Addressing the DSN shortage

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The requirements of the Diabetes National Service Framework imply an increased number of trained personnel to improve quality of care for diabetes and the National Diabetes Support Team (NDST) are actively developing a workforce strategy to accomplish this (NDST, 2005a). However, in the meantime, it is recognised that in some localities it is difficult to train or employ enough skilled staff, particularly DSNs. Demand appears to be outstripping supply and there seems to be a severe shortage of DSNs in some regions, as evidenced by small numbers of applicants for jobs (NDST, 2005b). This article reports on the experiences of the Sandwell and West Birmingham Hospitals on addressing this problem.

Article points

1. The urgent need for DSNs in primary care is creating an exodus of skilled nurses from secondary care.
2. The UK needs a recognised qualification and uniform training pathway; a faculty to run the course and provide accreditation; and an umbrella organisation to lobby parliament to set DSN training standards.
3. Sandwell and West Birmingham Hospitals designed a training course in collaboration with a pharmaceutical company and the University of Warwick to increase the number of DSNs without plundering the existing pool of skilled nurses.
4. The initiative resolved the hospitals' staffing shortage and added to the national pool of DSNs.

Key words

- Staff shortages
- Training and education
- Collaboration

The prevalence of diabetes is increasing throughout the UK and the world (Wild et al, 2004). However, the expanding workload within diabetes care is only partly due to this. The other major aspect involves government policy changes which have led to a more primary-care-focused NHS (DoH, 2000). In an attempt to provide incentives, the Quality and Outcomes Framework has been devised with treatment targets that encompass several chronic conditions, including diabetes (DoH, 2007).

A combination of growing awareness of the vascular effects of poor glycaemic control and new targets are encouraging primary care teams to aim for lower HbA_{1c} measurements. To achieve this, a consensus for earlier insulin treatment in type 2 diabetes has arisen with more patients being started on insulin therapy than ever before (Barnett et al, 2003). Much of this associated work has moved into primary care. This situation is hampered by the absence of a recognised training pathway to become a DSN.

The NHS Knowledge and Skills Framework has defined competencies for DSNs more clearly (DoH, 2004). The objective of the new structure is to attract new recruits, but many 'old hands' could be lost if their training and expertise are not recognised by the grading system. In addition, financial problems in some acute trusts may make DSN posts an easy target for cut-backs or even redundancy, exacerbating the effects of this exodus.

An innovative solution was found at Sandwell and City Hospitals in Birmingham in which four DSNs were trained in an initiative funded by a pharmaceutical company.

Problems in the current situation

The policy aim in diabetes management is for greater involvement of primary care. Thus, most diabetes-related funding goes to PCTs. However, despite this, many primary care programmes suffer because there are not enough nurses with specialist skills. The urgent need for skilled nurses to fill newly created roles in primary care creates pressure to recruit nurses who have already undergone training: usually DSNs from secondary care. The National Service Framework for diabetes has set targets for secondary care (DoH, 2001), but because very little extra funding has been allocated to meet them, the workforce is going where there is funding: primary care. This growing demand on a limited resource is creating shortages within all areas of diabetes management in secondary care.

Barriers to becoming a DSN

To redress the balance, more nurses need to acquire new skills. Although there is no shortage of interest, the barriers are formidable, such as ill-defined and convoluted training pathways; the gradual loss of secondary care funding; and the loss of junior posts on secondary care diabetes nursing teams. The obstacles facing would-be DSNs do not end with getting the right experiences; they must also secure study leave

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Page points

1. The implementation of a recognised training pathway is needed to provide nurses with the time and training to achieve the necessary skills required for DSN posts.
2. In the areas covered by the Sandwell and West Birmingham Hospitals the acute centres are caring for a disproportionately high number of people with diabetes.
3. Financing from a pharmaceutical company provided the opportunity to increase the number of DSNs in the area without plundering the existing pool of skilled nurses elsewhere.

and funding – either by pharmaceutical industry sponsorship or by funding their own training, which can be prohibitively expensive. Once funding is secured the NHS will usually allow study leave as long as it does not compromise services.

