UK workforce survey of DSNs and nurse consultants: Update

Charlotte Gosden, June James, Ursula Anderson, Nick Morrish

Article points

1. The aim of this study was to establish a database of DSNs working in the UK to help predict service needs over time and assist with workforce planning.
2. Most DSNs are qualified to the level required but it is worrying that some services are operating without a clinical lead.
3. Nearly half the DSNs and nurse consultants surveyed are expecting to retire in the next 10 years.
4. It is expected that this study will be repeated in 2010, and in all four UK nations, to build up national and regional pictures of the qualifications, work setting and roles of DSNs and nurse consultants.

Key words

- DSN
- Nurse consultant
- Survey
- Workforce

Author details can be found at the end of this article.

Aims: **To establish a database of UK DSNs to help predict manpower needs over time, assist with workforce planning, and to identify roles, qualifications, work settings and banding.** ***Methods***: **A questionnaire was developed and distributed to all identifiable UK DSNs (*n*=1363) in September 2009 and responses (*n*=838) collected until January 2010. Respondents could often give multiple answers, and missing responses have been omitted from the analysis.** ***Results***: **Respondents gave 238 separate job titles representing the role of the DSN; 47% of DSNs work in hospital, 22% in the community and 28% work in both; 76% indicated that their role includes general adults, 41% inpatients, 23% paediatrics, but only 10% in research; 74% have a diabetes diploma/certificate, 54% have undertaken ad hoc degree modules and 17% have a diabetes-related degree; 18% have completed ad hoc masters modules and 8% have a diabetes-related masters degree; 44% expect to retire within the next 10 years.** ***Conclusion***: **Fewer DSNs are working across both hospital and community settings, jeopardising opportunities for joint working, sharing knowledge and skills. Most DSNs are qualified to the level required of DSNs, however some services are operating without a clinical lead. By repeating this study annually, it can help to identify trends with which to guide service and manpower planning in the future.**

The role of the DSN was first introduced over 60 years ago and became more common in the 1980s with the need to educate people with diabetes in the transfer to 100 strength insulin, and with the introduction of self-monitoring of blood glucose (Davies et al, 2001). Owing to the vast number of people requiring this support and education, more effort was directed towards establishing nursing posts rather than considering their roles, entry criteria or development. This led to a profusion of job titles being used to describe the role of DSN, a variety of pay scales and no clear role definition (Da Costa, 2000).

In response to this lack of career structure and guidance in qualifications, *An Integrated Career and Competency Framework for Diabetes Nursing* was launched in 2005

Page points

1. DSNs should be registered nurses with a minimum 3 years' practice and they should have a proven interest in diabetes management, teaching and counselling.
2. All new-in-post specialist nurses are now required to have, or be working towards, a degree-level qualification to fulfil the national job profile for band 6 specialist nursing, and senior DSNs should be working towards a masters degree-level qualification for the advanced nurse job profile.
3. The aim of this study was to establish a database of DSNs and nurse consultants working in the UK to help predict workforce planning and services needs over time.

to guide strategic workforce planning and career development (Davis et al, 2007). This framework was updated in 2010 by TREND-UK (Training Research and Education for Nurses in Diabetes – UK, 2010).

What is a DSN?

Castledine, working with the Royal College of Nursing (RCN) in 1991, gave minimum recommendations for new DSNs, stating that the role exists to educate and support people living with diabetes and their families at all stages of their lives (Castledine, 1991):

- DSNs should be registered nurses with a minimum 3 years' practice and they should have a proven interest in diabetes management, teaching and counselling.
- DSNs must work entirely in diabetes care, with adults or children with diabetes, or both.
- The role should encompass specific elements, including leadership, innovation, research and education.
- DSNs should work within multidisciplinary teams with a consultant physician or paediatrician as their clinical lead.

This definition was reviewed and then endorsed by Diabetes UK following input from nursing groups, including the Diabetes Nurse Consultant Group, Diabetes UK Nursing Forum, the Diabetes Inpatient Specialist Nurse (DISN) UK Group and TREND-UK (Diabetes UK, 2010).

DSNs are usually part of a multidisciplinary team, however not all work with medical consultant colleagues as recommended by the RCN (Castledine, 1991). In addition, all new-in-post specialist nurses are now required to have, or be working towards, a degree-level qualification to fulfil the national job profile for band 6 specialist nursing, and senior DSNs should be working towards a masters degree-level qualification for the advanced nurse job profile (NHS Employers, 2010). At present, there is no single recognised qualification for the DSN role (TREND-UK, 2010).

The evidence so far

A study by Llahana et al (2001) found that most paediatric DSNs (PDSNs) were based both in hospitals and in community settings (88%), had undergone further training (83%), and a wide range of job titles were identified.

