

Leading the way: The changing role of the diabetes specialist nurse

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Article points

1. The role of the DSN has expanded to take on more complex clinical care and education.
2. This survey suggests that the nurse consultant and the diabetes care technician are supporting the diabetes specialist nurse role.
3. To support the continued development of DSNs, access to, and funding for, continuing professional development is key.

Key words

- Continuing professional development
- Diabetes education
- Diabetes specialist nurse
- Role development

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The role of the DSN has expanded considerably in recent years, taking on more complex aspects of diabetes care and education. As part of a series of surveys to review diabetes specialist services, a postal questionnaire was sent to lead DSNs across the UK. Data were collected on the roles of hospital DSNs, community DSNs, nurse consultants and diabetes care technicians. The survey results suggest that DSNs have expanded their role in clinical and patient education capacities, but that time and funding for professional development are lacking.

The role of DSN was introduced some 60 years ago to help support people with diabetes and their carers in the management of their condition. In response to the increasing number of people with diabetes, and new and more complex insulin regimens, the number of DSNs working in primary and secondary care has increased over the intervening years (Davies et al, 2001).

In 2000, the Association of British Clinical Diabetologists (ABCD) carried out a survey to identify the main elements of the DSN role, which included patient education and the provision of telephone helplines

for people with diabetes (Winocour et al, 2002). At the time of this survey, the ABCD predicted that DSNs would take more direct responsibility for clinical care and prescribing in the coming years (Winocour et al, 2002).

Since the 2000 survey, new roles in diabetes care have developed, namely the diabetes care technician and nurse consultant – the latter focusing on expert practice, leadership, education and training. In 2006, Diabetes UK and ABCD collaborated to review how specialist diabetes services are being delivered, and to look at the changes that have taken place over time by contrasting the two data sets.

Aim

Here, the authors summarise the findings of a series of surveys carried out by Diabetes UK and ABCD in 2006–7 (James et al, 2009). The focus of this article is on data that shed light on the DSN role, and the role of diabetes care technicians, nurse consultants and other allied healthcare professionals involved in diabetes care. The data collected are compared with those obtained in a similar survey from 2000.

Methods

The Diabetes UK and ABCD working group designed and piloted a questionnaire of 80 questions, broadly based on three areas:

- The clinical role of DSNs.
- The educational role of DSNs.
- Continuing professional development.

Some questions related to the diabetes service as a whole, while others asked for a response by type of diabetes nurse (hospital, community, paediatric and nurse consultant) to look for role similarities and differences.

The questionnaire was posted to all 361 diabetes services in the UK, which were identified from the membership lists of Diabetes UK and the National Diabetes Inpatient Specialist Nurse Group. Lead DSNs were asked to respond on behalf of their service and, where services were not integrated across primary and secondary care, to send a copy of the questionnaire to either the community or hospital service for completion.

The Statistical Package for Social Sciences (version 16; SPSS, Chicago, IL) was used to analyse the data, which are presented here as

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Page points

1. Of the services surveyed, 90% held independent DSN-led clinics.
2. In 97% of services, DSNs provided education to people with diabetes and healthcare professionals in both primary and secondary care settings.
3. The current survey revealed that 93% of services had one or more paediatric DSNs on staff.

percentages. Associations between variables were calculated using the Chi-squared test. $P < 0.05$ was considered statistically significant.

Results

Responses were collected between February and December 2007, following both postal and telephone reminders. One hundred and fifty-nine completed questionnaires were returned, giving a response rate of 44%. Of those that returned the questionnaire, 65% represented services that were integrated across primary and secondary care settings.

DSN role in clinical care

Clinical care tasks, and the percentage of diabetes nurses from any setting (hospital,

community, paediatric and nurse consultants) who carried them out, are shown in *Table 1*. Of the services surveyed, 90% held independent DSN-led clinics, on average three times per week.

DSN role in prescribing

In 77% of services, one or more of the nurses had attended a course in nurse prescribing. However, only 48% of these were putting the prescribing skills learned into practice. In some cases, this failure to use the nurses' training resulted from either Trust policy preventing or delaying the implementation of nurse prescribing. Delays in the development of protocols or agreement in the formulary were also reported.

DSN role in education

In 97% of services, DSNs provided education to people with diabetes and healthcare professionals in both primary and secondary care settings. DSNs and nurse consultants working in all settings were involved in education provision (*Table 1*). Sessions were usually held during working hours (97%), but some took place in the evening (19%) or on weekends (4%).