Nurses who do find a post offering experiential training may find that the reality does not match their expectations. Current financial pressures dictate that in order to recruit additional staff or even fill vacancies NHS trusts must 'demonstrate a need'. In other words, they must show evidence of being particularly hard-pressed. In practice, this means that by the time the need has been recognised, funding allocated and a nurse appointed, the workload may be so overwhelming that there is little or no time for training. As there is currently no alternative to secondary care training, trainee DSNs can only learn the requisite skills in an acute hospital environment. In particular, initiating insulin therapy can be a daunting task that requires the skills and confidence obtained by clinical experience.

The implementation of a recognised training pathway is therefore needed to provide interested nurses with the time and training to achieve the necessary skills required for DSN posts and to help fill the gaps in DSN staffing, however it occurs.

National needs

Over the last three decades, the DSN role has evolved from purely supporting diabetologists to becoming a skilled practitioner who can work independently and offer a range of care services that include patient education, insulin initiation, adjustments to other treatments and psychological support (New et al, 2003). Clearly, this increase in DSNs' responsibilities makes the absence of a recognised training pathway all the more concerning. The UK has Masters degrees in Diabetes Care, offered by the University of York and King's College London, that integrate the experiential and academic elements of the DSN role with a faculty to design the course, run it and provide accreditation. Such recognised qualifications and uniform training pathways make things easier for nurses and trusts alike. A PCT may have the funding to recruit a nurse with diabetes skills but if they do not have a clear understanding of the skill set required to fulfil a particular role, they could make the expensive mistake of appointing the wrong person. In such a scenario, the candidate, the practice and, ultimately, the people with diabetes will all suffer.

Local concerns

In the areas covered by the Sandwell and West Birmingham Hospitals there is a high proportion of people of South Asian origin – a group at elevated risk of developing diabetes. Thus, the acute centres in these areas are caring for a disproportionately high number of people with diabetes. These areas also have a greater proportion of practices with a single GP, which often require more secondary care support than group practices. However, local primary care developments can lead to greater awareness of diabetes and more referrals to hospital diabetes clinics. Financial problems in the Sandwell and West Birmingham Hospitals Trust led to a vacancy freeze where no new staff were hired to fill vacant posts. This made the future development of new diabetes nurse posts unlikely and increased the risk of the removal of specialist posts.

When a pharmaceutical company offered to finance local DSN training, the authors' recognised an opportunity to increase the number of diabetes nurses without plundering the existing pool of skilled nurses elsewhere. New initiatives within the NHS can take a very long time to be realised if funding has to be justified and extracted from sceptical commissioners. This approach, with the commitment and enthusiasm of our industry contacts, allowed ideas to be rapidly translated into action. Four posts were planned with money allocated to cover some administrative duties and the cost of contracting a nurse to assist with the workload in the diabetes centre for one year to allow a senior DSN to develop the course materials and supervise the trainees.

When the four posts were advertised, there was a much larger response than is usual for a new DSN post (more than 10 applicants for each post compared with the usual average of four or five), reflecting the appeal of a funded post with allocated study leave. The candidates underwent the DSN training on the understanding that this would be followed by a contracted 6-month period of work with the pharmaceutical sponsor's community insulin programme, which employs DSNs to teach primary care practitioners the skills required for insulin initiation and titration.

The course

The course was designed in conjunction with the University of Warwick and aimed to provide individually tailored training that considered every

candidate's existing experience. Tutors from the University of Warwick helped assess each trainee's needs for individual support. From the Warwick Medical School Masters degree in Diabetes Management the following three modules were identified as being the most appropriate for DSN training and were thus selected to be included in the new course.

- The principles of diabetes care: a theoretical framework of diabetes management.
- Insulin initiation: the theory behind insulin use and the practical issues around initiating insulin in people with diabetes.
- Counselling skills for healthcare professionals in diabetes: improving the quality of the diabetes clinicians' consultation.

Each module consisted of 5 days of teaching spread over 3 months and a 3000 word assignment or case study submitted at the end of that 3-month period. The University of Warwick provided access to a faculty that could provide accreditation and academic training at a postgraduate level, while the authors co-ordinated the training. The timing was such that the first two modules were carried out during the 6-month training programme and the third during the subsequent 6 months of clinical work as a newly-trained DSN.

