

# Breaking the primary–secondary care divide in diabetes

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In the Adur, Arun and Worthing area of West Sussex PCT, DSNs have been working collaboratively with practice nurses in general practice for the past 18 months. Specialist combined diabetes clinics now run in all 32 practices in the area and provide people with diabetes access to specialist care closer to home and act as a resource for primary care clinicians. This article reflects upon the first year of collaboration from a DSN position working within general practice and from a nurse practitioner's perspective based within one particular surgery.

Although diabetes care has been an important factor of general practice since the early 1990s, it has become an increasingly pertinent issue following the introduction of the new general practice contract and Quality and Outcomes Framework (QOF) targets in April 2003 (DoH, 2003), when financial rewards were announced for practices who met various aspects of care demonstrated by reaching national targets. These targets aim to ensure that regular monitoring and treatment are carried out in order to reduce or delay development of long-term diabetes complications. Care is given according to local and practice protocols based on national and international guidance.

In response to national and local chronic disease management strategies (DoH, 2006) three locally responsible primary care DSNs were appointed to provide specialist diabetes care in the Adur, Arun and Worthing areas of West Sussex PCT.

What is perhaps unusual about the way services have been designed in this area is that the primary care DSNs are employed by the PCT and work with nurses and GPs in general practice, but are themselves based at the secondary care diabetes

centre where they also work alongside secondary care colleagues and are managed by the nurse consultant in diabetes.

The main body of work for the primary care DSNs is at the joint DSN and practice nurse clinics, where complex cases are reviewed according to the same criteria used for referral to secondary care DSNs. The primary care DSNs also provide formal and informal education and clinical supervision for healthcare staff working in community and general practice settings, while education for care homes is provided on a study day basis. Links with community matrons and district nurses have enabled joint home visits and united management plans. The secondary care team continue to manage pregnancy, renal, complex type 1, children and adolescents; however admission avoidance, discharge facilitation, telephone triage, and group patient education is shared with secondary care colleagues.

Within the practice, 243 patients from a population of 6230 are on the diabetic register. Of these 11% have type 1 diabetes and 89% type 2. Historically, the diabetes team in secondary care has managed patients with type 1 diabetes

## Article points

1. Collaborative working leads to a sharing of knowledge and skills amongst Primary and Secondary Care clinicians.
2. Joint clinics provide a more holistic approach to diabetes care.
3. Patients receive quality evidence based care closer to home in an environment they are familiar with.
4. Collaborative working reduces fragmentation and duplication of services and can prevent admission to hospital and facilitate earlier discharge.
5. All patients with diabetes in the GP practice benefit from the increased knowledge, skills and confidence of the Nurse Practitioner/Practice Nurse.

## Key words

- Collaborative working
- Primary and secondary care
- Holistic approach

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### Page points

1. Initially the level of knowledge, skills and confidence among practice nurses and nurse practitioners with the lead in diabetes care was varied, ranging from rather poor to exceptionally good.
2. Working with the DSN provided a channel for the practice nurses to gain new knowledge and skills and to develop confidence.
3. Frequently, Nurse Practitioners and prescribers tend to have the highest degree of influence on the patient's self-care.
4. The varying prescribing preferences and targets used in the different practices continue to be a challenge.

while those with type 2 diabetes are predominately cared for within the practice.

Before the joint clinics began in January 2006, the management of people with diabetes was the responsibility of an experienced nurse practitioner and prescriber, who had 18 years of practical experience and formal education in managing patients with diabetes in general practice.

The collaborative clinics are held one morning a month. Thirty-minute appointments enable seven patients to be seen each month with the remaining time used for the DSN and nurse practitioner to discuss issues related to other patients who do not necessarily need to be seen in the clinic.

Following the introduction of collaborative clinics the practice looked at three areas to assess their influence: nurse practitioners' knowledge and skills, patient care and prescribing.

### Knowledge and skills

Initially the level of knowledge, skills and confidence among practice nurses and nurse practitioners with the lead in diabetes care was varied, ranging from rather poor to exceptionally good (assessed using *An Integrated Career and Competency Framework for Diabetes Nursing* [UK Association of DSNs and RCN, 2005]). The collaborative clinics in practices were attended by a primary care DSN and a practice nurse. The practice nurse had a validated or accredited qualification gained within the last 5 years. Despite this training it was clear that a knowledge gap remained, probably due to the fast development and changes occurring in diabetes care. The practice nurse is usually a generalist and may find it difficult to keep abreast of the latest developments in diabetes. Working with the DSN provided a channel for the primary care nurses to gain new knowledge and skills and to develop confidence – none of which would have occurred if the DSN had seen patients at the surgery independently of the practice nurse.