Findings from the Association of British Clinical Diabetologists (ABCD) survey in 2000 also found that the majority of nurses worked in both hospital and community settings (85%) (Winocour et al, 2002). The survey found that there was a wide variation in nurse qualifications required, grading of DSNs, and in day-to-day roles, which suggested a need for a nationally coordinated approach to training (Winocour et al, 2002).

A further survey in 2007 described how the roles and responsibilities of DSNs had expanded considerably with opportunities for career development into nurse consultant roles and prescribing, although few (22%) had a formal role in research (James et al, 2009). The survey also identified that nurses were less likely to work across both primary and specialist settings, and approximately one in five trusts did not have written job descriptions for the role of hospital DSN despite most nurses having been banded according to the new pay structure set out by Agenda for Change (Department of Health, 2004).

These changes in the role and work settings of DSNs have been in response to the increasing prevalence of diabetes and government directives, such as moving the focus of care from specialist into primary care settings.

The *Directory of Diabetes Care* (CMA Medical Data, 2009) identified 1363 DSNs working across the UK in 2009, but more information was needed to track gaps in provision, assist with workforce planning, inform commissioning and provide essential information around the qualifications of NHS-employed DSNs.

Aim

The aim of this study was to establish a database of DSNs and nurse consultants working in the UK to help predict workforce planning and service needs over time by addressing the following questions:

- How many DSNs and nurse consultants are working in the UK?
- What are the job titles of these DSNs?

Page points

1. A Diabetes UK and NHS Diabetes working group designed a questionnaire in 2009 consisting of 12 open and closed questions covering topics, including: job title, post-basic qualifications, length of experience, anticipated retirement date, banding, present employment type, hours worked in diabetes, work setting and role, and presence of a clinical lead.
2. A total of 788 respondents gave 238 separate job titles representing the role of the DSN, which were grouped into the following categories: 76% (600) DSN, 16% (128) paediatric DSNs and 2% (18) nurse consultants. The remaining 5% (42) comprised dual roles, roles in education, facilitators and research nurses.
3. Fifty-seven per cent (478/836) of DSNs work full-time in diabetes (37.5 hours per week), with hours worked ranging from 5.25 to 37.5 hours. Of 810 respondents, 98% (790) are employed by the NHS, 0.7% (6) by universities, 0.7% (6) by pharmaceutical companies and 1% (8) by "other".

- Where do DSNs and nurse consultants work?
- What roles are DSNs and nurse consultants carrying out?
- What qualifications have DSNs and nurse consultants gained?
- What band level have DSNs and nurse consultants been awarded?
- How may think they will retire in the next decade?

Methods

A Diabetes UK and NHS Diabetes working group designed a questionnaire in 2009 consisting of 12 open and closed questions covering topics, including: job title, post-basic qualifications, length of experience, anticipated retirement date, banding, present employment type, hours worked in diabetes, work setting and role, and presence of a clinical lead. The questionnaire was piloted by a group of DSNs and nurse consultants and modified according to the comments made.

Questionnaires were mailed to all DSNs and nurse consultants identified from Diabetes UK, the DISN UK Group and *The Directory of Diabetes Care* (*n*=1363) (CMA Medical Data, 2009) and followed up with reminders 1 month later. The questionnaire was advertised on the Diabetes UK and NHS Diabetes websites and promoted in the *Journal of Diabetes Nursing*. For the first year of the study it was agreed to limit responses to DSNs and nurse consultants in diabetes only.

Completed questionnaires were collated and the data were analysed using Excel and Statistical Package for Social Sciences (version 17). Both parametric and non-parametric tests were used according to the distribution of the data, which are presented here as percentages with actual numbers in brackets.

Table 1. Work settings of survey respondents (*n*=830).

Work setting	Percentage (*n*)
Hospital	47% (388)
Hospital and community	28% (233)
Hospital, community and "other"	1% (8)
Hospital and "other"	0.8% (7)
Community	22% (182)
Community and "other"	0.8% (7)
"Other"	0.6% (5)

Results

Of 1363 questionnaires sent out, 838 were received, giving a response rate of 61% across the UK. Missing responses have been taken out from the analysis and the data reflect those who provided an answer to the questions.

Job titles

A total of 788 respondents gave 238 separate job titles representing the role of the DSN, which were grouped into the following categories: 76% (600) DSN, 16% (128) PDSNs and 2% (18) nurse consultants. The remaining 5% (42) comprised dual roles, roles in education, facilitators and research nurses.