The range of topics covered in these educational sessions had increased since the 2000 survey. Pre-conception counselling, carbohydrate counting and smoking cessation were new additions to the curricula (*Table 2*). Compared with 2000 data, the current survey revealed that hospital DSNs in 2007 had taken on more of the planning and delivery of educational sessions than other members of the multidisciplinary team (*Table 3*).

DSN role in paediatric diabetes care

The current survey revealed that 93% of services had one or more paediatric DSNs on staff. Nearly all of these nurses had a qualification in paediatric nursing (97%). Clinically, paediatric DSNs are primarily involved in patient management, dose adjustment, inpatient care and providing insulin pump training (*Table 1*).

The high percentage of services with at least one paediatric DSN is in contrast to the data from 2000, in which only 59% of services

Table 1. Specific (a) clinical, and (b) educational tasks undertaken by DSNs in a variety of settings. Adapted with permission from James et al (2009).

	Services (%)			
	Hospital DSN (n=132)	Community DSN (n=104)	Paediatric DSN (n=67)	Nurse consultant (n=29)
(a) Clinical tasks undertaken by DSNs				
Patient management	99	96	93	76
Prescribing	49	56	27	66
Non-medical prescribing	47	46	9	55
Dose adjustment only	68	62	63	17
Pump training*	55	36	43	21
Hypertension clinics*	22	11	5	21
Cardiovascular disease	30	20	3	28
Foot clinics*	34	14	2	10
Renal clinics*	27	9	2	14
Inpatient care*	98	36	54	24
Antenatal*	72	40	12	35
Pre-assessment clinics prior to surgery*	23	5	0	7
(b) Education undertaken for various groups by DSNs				
Education for nursing staff*	98	89	88	90
Education for medical staff*	92	81	73	76
Education for other AHPs	91	91	70	79
Education for patients	94	95	75	76

*Statistically significant difference between hospital and community DSNs ($P < 0.05$). AHP = Allied healthcare practitioner.

reported the same. Despite this improvement, the current survey reveals that the average case load of children per paediatric DSN remains unacceptably high (109; range 15–300).

Table 2. Educational topics covered by DSNs in (a) both the 2000 and 2007 surveys, and (b) new topics for 2007. Adapted with permission from James et al (2009).

	Services 2007 (%) (n=151)	Services 2000 (%) (n=183)
(a) Topics covered (2000, 2007)		
Nature of diabetes	99	99
Importance of metabolic control	96	97
Impact of diet and exercise	95	97
Managing diabetes during illness	94	98
Driving	93	94
Home blood monitoring*	90	98
Travel	89	91
Insurance	89	92
Employment	89	86
Footwear*	87	76
Injection technique*	86	97
Prescription charges	81	83
Contraception	76	81
Home urine monitoring*	44	73
(b) New topics covered (2007)		
Hypoglycaemia	94	
Smoking cessation	88	
Carbohydrate dose adjustment	83	
Pre-conception counselling	74	
Erectile dysfunction	71	
Group initiation of insulin	41	
Alternative intensive management scheme	22	

*Statistically significant difference between hospital and community DSNs ($P<0.05$).

Table 3. Education planning and delivery undertaken by DSNs and other healthcare professionals (HCPs).

	Services (%)		
	2007 Education planning	2007 Education delivery	2000 Education input from other HCPs
Hospital DSN	78	76	
Dietitians	64	72	88
Podiatrists	32	44	84
Medical staff	14	23	66
Pharmacists	5	6	8

Diabetes care technician role

The majority of services (66%) reported having one or more diabetes care technicians. Diabetes care technicians were reported to carry out a range of activities, the majority relating to the annual reviews of people with diabetes (Table 4).

Continuing professional development

Less than half (48%) of the services reported offering guarantee time for continuing professional development for DSNs. In only 15% of services was there a protected budget for professional development. Comparing present data with the results from 2000, significantly fewer nurses has a formal role in diabetes research (22% vs. 48%; $P<0.001$). Specific, personalised job descriptions for DSNs were reported by 78% of services, compared with 86% in 2000.

Telephone helplines

Telephone helpline support was offered to people with diabetes by 71% of hospital-based services. These helplines were available during weekday office hours (91%) and were operated by hospital DSNs (94%) with support provided by secretaries (11%) and education centre staff (5%). Few services operated helplines outside of normal office hours, with 12% providing a 24-hour service, 5% available on weekday evenings and 2% on weekend office hours.

