The Bradford approach to optimising diabetes care

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ARTICLE POINTS

1 Supporting diabetes care delivered within the Bradford model has been challenging for the diabetes specialist nurse (DSN) team across the district.

2 Care is now delivered within a three-tier system, with a unified on-call system linking community and hospital-based DSNs.

3 A gold standard DSN support means that a DSN attends all satellite clinic sessions.

4 The next step is to ensure that all patients not only receive structured care but also access to structured education.

KEY WORDS
- **Diabetes nurse specialist**
- **Bradford approach**
- **Workload assessment**
- **Gold standard**

Introduction

As more people with diabetes are accessing structured diabetes care than ever before, the challenge that faces us is ensuring that this care is accessible to all patients. The Bradford approach to diabetes care involves a three-tier system, where patients receive care at the appropriate level to their clinical need. To meet the challenge, the diabetes specialist nurse (DSN) team supports a unified on-call system, linking community and hospital-based DSNs. 'Gold standard' DSN support means that a DSN attends all satellite clinic sessions. In order to meet such a demand, a further two community DSNs were recruited. In some practices, a buddy system links the practice to a satellite clinic, providing DSN support as required.

Over the past 15 years, the number of patients with diabetes has significantly increased (Audit Commission, 2000), the treatment targets have been tightened (British Medical Association, 2003) and more people with diabetes are accessing structured diabetes care than ever before. In practice, we are all working differently and probably harder than before. The challenge that faces us is delivering integrated, structured diabetes care that is accessible to all patients.

The Bradford approach to diabetes care

The delivery of diabetes care in Bradford has developed since the late 1990s. Care is now delivered within a three-tier system (*Figure 1*). The aim is that patients receive care at the appropriate level to their clinical need (*Table 1*). Where possible, movement is encouraged through the levels in both directions, which is unlike the one-way referral process historically adopted in diabetes care.

Access to diabetes specialist nurse advice

Supporting diabetes care delivered within this model has been challenging for the diabetes specialist nurse (DSN) team across the district. This challenge was compounded by the fact that, initially, the six DSNs working within Bradford (following the introduction of the satellite clinics in 1998) operated as two distinct teams: three DSNs supported the satellite service; and three were hospital-based DSNs. There were two, separate, DSN on-call systems in operation across the city: one 5 pm–9 am, Monday to Friday, and 24 hours on a weekend; and the second 7.30 am–11 pm, every day of the

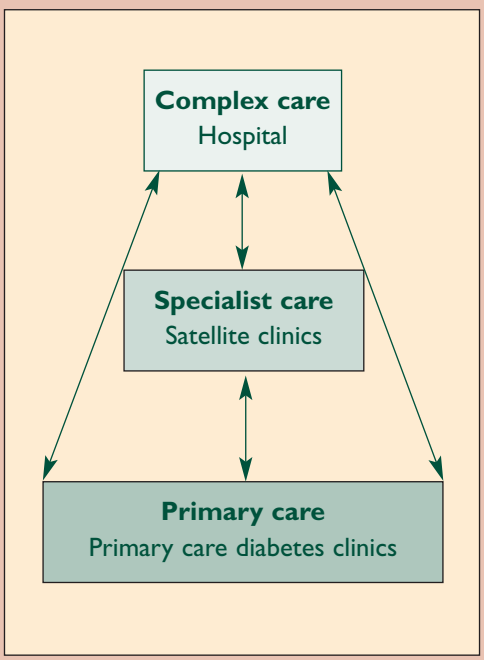

Figure 1. Bradford model of diabetes care.

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week. Any patient or healthcare professional could contact the hospital-based DSNs for advice, but only patients attending the satellite service and community staff had access to the telephone numbers for the community DSNs.

Integration of the DSN on-call

Following review of call patterns and an in-depth risk assessment of the need for an on-call system, one unified on-call was established in July 2002, from 7.30 am–11 pm, every day of the week. The DSNs provided a one-in-six, rather than a one-in-three cover. Following the appointment of additional DSNs, they now cover one week in eight working 7.30 am Monday to 11 pm Sunday. In addition to promoting closer working relations between the teams, the unified on-call has also highlighted areas, such as documentation, where the two teams can work closer together.

When the two-directional approach to diabetes referrals was explored with GPs, many of whom were running established primary care diabetes clinics, they were happy to accept patients back for ongoing care and management once they had been established on insulin therapy. However, many GPs expressed concern that DSN support would be withdrawn from these patients. Equally, the community DSNs expressed concern that they had an ever-expanding caseload of patients and a limited capacity to meet their needs. This then raised the question: 'What is an appropriate caseload for a DSN?'

