Evaluation of DSN support to practice nurses

Geraldine Farmer

Introduction

The DSN role involves education and support of fellow healthcare professionals. This article describes a small study that evaluated a local DSN service from the perspective of practice nurses. The motivations for the study were paucity of research and personal concern. Results showed areas for improvement, e.g. immediacy of advice and availability of information. Training needs, especially with regard to patients with type 1 diabetes, were identified. Recommendations include more promotion of the service by DSNs, e.g. by visiting practices.

Although many practice nurses (PNs) have developed considerable expertise in diabetes management, there still appears to be variation in the level of experience and confidence. Diabetes specialist nurses (DSNs) should play a pivotal role in supporting PNs. A local study was carried out to evaluate PNs' perception of the DSN service.

Background

The study was an evaluation of the DSN service at Law hospital, one of three hospitals within Lanarkshire Acute Hospitals Trust. Lanarkshire has a population of approximately 550 000. About 4000 registered patients attend the hospital clinic in Motherwell and the outreach clinic at Lanark. Consultant clinics are held every afternoon except Fridays.

There are two specialist nurses who work in both the hospital and the community and review with both adults and children. The schedules of the two nurses make them equivalent to one whole time nurse — they are referred to as 'the DSN' in this article.

Research by Pierce and Agarwal (1999), describing the first national survey of shared care clinics in England, found that PNs were involved in 98% of clinics. In more than one third of cases, the PN ran the clinic alone. These figures reflected the findings of the 1998/99 Lanarkshire audit which found that 98% of practices were involved in shared care initiatives and that in 50% of cases, the PN was the principal individual undertaking regular screening.

Reasons for the study

After this audit and informal discussions with PNs, the author was concerned about the variability of the level of confidence and the impact on patient care. The majority of nurses reviewed mainly patients with type 2 diabetes, although a few reviewed small numbers of patients with type 1 diabetes. Many nurses expressed concern about managing this latter group because of lack of experience. Although some PNs contacted the DSN regularly, others had minimal or no contact. As a DSN herself, the author was not always aware which PNs were running clinics, thus there was duplication of effort. The small-scale study was therefore a preliminary step towards fostering improved links between primary and secondary care.

The role of the DSN

Education and support of fellow professionals has always been regarded as a fundamental role of the DSN. MacKinnon (1989) found that DSN support to practices had a positive effect on the quality of diabetes care. Stearn and Sullivan (1993) suggested that regular contact with the DSN was beneficial. The role of the diabetes facilitator has gained prominence in the literature. Freeman (1997) views the role as a means of enhancing relations between primary and secondary care.

ARTICLE POINTS

1. A postal survey evaluated practice nurses' perceptions of their DSN service.
2. Results revealed two main themes: barriers to effective communication and lack of integrated records.
3. Only 10% of nurses had attended an accredited course; more in-depth training was needed, particularly in the management of patients with type 1 diabetes.
4. Support and training for practice nurses has resource implications, particularly in areas already understaffed.
5. DSNs need to consider their role, particularly in light of changes in primary care and the forecasted rise in the incidence of diabetes.

KEY WORDS

- **Postal questionnaire survey**
- **Practice nurse**
- **DSN service**
- **Communication**
- **Training**

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However, despite a wealth of studies on the organisation of diabetes in primary care (Jones and Marsden, 1991; Sullivan and Menzies, 1992; Greenhalgh, 1994), there appears to be a lack of evidence-based studies on the effectiveness of support and training provided by DSNs to PNs. In the light of the increasing incidence of diabetes and changes within primary care, particularly the introduction of local health care co-operatives and primary care groups, DSNs have an opportunity to reflect on their specific role within the partnership of primary and secondary care.

Watkinson (1998) reflects that, in the face of a heavy clinical workload, support of non-specialist colleagues can often take a secondary role. A survey of 129 DSNs by Rodgers (1998a) found that 93 were involved in the provision of training but felt unable to develop this due to clinical commitments. She describes the dilemma of having to choose between providing clinical care to individual patients or spending more time on the development of other healthcare professionals, thus allowing secondary care to concentrate on complications and specialist areas.

Q1. Approximately, how many of the following patients do you personally review each week?

Insulin-dependent	None	1–4	5–8	9–12	Over 12
Non insulin-dependent	None	1–4	5–8	9–12	Over 12

Q5. How often do you contact the Diabetes Specialist Nurse?

Weekly Monthly Occasionally

Never Other (pleases specify) ....

Q7. Do you experience any difficulty in contacting the Diabetes Specialist Nurse ?

Yes No

If yes, pleases give details:

....

Q9. Have you attended an accredited diabetes course?

Yes No

If yes, state title ....

Q11. In which areas do you require more support?

- Education of newly diagnosed patients ❏
- Structure and organisation of clinics ❏
- Management of insulin-dependent patients ❏
- Management of non insulin-dependent patients ❏
- Changes in insulin prescribing ❏
- Advice regarding patients with complications ❏
- New oral agents ❏
- Other (please give details): ❏

....

Figure 1. An example of some questions used in the questionnaire.