Apart from 15 days spent attending the three modules, the nurses also had one study day a week to complete assignments. Other diabetes consultants in the Sandwell and West Birmingham NHS Trust were willing to provide a programme of additional lectures to supplement the training (see *Box 1*). The practical experience organised as part of the training programme included visits to various sub-specialty diabetes clinics, including the renal, insulin pump, antenatal, young adult, diabetic retinopathy and diabetic foot clinics.

Outcomes

Now that routine diabetes management has substantially moved out of secondary care, the services offered by the authors' PCT are much more specialised. The benefits to the nurses were as intended; they worked in a supernumerary capacity that allowed the scheduling of dedicated study time and, because their study leave was funded, candidates had the opportunity to enjoy their training rather than squeezing it around a full-time job. An additional benefit was that candidates were able to support each other and share knowledge from the outset. This meant that the recruits made excellent progress and were confident enough to carry out patient consultations just 6 weeks into the course. These early consultations included patient education, insulin dose adjustments, lifestyle advice and counselling for psychological issues such as anger and diagnosis denial. Comments from one programme participant are shown in *Box 2*.

Running the course has helped the diabetes centre team – consultants, registrars, specialist nurses and dietitians – develop training skills and provided an opportunity to review and refine current practice and the evidence behind it. The enthusiasm and outside experience of our four trainees who have recommended or introduced different procedures has been beneficial. Indeed, apart from minor problems such as desk space and clerical support for the trainees, all the outcomes and assessments have been enormously positive following evaluation and there are plans to repeat the process at a later date.

Not only did this initiative help solve the local resource problem, it has contributed to the national pool of experienced nurses and forged relationships with trainees who may work for the centre in the future. Two of the nurses immediately joined the sponsor company's community programme in the West Midlands once their training was complete. The other two remained with the PCT in secondary care for 6 months after their training period, helping to support the diabetes nursing team and covering a period of sickness before joining the programme.

The outcome is a moderate or substantial gain for the NHS, depending on one's perspective. Firstly, during the 6 months of their training, although technically supernumerary, the four nurses provided significant support to clinics in and effectively worked as DSNs.

Firstly, the role that the participants carried out for the pharmaceutical company was as advisors assisting local primary care practices in insulin starts, relieving some of that workload from secondary care.

Page points

1. The objective of the course was to train four new DSNs to resolve an acute staffing shortage rather than drawing upon the existing limited resources.
2. The training nurses worked in a supernumerary capacity with the opportunity to enjoy their training rather than squeezing it around a full time job.
3. Running the course has helped the Diabetes Centre team to develop training skills and provided an opportunity to review and refine current practice and the evidence behind it.

Box 1. Lecture programme additional to formal programme.

- Hypoglycaemia and devices for glucose monitoring.
- Management of type 1 diabetes, including insulin pump therapy.
- Screening and management of renal disease in diabetes.
- Education and lifestyle measures.
- Cardiovascular risk and management of blood pressure and lipids.
- Foot problems and care in diabetes.
- Insulin initiation and regimens.
- Management of diabetes during pregnancy.
- Diet and nutrition for people with diabetes.

Page points

1. The training programme addressed the local need for DSNs and contributed to the national pool of experienced nurses.
2. Other PCTs may wish to adopt the training programme and take the further step of linking it to a local university's Masters' course in diabetes.
3 An externally-funded training course can be successful even in a relatively hard-pressed trust if there is enthusiasm for teaching.

Secondly, after their period of 'indenture' to the pharmaceutical company. Two of the four moved back into the NHS as fully-fledged community DSN's in local PCT's, where they currently work, a year after the end of the project. The fourth nurse applied to become diabetes nurse team leader for the pharmaceutical company, was unsuccessful, but was successful in gaining a pharmaceutical representative post with that company. She is the only one lost – perhaps only temporarily – to the NHS.