Work settings and role

A total of 830 respondents described a variety of work settings (*Table 1*), and 810 described their role: 76% (612) indicated that their role includes general adults, 41% (332) inpatients, 23% (185) paediatrics, but only 10% (77) included research in their role. Seven per cent (58) included "other" as part of their role, examples of which included specialist midwife, education, management, endocrinology and maturity onset diabetes of the young.

Qualifications

Respondents (*n*=793) were asked to describe the post-basic qualifications they had gained (*Table 2*). Five per cent (45/838) either did not respond to this question or have no further qualifications.

Diabetes experience

Fifty-seven per cent (478/836) of DSNs work full-time in diabetes (37.5 hours per week), with hours worked ranging from 5.25 to 37.5 hours. Of 810 respondents, 98% (790) are employed by the NHS, 0.7% (6) by universities, 0.7% (6) by pharmaceutical companies and 1% (8) by "other".

On average, DSNs had 9.6 years' experience working as a DSN; of the 813 responses to

Table 2. Post-basic qualifications of DSNs (*n*=793).

Qualification	Percentage (*n*)
Diabetes diploma/certificate	74% (587)
Diabetes-related degree	17% (138)
Diabetes-related masters	8% (65)
Ad hoc modules degree	54% (424)
Ad hoc modules masters	18% (145)
Diabetes counselling course	16% (126)
Non-medical prescribing	40% (320)
PhD, completed or undertaking	1% (11)
General degree	10% (80)
Teaching	4% (34)
Other	6% (51)

Page points

1. Eighty-nine per cent (725/819) of respondents reported having a clinical lead for their service.
2. The findings presented here confirm the results of other studies which show that DSNs are involved in a variety of roles, including general adults or paediatrics, while involvement in research remains disappointingly low.
3. These data show that nearly half of respondents are expecting to retire in the next 10 years. This has important implications for succession planning to ensure there are sufficient numbers of DSNs to meet the needs of an increasing diabetes population and ensure they receive high-quality care.

this question, 3% (26) had less than 1 year of experience, 27% (218) had between 1–5 years' experience, 34% (278) had 6–10 years and 36% (291) had 11 years or more experience.

Regarding band level, 83% (1131) were either band 6 or 7 (median band 7), 0.6% were band 5, 10% were band 8 (including 8a, 8b and 8c) and 0.1% were band 9; 49% (667) were at the top of their band, and 44% (304/693) expect to retire in the next 10 years.

Leadership

Eighty-nine per cent (725/819) of respondents reported having a clinical lead for their service. In 85% (604/715) of services this was the consultant; in 9% (64/715) this was a nurse; in 4% (25/715) this was stated as "other"; in 3% (21/715) this was a GP with a special interest (GPSI) in diabetes; and in 0.1% (1/715) of cases this was jointly held by the consultant and a GPSI. Where "other" was stated, examples included coordinator, dietitian, doctor, education lead or services manager.

Discussion

The proliferation of job titles in diabetes nursing has persisted over the past 10 years, which may reflect a lack of national guidance to support consistent role descriptions to describe the role and functionality of the DSN.

The findings presented here confirm the results of other studies which show that DSNs are involved in a variety of roles, including general adults or paediatrics, while involvement in research remains disappointingly low. It is essential that role diversity is recognised by those who have an influence on service design so that all aspects are taken into account when reviewing services. Standardised job descriptions and job titles could help to resolve this lack of clarity.

The trend towards the fragmentation of work settings, identified by Diabetes UK and ABCD in 2007 (James et al, 2009), appears to have continued over the past 10 years, with fewer nurses working across hospital and community settings. This is concerning as it is unknown what effect this will have on the care for people with diabetes. It also jeopardises opportunities for joint working, sharing of knowledge and skills, such as prescribing for DSNs, which are unique to the UK.

Most DSNs in the survey were qualified to the minimum level required of DSNs, and it was encouraging that only 5% did not have further qualifications, or did not respond to the question – an improvement since 2000 (Winocour et al, 2002) – and most likely in response to new directives which state that DSNs should either have or be working towards a degree or masters degree. Nearly half of the DSNs surveyed also have a qualification in prescribing, while in 2007 it was found that many were not able to implement prescribing (James et al, 2009) – the present survey does not provide enough information to assess whether this has improved.

Alarmingly, these data show that nearly half of respondents are expecting to retire in the next 10 years. This has important implications for succession planning to ensure there are sufficient numbers of DSNs to meet the needs of an increasing diabetes population and ensure they receive high-quality care. In addition, as nearly half of respondents reported that they are at the top of their band there is a need to ensure that a career pathway exists to support progression.