It may well be that the answer to this question will be different depending on where the DSN is working, but some way of quantifying a DSN's workload is required if service expansion is to be supported.

Workload assessment

When the diabetes satellite service was established in 1998, with funding for 3.0 whole-time-equivalent (wte) DSNs, 2.0 wte specialist dietitians and 1.2 wte podiatrists were appointed to support the 19 clinics that ran either monthly or fortnightly. It was expected that the DSN would be in attendance at 100%, dietitians at 75% and podiatrist at 50% of clinic sessions.

Table 1. Points of diabetes care in Bradford

Care level	Patient group	Potential patient group
Primary care diabetes clinics	All newly diagnosed patients with type 2 diabetes Patients with type 2 diabetes treated with tablets	Patients with type 2 diabetes stable on insulin therapy
Specialist care	Patients with type 2 diabetes on maximum medication with an HbA_{1c} >7.5% for consideration for insulin Patients with type 2 diabetes treated with insulin Patients with type 1 diabetes	
Complex care	Adolescents Patients newly diagnosed with type 1 diabetes Pregnancy planning Pregnant Renal Maturity-onset diabetes of the young Active foot problems Complex problems	

By 2002, most clinics ran weekly or for three weeks out of every four. The dietitians and podiatrist continued to attend the same number of clinics initially funded for, but the DSNs were still trying to attend 100% of clinic sessions. In some cases, the DSN was supporting seven clinic sessions within a week, having to initiate insulin outside the clinic sessions and maintain follow-up on patients recently started on insulin.

This raised several questions:

- Did the DSN need to attend 100% of clinic sessions?
- How many satellite clinics could 1.0 wte DSN support?

The gold standard

Following an in-depth workload analysis and review of the DSN role four years

Table 2. Patient capacity in satellite clinics

Frequency	Sessions per year	Patients per session	Number of patients based on three appointments per year
Weekly	46	10	153
Fortnightly	23	10	77
Monthly	12	10	40

after the establishment of the satellite clinics, it was agreed that 100% attendance was the gold standard. One satellite clinic session generated a further two sessions of clinical work, e.g. group insulin initiation sessions, patient follow-up and administration.

