Using PBC to redesign diabetes education in primary care

Mary Braddock

Through practice-based commissioning, a care deficit was identified in the Surrey PCT. Individuals who had existing diabetes were not elligible for the education introduced in response to NICE guidance (2003). As a result, changes to a nurse-led clinic were instigated. This article examines the results of an audit of this new service and explains how the educational approaches employed by the service may have facilitated these results.

Structured education for people with diabetes has been one of the frequently touted phrases in diabetes care since the DoH published a report from the Patient Education Working Group in January 2005. The key criteria for provision of this education were described by NICE in 2003 (see *Box 1*) and since should now have been implemented for people with newly diagnosed diabetes (DoH, 2005). However, there appears to be one glaring omission: what about structured education for the 1.8 million people who were diagnosed with diabetes before April 2006? Why has provision not been made for a similar form of education for these people?

According to results reported in a paper commissioned by the Healthcare Commission, 88 % of the people with diabetes interviewed nationally said that they had not participated in educational sessions (the Healthcare Commission, 2007). Local results for Surrey mirrored this figure. This suggests that people with diabetes both locally and nationally do not realise that a visit to their practice nurse constitutes an educational event. Furthermore, these data identify an important practice-based commissioning target of improving education for people with existing diabetes.

There are already opportunities within primary care available for healthcare professionals in practice-based commissioning. It is stated in the practical implementation section of the practice-based commissioning document that practitioners should challenge current practise, and be innovative and involved with influencing the development of services for their patients (DoH, 2006). Deeper integration of primary and secondary care services that result in improvements to patient services are anticipated from changes brought about by practice-based commissioning.

Clinic design

It was through practice-based commissioning that the services provided by a nurse practitioner at a health centre in Surrey began to change in 2006. Prior to the service redesign, no diabetes clinics were run by the nurse practitioner. The new clinic is linked to the four practices housed in a single health centre (during the first changes it was available to just two) providing care for 20 000 people. It provides one-to-one diabetes care focussed on individuals (with type 1 or type 2 diabetes) requiring insulin via a nurse practitioner who is available for eight appointments per week and has the support of a GP within the health centre for challenging management decisions. Practice nurses continued to provide the usual

Article points

1. Practice-based commissioning was used to provide nurse-led education for people requiring insulin therapy at a health centre in Surrey.
2. While the new extended service challenged current practise, it also served to integrate primary and secondary care.
3. The education aimed to address the neeeds identified by the person with diabetes.
4. An improvement in HbA_{1c} in 82 % of those audited was recorded. Over 6 months the financial savings for the PCT were £4 600.

Key words

- Practice-based commissioning
- Patient-centred education
- Service redesign

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1. This was the first diabetes clinic in the locality to formally discuss with people with diabetes the transfer of their management from secondary to primary care.
2. The nurse practitioner's patient discussion techniques and education style involve an informal, patient-centred learning needs assessment for each person coming to clinic.
3. Irrespective of what a healthcare professional says or does, the patient can ignore the advice as soon as she or he leaves the room. They are less likely to do this if it is their issues that have been the focus during the discussion.

Box 1. Key criteria that a structured education programme should meet to fulfil the NICE requirements (NICE, 2003).

- Contain a structured curriculum that is person centred, reliable, valid, relevant and comprehensive.
- Involve trained educators who are competent in the delivery of education theory, principles and content.
- Be quality assured by independent assessors.
- Be auditable in a way that can include the patients' experiences.

Box 2. Requisit elements for a comprehensive nurse-led diabetes clinic.

- A general practice with good recall systems in place.
- An administration that assists with letters of invitation and recall to patients.
- A general practice database that contains full patient history.
- A healthcare assistant who captures clinical measurements such as blood pressure and weight.
- A practice nurse who performs full annual diabetes reviews.
- A supportive, accessible GP within the practice.
- An accessible GP with a special interest in diabetes.
- Communication and teamwork with secondary care.
- A nurse practitioner who is a skilled professional with a special interest in diabetes, is a nurse independent prescriber and has knowledge of structured education for people with diabetes.

diabetes clinics and worked to the new General Medical Services (nGMS) targets.

The extended service aimed to challenge current practise and integrate both secondary and primary care services. This was the first diabetes clinic in the locality to formally discuss with people with diabetes the transfer of their management from secondary to primary care. People with diabetes were only offered this option when secondary care and healthcare professionals from the new clinic deduced that it was safe to do so and was in the individual's best interest. It was also agreed that individuals would be quickly referred back to the consultant if either the nurse practitioner or the person with diabetes felt that treatment was not working or other complications became a significant factor. *Box 2* details the necessary requisites to start such a clinic.