Thirdly, one of the contract nurses who was placed by the pharmaceutical company to help cover the workload of the co-ordinating senior DSN left the pharmaceutical company and was re-employed by Sandwell and West Birmingham Hospitals when the vacancy freeze was relaxed. The last of the four decided to go back to her old job as practice nurse – this was no loss to the NHS, but it is unclear at present to what extent she would use her skills in this position.

It is possible that other PCTs may wish to adopt the concept, which would probably also be successful if linked to a local Masters course in diabetes. If such an initiative is to be replicated on a larger scale, a national body must take up the cause with the NHS Workforce Confederation to establish a training faculty to set standards for all trusts to follow.

Conclusion

Although the solution for Sandwell and West Birmingham cannot, on its own, solve the national shortage of diabetes nurses, it illustrates the benefits of a fruitful collaboration between an NHS diabetes service and the pharmaceutical industry. In this win-win situation, the trust benefitted from supernumerary support for secondary care services; developed experiential training skills; and added to the pool of community DSNs. The nurses themselves have gone through a comprehensive and accredited training programme with allocated study time and industry funding.

Box 2. Comments from a course participant.

'[The course was] a fantastic opportunity to get specialist training that combined plenty of hands-on experience with three excellent university modules. By the second module, we had gained enough confidence and experience to conduct our own consultations – I find it very rewarding when patients report feeling well-supported at follow up clinic appointments. The self-funded route would have been prohibitively expensive so taking the course was certainly the best career move I've ever made. My current role combines two days in secondary care clinics with three days in primary care so I'm getting the best of both worlds while developing my skills and knowledge.'

Nationally, we still need additional recognised training pathways. Many of the features used here have been accredited at Masters level and have been used by DSNs from various parts of the country. Thus they would be appropriate for other services and localities and could potentially form a core curriculum for a nationally approved course.

The expertise in diabetes nursing still resides predominantly in secondary care, but funding is directed to primary care. Without an outside source of funding, training of new DSNs is likely to remain problematical. The experience documented here of an externally-funded training course leads the authors' to believe that such a programme can be successful if there is enthusiasm for teaching even in a relatively hard-pressed trust.

An alternative to external funding from non-NHS bodies would be the redirection of funding within the NHS. Some trusts in both acute and primary care will find it difficult to develop programmes in the face of financial difficulties. Concerted action will be needed if nursing shortages are to be addressed and the challenges of the diabetes epidemic are to be met. ■

Barnett AH, Capaldi B, Davies-Lyons M et al (2003) Expert opinion statement on the use of insulin therapy in patients with type 2 diabetes in primary care. *Practical Diabetes International* **20**: 97–102

DoH (2000) *The NHS Plan: a plan for investment, a plan for reform*. DoH, London

DoH (2001) *National Service Framework for Diabetes: Standards*. DoH, London

DoH (2004) *The NHS Knowledge and Skills Framework (NHS KSF) and the Development Review Process*. DoH, London

DoH (2007) *Improving Diabetes Services: The NSF Four Years On. The Way Ahead: The Local Challenge*. DoH, London

National Diabetes Support Team (2005a) *Passionate About Workforce: Eight Months on: Working Together to Improve Diabetes Care*. Available at: http://www.diabetes.nhs.uk/downloads/SFH_passionate_about_workforce_long.pdf (accessed 28.03.2007)

National Diabetes Support Team (2005b) *Diabetes Challenges and Solutions Group Conference Report July 2005*. Available at: http://www.diabetes.nhs.uk/downloads/Diabetes_event_report.pdf (accessed 28.03.2007)

New JP, Mason JM, Freemantle N et al (2003) Specialist nurse-led intervention to treat and control hypertension and hyperlipidemia in diabetes (SPLINT): a randomized controlled trial. *Diabetes Care* **8**: 2250–5

NHS Employers (2005) *NHS Terms and Conditions of Service Handbook*. Available at: https://www.nhsemployers.org/restricted/downloads/download.asp?ref=323&hash=bc6dc48b743dc5d013b1abaebd2faed2&itemplate=e_aboutus_3col_aboutus-2028 (accessed 27.02.2007)

Wild S, Roglic G, Green A et al (2004) Global prevalence of diabetes: estimates for the year 2000 and projections for 2030. *Diabetes Care* **27**: 1047–53