Discussion

The results of this survey demonstrate that DSNs play a key role in caring for people with diabetes through patient management, delivering education and giving telephone support. In the 8 years since the first DSN survey (Winocour et al, 2002), the role has continued to evolve and expand as predicted, with DSNs taking on more complex aspects of clinical care, such as pump training, prescribing and foot clinics, as well as working independently in DSN-led clinics.

Furthermore, the current survey found that DSNs have more responsibility for planning and delivering education on an increasingly broad range of topics. This is with less input from the multidisciplinary team than was seen

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1. The expansion of the DSN role has been supported by the introduction of two new roles in diabetes care services: the nurse consultant and the diabetes care technician.
2. There is still a shortfall in the number of paediatric diabetes specialist nurses, with many services failing to meet the Royal College of Nursing recommendation of one paediatric diabetes specialist nurse to every 70 children and young people with diabetes.
3. To provide high quality care, it is key that DSNs are able to access continuing professional development through study leave and funding that is protected for this purpose.

in 2000 (although, it is important to ensure that all diabetes education is undertaken with the support of the full multidisciplinary team).

Significantly fewer hospital DSNs reported having a liaison role with primary care practice nurses than in 2000 ($P < 0.001$). This means that there is less opportunity to provide support and education to develop practice nurse competencies, which is a core part of providing a diabetes service. However, it may be the result of the increased number of community DSNs during the intervening time.

The expansion of the DSN role has been supported by the introduction of two new roles in diabetes care services: the nurse consultant and the diabetes care technician. This survey reveals that diabetes care technicians have taken on responsibilities for core elements of the annual diabetes review. These tasks traditionally fell to the DSN or practice nurse, and this sharing of care increases the time available to DSNs to carry out prescribing, teaching and running clinics. The introduction of the nurse consultant role has created a career structure for DSNs that promotes and recognises their increasing leadership and clinical expertise, and opens up avenues for research (Pennington, 2000).

There is still a shortfall in the number of paediatric DSNs, with many services failing to meet the Royal College of Nursing (2006)

recommendation of one paediatric DSN to every 70 children and young people with diabetes. While the number of paediatric DSNs has improved since the 2000 survey, the improvement has been patchy and suggests geographical inequalities in service provision for children and young people with diabetes.

In the Department of Health (2008) publication, *A High Quality Workforce: NHS Next Stage Review*, the role of nurses was recognised as being at the heart of shaping patient experience and care delivery. The document states that achieving high-quality care without high-quality nursing is impossible. To provide high-quality care, it is key that DSNs are able to access continuing professional development through study leave and funding that is protected for this purpose.

It is disappointing that this survey demonstrates that support for DSNs to access continuing professional development has not improved since a Diabetes UK survey on specialist staffing cuts in 2006, at which time it was found that 40% of nurses had their time for study leave reduced, 45% had their funding for professional development had been reduced and 40% said that requests for study leave had been denied (James et al, 2007). This increasingly limited access to professional development, together with the finding that significantly fewer nurses are engaged in research, suggests that the skill and knowledge development of DSNs is being undermined.

Conclusion

The quality of care for people with diabetes, and the support of services developments, can only be achieved through consistent and regular access for nurses to professional development opportunities. Such allowances are key in maintaining the leadership role of DSNs, and to the status and function of specialist nurses in general.

The DSN, especially in the community, is an expert resource who is accessed by a variety of other clinicians for advice, support and guidance in diabetes care. Such a position can only be fulfilled and sustained if the DSN's knowledge is up-to-date and specialist.

Table 4. Activities carried out by diabetes care technicians.

Activity	Services (%)
Weight/height/BMI	95
Urine testing	91
Blood pressure	83
Visual acuity	56
Waist circumference	47
Exercise advice	31
Injection site check	28
Foot screening	27
Smoking cessation advice	27
Pre-conception advice	18
Medication review	16
Other	10

Having developed a career structure for DSNs, it is key that their progression is supported. This extends not only to adequate time and funding for professional development, but also to opportunities to take part in research, and to the provision of accurate job descriptions on which to assess pay. The latter would be supported by a database of DSNs that contains accurate information on job titles and qualifications to support both nurse career progression, and would indicate whether a service's workforce included staff with the necessary skill sets to meet the needs of people with diabetes.

Across the UK, the number of paediatric DSNs needs to be increase to reduce inequalities in the support and care of children and young people with diabetes. Furthermore, seamless and integrated service delivery would be facilitated through greater opportunities for DSNs working in both primary and acute care to meet regularly for collaboration and support, thereby ensuring continuity of care for people with diabetes. ■

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