type 1 diabetes continues to be provided by the acute hospital, although this takes place in both a hospital and community setting.

InterCare Health is a partnership between three local GPs in Derby and Derby Hospitals NHS Foundation Trust. The three GPs represent a wider group of 29 GP practices with a total population of 225 000 and a diabetes population of just over 10 000. The catchment population includes areas with high levels of deprivation and a large South Asian population. InterCare Health was commissioned to provide more comprehensive diabetes care to the local population, with the first phase to seven practices beginning in September 2010, and the second phase in September 2011. It delivers an integrated IT service, advice to practices on individual patients based on a review of the electronic notes, education for patients with newly diagnosed type 2 diabetes, accredited education for health care professionals in primary care, joint clinics between practice nurses and diabetes specialist nurses, and financial incentivisation for GP practices to deliver better diabetes care.

Currently, InterCare Health holds a contract with the PCT to deliver care for people with diabetes. However, the joint venture model also provides the opportunity to diversify in order to deliver the care of people with long-term conditions other than diabetes. It is set up as a company limited by shares because alternative vehicles such as 'community interest companies' or 'social enterprises' would not allow such diversification after they have been established. The different models of joint venture organisations are discussed below.

Professional education is provided in both First Diabetes and InterCare Health and is important in providing a structure for closer clinical relationships. The aim of the training has been to develop a health care professional diabetes community in which no individual practitioner is left without adequate support and training.

In each joint venture organisation the GP diabetes leads involved in the management of the company are remunerated at an hourly rate (which is a lower rate than that paid for GP locums). The trust receives an income for the time spent on the project by its staff.

Unique character of joint ventures

The unique aspect of both First Diabetes and InterCare Health is that they are jointly and equally owned by an acute hospital trust and local GPs. This was felt to be essential to deliver care organised around the patient. Putting the patient at the centre of both the clinical pathway and the structure of the organisations made sure that the clinical, organisational and financial directions of the service were aligned. (Figure 1.)

This partnership working has created constructive challenges to both primary and secondary care as to where the patients should be seen

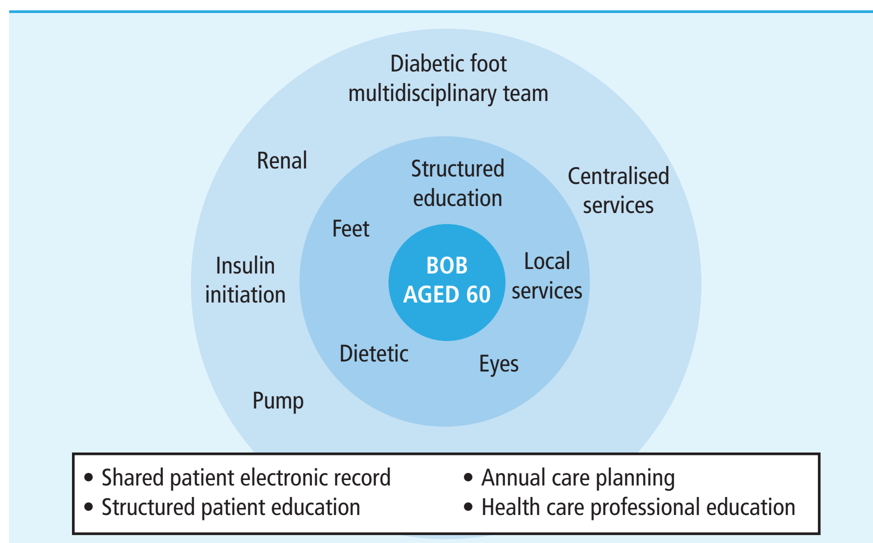

Figure 1. The integrated care partnership between primary and secondary care aims to improve the quality of care as well as the patient experience (in this case, virtual patient 'Bob' with diabetes) by avoiding duplication and coordinating appointments

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and the level of governance needed to deliver a quality assured service. It also provides for a greater sense of ownership of the whole service by all clinicians than the traditional hospital-based model.

Outcomes

Clinical audit data from GP practices served by the First Diabetes service are now available. This compares outcome data from 2009–2011, with particular focus on the management of risk factors associated with diabetes, including blood glucose levels, blood pressure, and cholesterol.