The University of Warwick's Intensive Management of Diabetes course and guidelines produced by the University Hospitals of Leicester NHS Trust (2005) form the backbone of the clinic protocols and lend guidance to decisions made about patient care.

People with diabetes received one-to-one half-hour appointments with follow up as necessary. The practice computer systems were used to provide full background history – including medication – of each individual. The one-to-one approach to the clinic was decided upon as the individuals being referred to the service had clinical indicators (such as HbA_{1c}) outside the ranges specified in the nGMS contract and therefore would have specific, individual needs. From previous experience, the nurse practitioner felt that the people attending the clinic would find it easier to discuss their problems and needs in a one-to-one setting.

The new clinic extended the services for individuals who met the following criteria.

- Diabetes control was above the nGMS contract target HbA_{1c} of 7.4 %.
- Were already using insulin.
- Those who had agreement from primary and secondary care to participate.

Practice nurses and GPs at the health centre helped to identify the individuals who met these criteria. The additional diabetes experience and knowledge the nurse practitioner brought to the health centre was benefitial as the centre's experience with insulin was limited.

The nurse practitioner's patient discussion techniques and education style involve an informal, patient-centred learning needs assessment for each person coming to clinic. This identifies the individual's agenda rather than working to health professionals' targets and, as such, meets the requirements of the *Diabetes National Service Framework* (DoH, 2001) that asks for healthcare professionals to work with their patients in such a way that promotes self-management skills.

Anderson and Funnell (2000) have identified that irrespective of what a healthcare professional says or does, the patient can ignore the advice as soon as she or he leaves the room. They are less likely to do this if it is their issues that have been the focus during the discussion. To this end, the X-PERT programme of patient structured education uses the philosophy of the patient-centred approach (Deakin, 2006). In a randomised controlled trial, the X-PERT programme has been shown to significantly decrease HbA_{1c} compared with standard consultations (-0.6 % versus 0.1 %,

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1. The first aduit looked at glycaemic control in people with diabetes from a practice with an existing diabetes clinic before and after they transfered to the new nurse-led clinic.
2. Among the 44 patients seen in the nurse-led clinic, 36 (82%) had undergone a reduction in HbA_{1c}.

respectively, $P<0.001$). While it has been assumed here that knowledge of group education gained through the X-PERT educator's course would also strengthen the healthcare professional's ability to facilitate a useful one-to-one discussion, the author is not aware of any evidence that supports the transfer of educational techniques between group and individual sessions.

The agendas of people with diabetes will include a whole range of questions. In the author's experience, a non-judgemental approach should gain the confidence of the individual and enable frank honest conversation to follow about more crucial subjects such as medications and frequency of tablet omission. However, the nurse practitioner brings into discussion at a suitable point clinical targets (HbA_{1c}, blood pressure and lipids), the evidence behind these targets and the individual's understanding of what their own targets are. A patient-held record can help provide pertinent written information to aid understanding and enable them to track their progress. It also provides contact numbers for times when reassurance is required.

Self-monitoring of blood glucose (SMBG) is a powerful tool for people using insulin and the audit supports this. SMBG provides the person with diabetes with vital knowledge about themselves in relation to their diet, activity and insulin requirements. However, it is key that they also have knowledge of how to use the results of SMBG (Karet, 2006). Part of the nurse practitioner's role in the new clinic is to ascertain how much the individual knows about SMBG and to help them use their results.