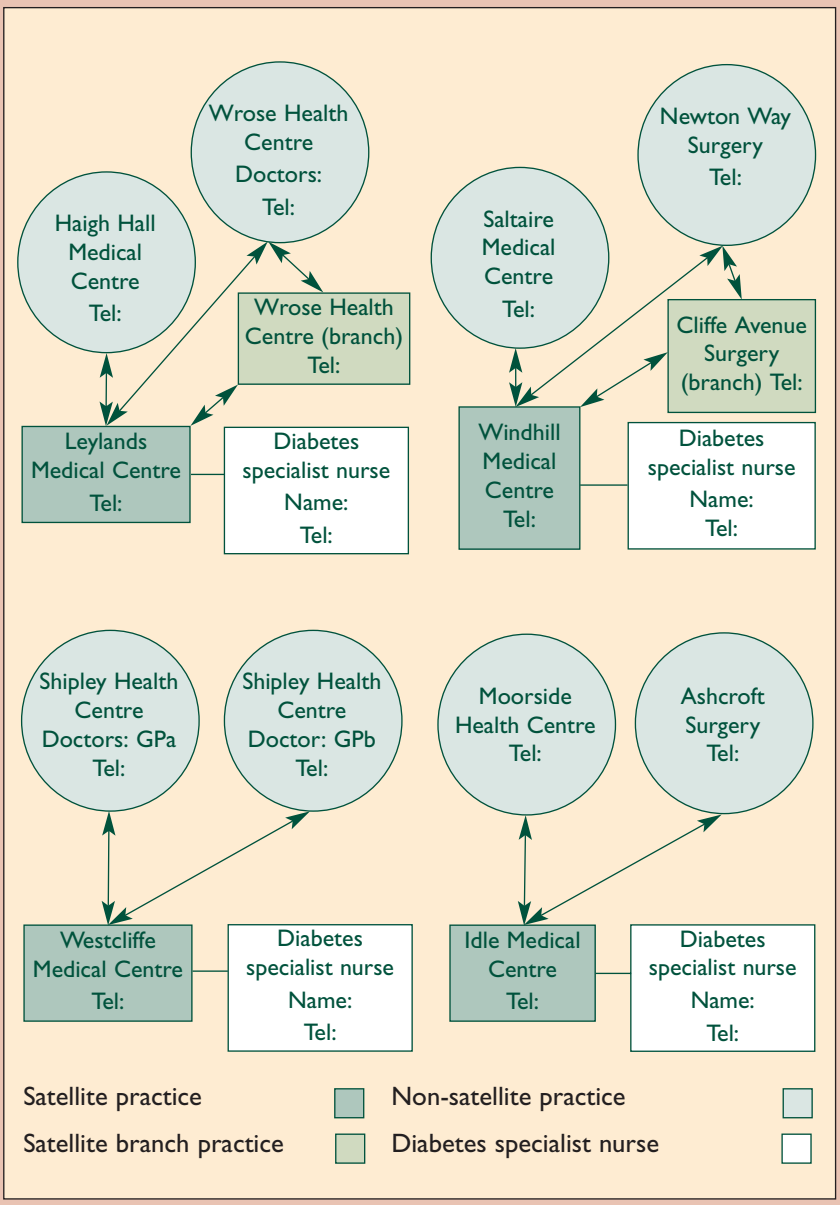

Figure 2. Buddy system diagram for diabetes care used by Bradford North Primary Care Trust (contact names and telephone numbers not published).

By providing gold standard DSN support, the approach to patient education adopted at the point of transfer to insulin therapy could be maintained, with the expectation that an annual educational review would identify a patient's individual educational needs. This meant that by taking into account time for healthcare professional educational commitments, personal development, audit and innovations in practice, a 1.0 wte DSN could support the equivalent of three satellite clinics each week.

Therefore, to support the clinics that were currently operating, a further 2.0 wte DSNs would be required to maintain the 100% attendance commitment, or alternatively a suboptimum support would have to be provided by reducing DSN attendance to 50% of clinic sessions. As it had been previously established that a weekly satellite clinic could give clinical support to a caseload of 153 patients (*Table* 2), a 1.0 wte DSN's caseload is approximately 460 patients. When this work was presented to the local primary care teams (PCTs), the need for additional DSN resources was supported, and a further two community DSNs were recruited.

The lessons learnt from this process clearly supported the approaches adopted by the dietitians and podiatrists, that quality service expansion can only take place if adequately resourced; spreading resources thinner impacts on the quality of care delivered.

In addition to highlighting the need for

additional resources to support the existing services, this process clearly established that before further expansion to the satellite service could take place, additional resources needed to be identified. This has resulted in one PCT successfully identifying funding for satellite service expansion through a local development plan.

DSN support to non-satellite primary care clinics

With the addition of 2.0 wte DSNs to the community team, support to patients outside the satellite clinic system was easier to address. All insulin-treated patients have access to the DSN on-call number wherever they receive their care. Additionally, all healthcare professionals across the city can access the DSNs for emergency advice via the on-call process. Also, further approaches to healthcare professional support have been adopted by different PCTs, dependent on their needs.

The buddy system

North Bradford, the smallest of the three PCTs, has only 12 practices (population 90 000), of which four are satellite service providers. This has enabled a simple buddy system to be established (*Figure 2*), where two practices are linked to one of the satellite clinics. The principle of this model is that the GP, practice nurse or community staff can access their linked satellite GP or attached DSN for advice as required.

Primary care diabetes nurses

In Bradford City Teaching PCT the support required by practices amounted to more than access to telepone advice. In 2002, in contrast to North Bradford PCT, Bradford City Teaching PCT served a population of 148 000, with 42 GP practices of which approximately 50% were run by single-handed GPs: 55% of practices provided structured diabetes care; but 45% did not (Margerison, 2004).

To support the target of 100% provision of structured diabetes care, 1.5 wte (increased to 2.0 wte in 2003) primary care diabetes nurses were appointed by the PCT. Although their roles are different to that of the traditional DSN, these primary care diabetes nurses have considerable diabetes experience and knowledge. They have successfully worked alongside GPs and practice nurses to develop the provision of structured diabetes care, achieving 84% provision by the start of 2004 (Margerison, 2004) with an anticipated target of 100% by 2005.

However, as one target is reached another takes its place. The next step is to ensure that all patients not only receive structured care, but also access to structured education.

Conclusion

In 2002 it was estimated that there were 12 000 people with diabetes across the three Bradford PCTs, about 4000 of whom attended either satellite clinics or the hospital service. Currently the number of people with diabetes is approximately 15 000, and over the past three years 1800 patients have been referred out of the primary care clinics into the next two levels of care. This clearly demonstrates that workloads at all levels of the service are expanding.

The DSN team would need to be considerably larger to provide education and support to all people with diabetes in Bradford. The role of the DSN is therefore being developed to provide education and support to patients treated with insulin, and to support primary care staff in providing education and support to the patients whose care they manage. ■

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