The data show significant improvements in the number of patients reducing their HbA_{1c}, with a 38% improvement in the percentage of patients with an HbA_{1c} <7% and a 26% improvement in the percentage of patients with HbA_{1c} <8%. There has also been an 18% improvement in the percentage of patients reducing their blood pressure (BP <145/85mmHg) and a 53% improvement in the percentage of patients achieving a cholesterol target of <5mmol/L.

Within one year of the First Diabetes service starting, 91 patients referred to the service with poor diabetes control had lowered their HbA_{1c} with 39 patients having an improvement by >1%. Seventy-three patients were discharged back to their GPs.

In the last year, 903 patients have been screened, with 14 patients diagnosed with diabetes and 15 patients diagnosed with impaired glucose regulation. A total of 187 patients attended education courses including those for newly diagnosed type 2 diabetes, courses for patients with raised HbA_{1c} (both prior to and on insulin) and courses for those starting GLP-1 agonists.

The average uptake of retinal screening has risen from 88% to 92% across the five GP practices, with 620 patients screened locally and a DNA rate of 6.6%. Ninety-three patients were assessed in the last year by a consultant ophthalmologist, with five patients referred for laser treatment and five patients referred for cataract removal. Six patients were discharged back to the Derbyshire Retinal Screening Service.

InterCare Health has only started providing services for patients with diabetes in Derby City since September 2010. It is too early to see changes in quality outcomes at present, but there have already been improvements in hospital admissions as detailed below.

The new partnership organisations have led to a reduction in emergency admissions of patients with a primary diagnosis of diabetes. In First Diabetes there was a fall in unplanned admissions from 43 in 2009–2010 to 34 in 2010–2011. Comparing similar six-month periods for InterCare Health showed a reduction in unplanned admissions from 54 (September 2009 to April 2010) to 46 (September 2010 to April 2011). There was an almost 50% reduction in the total number of bed days for patients with a primary diagnosis of diabetes between those periods. Other factors in demand management during that time may have contributed to this reduction, but a comparable reduction in emergency admissions in patients with a primary diagnosis of diabetes was not seen in the other GP practices that were not part of the first phase of InterCare Health.

A patient satisfaction questionnaire was handed out to all patients attending the First Diabetes Community Service in February 2010. The results showed:

- 86% of appointments were offered within three weeks of referral.
- 83% of patients were happy or very happy with the speed of referral.
- 90% of patients said that getting to the clinic was either easy or very easy.
- 100% of patients rated the professionalism of the clinician they saw as either good or very good.
- 100% of patients rated the personal manner of the clinician they saw as either good or very good.
- 63% of patients rated the care at First Diabetes as excellent, 22% as very good and 15% as good.

Key elements

- Redesign of services for patients with long-term conditions is best done in collaboration between primary and secondary care
- Joint venture working enables clinical decision making to take priority
- Collaborative working enables commissioning of a comprehensive service
- Integrated clinical governance requires both hard tools (e.g. local enhanced services) and soft tools (e.g. meetings, easy communication, nurturing relationships)

Professional education

In order to up-skill the health care workforce which provides care for patients with diabetes in Derby, a competency-based education module in diabetes care (accredited by the University of Nottingham) was developed. Over the last two years, 84% of practices in Derby have attended both this course and other competency training.

The formal competency-based training is supplemented by education sessions (both in person and by teleconferencing), and joint clinics between diabetes specialist nurses and practice nurses, and GPs and hospital specialists. There are payments for GP practices at different skill levels to ensure that good diabetes care is incentivised.

Drivers for change

The key to the success of First Diabetes and InterCare Health is the emphasis on partnership working. Partnership working between primary and secondary care is reflected not only in the composition of the board of directors, but also in the operational structures and the importance attached to joint decision making. Payment by Results and the national tariff structure have created a financial barrier between primary and secondary care. This has the potential to generate a conflict between good clinical decisions and the financial implications of those decisions. A joint venture company owned by both parts of the health care community has the opportunity to make the correct clinical decisions and mitigate any consequent financial risk across the whole health economy.

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