Of concern was that nearly one in ten DSNs did not have the appropriate clinical leadership for their service, which suggests they are working without access to specialist clinical support. This may lead to inconsistencies in knowledge and skills and eventually to unacceptable variation in the competencies of

DSNs, which could impact adversely on the care of people with diabetes.

There were a number of limitations to the study. It was difficult to determine an accurate number of DSNs to send the questionnaire to as there are no readily available lists of DSNs employed by pharmaceutical companies, GPs or primary care commissioning groups. To reach as many DSNs as possible the survey was promoted via the *Journal of Diabetes Nursing*, NHS Diabetes and Diabetes UK websites and other appropriate organisations. However, it cannot be certain that all DSNs in the four UK nations were given the opportunity to take part. Also, given that people change jobs and change names through marriage, some questionnaires may not have reached the intended person.

Conclusion

This study provides information on DSN and nurse consultant roles, qualifications, work settings and banding. The establishment of an accurate database of DSNs will help to ensure that the workforce is appropriate for the needs of people with diabetes and that plans can be made to ensure that it remains or becomes so. It can also be extended in future years to highlight the level of provision of time and funding for study leave and opportunities to take part in research.

The study has provided a starting point for mapping the progression and development of a key part of the workforce available to diabetes services. Additional research is required to gather information to map available competencies to the qualifications and role of DSNs.

Used in conjunction with *An Integrated Career and Competency Framework for Diabetes Nursing* (TREND-UK, 2010), this database has the potential to provide an invaluable resource to commissioners and service managers involved in the design and planning of diabetes services. This is vital to ensure that over time there will be appropriately trained individuals to deliver increasingly complex care to the growing population of people with diabetes in a rapidly changing healthcare environment

It is expected that this study will be repeated in 2010, and in all four UK nations, to build up national and regional pictures of the qualifications, work setting and roles of DSNs and nurse consultants. ■

Acknowledgements

The authors would like to acknowledge funding from NHS Diabetes for this survey.

Authors

Charlotte Gosden is an Information Analyst, Diabetes UK, London; June James is Consultant Nurse in Diabetes, University Hospitals of Leicester NHS Trust, Leicester; Ursula Anderson is Regional Programme Manager, South Central Region, NHS Diabetes, Leicester; Nick Morrish is Consultant Diabetologist, Bedford Hospital NHS Trust, Bedford.

Castledine G (1991) The role of the diabetes specialist nurse: Nursing Forum presentation. In: Diabetes Specialist Nursing Working Party (eds). *Royal College of Nursing Forum Presentation and Diabetes Specialist Nursing Working Party Report*. RCN, London

CMA Medical Data (2009) *The Directory of Diabetes Care*. CMA Medical Data, Loughborough

Da Costa S (2000) Diabetes specialist nursing: looking to the future, learning from the past. *Br J Nurs* **9**: 287–90

Davies M, Dixon S, Currie CJ et al (2001) Evaluation of a hospital diabetes specialist nursing service: a randomised controlled trial. *Diabet Med* **18**: 301–7

Davis R, Turner E, Hicks D, Tipson M (2007) Developing an integrated career and competency framework for diabetes nursing. *J Clin Nurs* **17**: 168–74

Department of Health (2004) *NHS Job Evaluation Handbook*. 2nd edn. DH, London. Available at: http://tinyurl.com/3b7wxs (accessed 22.06.10)

Diabetes UK (2010) *Defining a Specialist Diabetes Service for Adults with Diabetes: A Diabetes UK Task and Finish Group Report* [in press]. Diabetes UK, London

James J, Gosden C, Winocour P et al (2009) Diabetes specialist nurses and role evolvement: a survey by Diabetes UK and ABCD of specialist diabetes services. *Diabet Med* **26**: 560–5

Llahana S, Poulton B, Coates VE (2001) The paediatric diabetes specialist nurse and diabetes education in childhood. *J Adv Nurs* **33**: 296–306

NHS Employers (2010) National job profiles: Nursing and midwifery. NHS Employers, London. Available at: http://tinyurl.com/3x6ochm (accessed 22.06.10)

TREND UK (2010) *An Integrated Career and Competency Framework for Diabetes Nursing*. 2nd edn. SB Communications Group, London. Available at: http://tinyurl.com/TREND-UK (accessed 22.06.10)

Winocour PH, Ford M, Ainsworth A; Association of British Clinical Diabetologists (2002) Association of British Clinical Diabetologists (ABCD): survey of specialist diabetes care services in the UK, 2000. 2. Workforce issues, roles and responsibilities of diabetes specialist nurses. *Diabet Med* **19**(Suppl 4): 27–31

"The study has provided a starting point for mapping the progression and development of a key part of the workforce available to diabetes services."