One further observation is that there appears to be a correlation between the level of independence a practice nurse is given by their general practice colleagues and the confidence the practice nurse has in making decision and influencing others. Nurse practitioners and prescribers tend to have the highest degree of influence on the patient's

self-care – although this is certainly not true of all practices.

### Primary care DSN knowledge and skills

After many years of working within secondary care the move to primary care was a little daunting for many involved. Collaborative working has had a positive influence on consultations and providing a more holistic approach to care. Generally in a secondary care consultation the healthcare professional is reliant on the quality of the referral letter and the degree to which the person with diabetes communicates. Through joint working, far greater physical, psychological and social detail is revealed that may enhance the patient–healthcare professional relationship and influence decisions about management.

What continues to be challenging is the varying prescribing preferences and targets used in the different practices. For example, some practices are happy if the QOF targets are achieved while others are more focussed on following guidelines from evidence-based medicine such as the tighter targets in the latest Joint British Societies' guidelines (British Cardiac Society et al, 2005). As a DSN, this can be difficult when trying to promote the benefits of the stricter evidence-based guidelines while still taking the wishes of the person with diabetes and their quality of life into account.

Working in primary care has required greater knowledge and skills in the management of hypertension, hyperlipidaemia, nephropathy, and neuropathy. However, many of the primary care nurses have far greater skills in the management of diabetes-related risk factors – such as the control of hypertension, weight management and smoking cessation – and these are therefore areas in which the primary care DSNs can learn from them.

Another hurdle has been the various computer systems used in the different practices, as no formal education has ever been provided to the primary care DSNs in any aspect of their use or integration. In addition, the practices do not have access to all the results of blood tests carried out at the hospital. Therefore, further blood samples may be taken or decisions made based on results from the general practice system with no knowledge

that the hospital may have more recent data. Communication will dramatically improve once primary and secondary care computer systems are linked through Connecting for Health.

### Nurse practitioners' knowledge and skills

Working alongside the DSN has promoted a greater depth of practice nurse knowledge and confidence in many areas of diabetes care. All the appropriate individuals with diabetes (those on insulin or hypoglycaemic agents) have the means to monitor their risk of becoming either hypo- or hyperglycaemic, including the means to treat either. At the same time the frequency and appropriateness of home monitoring is now more closely considered in light of the identified increased prescribing cost to the practice. Additionally, nurse practitioners have further enhanced skills in empowering people with both types of diabetes to manage their condition.

Oral and insulin therapy is now titrated earlier in individuals where diet and exercise control methods are not effective, while still reinforcing its ongoing impact on insulin resistance. Oral therapy is increased more rapidly according to home testing results rather than waiting 3 months for HbA<sub>1c</sub> result. A wider range of oral medications is used and insulin transfer is discussed at an earlier stage. A collection of demonstration insulin devices in the practice allows people with diabetes to start looking at and handling the devices, thereby acquainting and familiarising them with insulin as a treatment option before it becomes necessary, thus tackling psychological insulin resistance.

### Patient care

Forty-seven people with diabetes have been seen by the service to date (many on more than one occasion), representing the most complex cases on the practice register. Looking specifically at diabetes control assessed from HbA<sub>1c</sub> results, 19 of the 47 have reduced their HbA<sub>1c</sub>, two experienced no change, an increase was recorded in five people with diabetes, two died from stroke and in 19 cases no repeat HbA<sub>1c</sub> has been taken. Of those who have had their HbA<sub>1c</sub> repeated, 73% have seen an improvement in their HbA<sub>1c</sub> (mean improvement was 1.8%;

mode 1.5%, range -6.9–0.2%).

The benefits for those individuals seen in the joint clinics have been demonstrated by a majority reduction in HbA<sub>1c</sub>, thus reducing, or delaying, long-term complications (The Diabetes Control and Complications Trial Research Group, 1993). The increased knowledge gained through these collaborative clinics is filtered through to other people with diabetes and colleagues within the practice, which in turn addresses the increasing long-term morbidity and mortality in these individuals and has an enormous knock-on effect on the overall health economy.

Without undertaking a formal patient survey it is difficult to objectively state whether people with diabetes find collaborative clinics more beneficial than standard approaches. However, from the authors' personal experiences and feedback from individuals, the clinic attendees do appear to prefer seeing a specialist in an environment they are familiar with.

There is no confusion over letters or prescriptions as a systematic management plan is agreed, written and prescriptions arranged at the time. Individuals do not have the stress and worry of, for example, getting to and parking at the hospital for specialist reviews. Those individuals nearing insulin transfer can be seen at their surgery where fears and concerns can be addressed early. In some cases where the person with diabetes cannot attend group sessions, insulin transfer can be carried out in the practice. Additionally, if primary care nurses and primary and secondary care DSNs are involved, admission to hospital can be prevented. Even if an admission is elective or unavoidable, the journey from admission through to discharge is seen to improve.