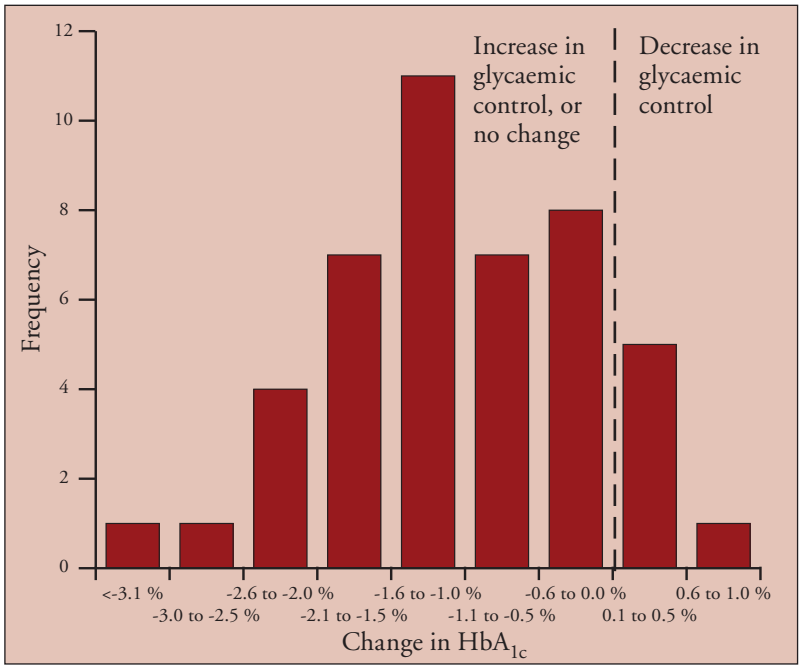

Figure 1. Distribution of changes in HbA_{1c} over the audit period.

Audit

Owing to the design of the service (see *Box 2*), audit and evaluation systems were already in place and the PCT was able to retrieve financial data. The first audit looked at glycaemic control in people with diabetes from a practice with an existing diabetes clinic before and after they transferred to the new nurse-led clinic. HbA_{1c} was chosen as the clinical measurement tool. While cardiovascular risk is assessed and managed by the nurse practitioner, it was not audited in this first instance.

The time span of the audit was 15 months. Each participant's last HbA_{1c} before they were seen by the clinic was recorded and a their HbA_{1c} in January 2007 was noted for comparison.

Results

See *Figure 1* for a summary of the changes in HbA_{1c} over the 15-month audit period. Among the 44 patients seen in the nurse-led clinic, 36 (82%) had undergone a reduction in HbA_{1c}. Of these:

- Twelve had an increase in their insulin dose or changed to a basal–bolus regimen in conjunction with discussions focusing around their insulin management.
- One person had commenced once-daily insulin in addition to existing oral medication.
- Thirteen had received education about the management of their insulin.
- Nine received education about the oral medication they were taking as well as a dose increase or, where possible, switching to a sustained-release preparation to reduce pill burden.
- One person had made significant changes by diet and exercise alone supported by education.
- HbA_{1c} was reduced to below the nGMS target of <7.4% in 23 individuals.

Eight individuals did not reduce their HbA_{1c}: in six it increased and for two it remained static. Details are as follows.

- Two did not attend clinic sessions. For these individuals, their final HbA_{1c} was taken when they saw the GP for a reason not relating to their diabetes. For both, HbA_{1c} had increased.
- One refused to have input in their diabetes management; their HbA_{1c} increased.
- One individual refused insulin despite being on maximally tolerated oral therapy; their HbA_{1c} increased.
- One person had only recently been referred to the clinic and had at the time of the audit had not undergone follow up so final HbA_{1c} measurement was not available.
- Three participants were referred onto the GPSI diabetes or to secondary care due to a co-existing disease. All experienced an increase in HbA_{1c}.

The savings for the first 6 months of the new clinic were calculated to be £4 600.

Discussion

This small study reflects improvements not previously seen in this group of people with diabetes. The one constant factor with all the participants was that they had been referred to a nurse practitioner who was actively educating them in a manner that facilitated empowerment. One of the benefits of the patient repeatedly seeing the same nurse practitioner is that a relationship is formed where the two individuals get to know each other. It is then easier for the nurse practitioner to unravel any preconceived ideas that may cause denial or a block in the cycle of change. People with diabetes need the knowledge, skills and motivation to be able to assess their risks and affect change. The nurse, however, also needs the knowledge and skills to be able to deliver structered patient education that fits the individual's clinical and psychological needs and is adaptable to their educational and cultural background (NICE, 2003).

Four of the eight individuals who went on to have either a raised or static HbA_{1c} chose their own managment methods or refused external input. Several factors may explain why control of their diabetes did not improve; in the author's experience, these can range from denial through to a false belief that they are making realistic changes. It is an observation of the nurse practitioner that the empowerment technique does not work with all individuals and some people actually prefer a didactic approach.

The two individuals who did not attend their follow-up clinic appointment were included in the audit as recording such information shows that people with diabetes do have a choice in the management of their condition. Additionally, it helps to give a realistic picture of what occurs in primary care.

Conclusion

Practice-based commissioning offers opportunities for a new style of approach to patient care in diabetes. There are huge benefits: people with diabetes see the same clinician; the control of their diabetes is improved; the practices are achieving more of their nGMS targets; the PCT is saving money; and secondary care can spend more time with more complex cases.

There is an opportunity for innovation and, in these challenging times, there should not be a fear of change nor of challenging traditions including methods of education. Nurse educators should be asked to provide training for nurses that enables them to deliver patient-centred care and move away from former didactic methods. ■

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