The majority of people seen in a joint clinic experience an improvement in HbA<sub>1c</sub> and their motivation to self manage; however, if the person with diabetes has not been reviewed for several months there is often a subsequent decline in control. The authors feel that the collaborative clinics are merely scratching the surface in providing care wanted or required by people with diabetes. Thus, supplementary methods of working – such as

### Page points

1. Communication between primary and secondary care still needs improvement.
2. Working alongside the DSN has promoted a greater depth of primary care nurse knowledge.
3. Of those who have had their HbA<sub>1c</sub> repeated, 73% have seen an improvement in their HbA<sub>1c</sub>.

### Page points

1. There has been an increase of 40% spent on diabetes between 2004/5 and 2005/6 as a result of the change.
2. Unless more of their nursing hours are allocated to people with diabetes there is a limit to what can be achieved.
3. Success of the model is therefore attributed to a team approach towards managing diabetes services and patient care.

ongoing structured group education – need to be explored, although there are dependent on resources being made available.

### Prescribing

Analysis of the prescribing budget showed that there has been an increase of 40% spent on diabetes between 2004/5 and 2005/6 as a result of the changes. Breaking this 40% down showed that 39% was spent on insulin, 33% on oral medication and 27% spent on testing equipment. Very few prescriptions had been issued for materials relating to treating hypoglycaemia (such as glucagon injection kits) or identifying diabetic ketoacidosis (such as urine dipsticks). This programme has been able to highlight what has been spent in different areas of diabetes and therefore allow approaches to address any such issues raised.

Looking specifically at what types of oral medication had been issued, the majority was spent on metformin followed by gliclazide and glitazones. This approach elucidated two older people with diabetes who were taking glibenclamide – considered to be less safe in the elderly – and enabled these individuals to be called in to the practice so that the medication could be changed to a more appropriate one.

Although the prescribing budget has been seen to increase by 40% and is expected to continue to rise, the practice has accepted that this is not necessarily a negative outcome: the authors' believe there will be a reduction in long-term complications and non-elective hospital attendance. Good control requires adequate treatment and some of these are new and more expensive compared to the effective and inexpensive metformin, which is still recommended first line in individuals with diabetes who are overweight where dietary and exercise strategies have been unsuccessful. Additionally, increased knowledge of medications allows the independent prescriber to prescribe more appropriately and based on evidence.

### Resources

Collaborative clinics are time consuming with each appointment taking at least 30 minutes, but surgery time allocated to diabetes care and

resources are limited. Lack of time is always an issue in general practice when so much other work has to be done in a day. Not all surgeries have the luxury of having protected time available to concentrate at length on people with diabetes. Most nurses in general practice have a wide remit of other work, including acute triage; minor illness; chronic disease management and health promotion; and managing nursing teams. They are generalists rather than specialists. Unless more of their nursing hours are allocated to people with diabetes there is a limit to what can be achieved.

### Conclusions

From reflecting upon the experience of 18 months of collaboration between primary and secondary care nurses, all those involved feel that they and the people with diabetes who they have treated have benefited enormously from the increase in knowledge and skills within the practice. However, time restraints and other general work means that the sustained input and knowledge of a DSN is vital to ensure patients continue to benefit.

This model of care has enabled the primary care DSNs to function as part of the wider diabetes team, which encompasses all primary and secondary care clinicians, while not being isolated from their secondary care colleagues. Success of the model is therefore attributed to a team approach towards managing diabetes services and patient care, aiming to prevent omission, fragmentation and duplication of services, while improving communication between primary and secondary care diabetes services. ■

British Cardiac Society, British Hypertension Society, Diabetes UK et al (2005) JBS 2: Joint British Societies' Guidelines on Prevention of Cardiovascular Disease in Clinical Practice. *Heart* **91** (suppl. V) 1–54

Diabetes Control and Complications Trial Research Group, The (1993) The effect of intensive treatment of diabetes on the development and progression of long-term complications in insulin-dependent diabetes mellitus. *New England Journal of Medicine* **329**: 977–86

DoH (2001) *The National Service Framework for Diabetes: Standards*. Department of Health, London

DoH (2003) *The New GMS Contract 2003; Investing in General Practice*. Department of Health, London

DoH (2006) *Our Health, Our Care, Our Say: a New Direction for Community Services*. Department of Health, London

UK Association of DSNs and the RCN (2005) *An Integrated Career and Competency Framework for Diabetes Nursing*. SB Communications Group, London