Aims of the study

The aims of the study were to:

- Examine the current level of support provided by the DSN to PNs running diabetes clinics.
- Seek PN opinions on improving communication links between the DSN and PNs.
- Establish the current level of experience and training.
- Explore ways in which the DSN can offer further support.

Methods

A questionnaire specifically related to the communication and training needs of nurses in the local area was developed. The questionnaire was divided into three categories:

- Current practice (level of experience, type of patient reviewed).
- Communication between GP practice and the DSN.
- Training and development needs.

There were 15 questions, which were of open and closed type. Figure 1 shows some of the questions as they appeared on the questionnaire.

A list of 115 PNs was provided by the PN co-ordinator for Lanarkshire. This list was used to select the 44 PNs running diabetes clinics within the geographical area covered by the DSN. The questionnaire was piloted by two PNs, one from an urban practice and one from a rural practice.

Results

A total of 34 questionnaires were returned (giving a response rate of 77%). Four of the returned questionnaires were excluded from the study (two were returned by respondents who were not yet involved in running diabetes clinics; two were only partially completed). The remaining 30 had been completed by 29 PNs and 1 district nurse.

Level of experience

Table 1 demonstrates the amount of diabetes experience that nurses have in their current practice. *Table 2* shows the numbers of patients with type 1 diabetes and type 2 diabetes reviewed by respondents every week. A total of 53% of respondents did not personally review any type 1 patients. In contrast, 53% of respondents reviewed five or more type 2 patients per week.

Communication with DSNs

The frequency of contact with the DSN varied from 'never' (17% nurses) to 'occasional' (80% of nurses). Of those who qualified their answer, two had no details on how to access the service. One was not aware of the range of support available and another did not know the name of the DSN.

Table 1. Duration of diabetes clinical experience in present practice

Duration	Number (%) of nurses
Less than 1 year	6 (20%)
1–3 years	6 (20%)
3–6 years	11 (37%)
>6 years	7 (23%)

Table 2. Numbers of patients with type 1 and type 2 diabetes reviewed by respondents per week

Number of patients with type 1 diabetes reviewed per week	Number (%) of nurses
0	16 (53%)
1–4	14 (47%)
>4	0

Number of patients with type 2 diabetes reviewed per week	Number (%) of nurses
0	1 (3%)
1–4	13 (43%)
5–8	9 (30%)
9–12	6 (20%)
>12	1 (3%)

Information was sought on why nurses would contact the DSN. A selection of possible reasons was given. *Table 3* shows the selection of reasons and frequency of respondents who chose each. Although over 50% of nurses do not review type 1 patients, 83% of nurses would contact the DSN for information regarding this group.

Nurse were asked if they experienced any difficulty in contacting the DSN: 77% said no; 17% said yes; 6% did not reply. Of the five nurses who said yes, the main reason cited was the answerphone. Two nurses stated that they would prefer to speak to the DSN directly, as they often required advice while they were seeing the patient. Two stated that their calls had not been returned. Two had never tried to contact the DSN because they did not know how to access the service. Sixteen respondents (53%) gave suggestions on how to improve communication (*Table 4*).

Training and support

Only three nurses (10%) had attended an accredited course in diabetes. Two had obtained a Diploma in Diabetes Management; the third did not provide details. Nine respondents (30%) had attended a 3-day (non accredited) course at the University of Glasgow. Fourteen respondents (49%) do not appear to have attended any courses. A possible reason for the low numbers attending accredited courses was the absence of local accredited courses at the time of the study. The report *Training and Development in Diabetes Care* (BDA, 1996), recommended that training should be provided locally and be accessible to all professional disciplines.

Nurses were asked whether they would prefer frequent updates within their own

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1. Practice nurses mainly reviewed patients with type 2 diabetes.
2. Over half of the practice nurses surveyed did not review any insulin-treated patients.
3. At the time of the survey only 10% of practice nurses had attended an accredited course.

Table 3. Reasons for which nurses would contact the DSN

Reason	Number (%) of nurses
Advice regarding patients with type 1 diabetes	25 (83%)
Request for an early review appointment	21 (70%)
Request for educational material	18 (60%)
Advice regarding patients with type 2 diabetes	16 (53%)
Other	6 (20%)

practice, group education sessions or formal lectures. Respondents appeared to favour a mixed approach to learning combining two or three modes. A total of 11 nurses (37%) had visited the local hospital diabetes clinic. Of the 19 who had not visited the clinic, 17 felt that it would be beneficial. The DSN had only visited the practice of 13% of nurses. Of the remaining nurses, 81% considered it would be helpful if such a visit was made, and 15% considered that it would not be helpful (4% did not give an answer).

The DSN is a member of The Lanarkshire diabetes group (LDG), a multidisciplinary group which already organises evening educational updates for GPs and PNs. However, only 50% of respondents received regular information regarding these meetings citing that information is not always relayed from the GP to the PN. All those who did not receive information requested to be added to the mailing list.

Nurses were asked to choose areas for which they felt they required more support. *Table 5* gives their responses.

Table 4. Suggestions given by nurses on how to improve communication between the DSN and practice nurses

Suggestion	Frequency
Regular meetings	6
Copies of letters sent directly to practice nurse	5
Advice on how to contact DSN if required immediately	5
More written information on service available	2
Standardised shared care sheets for notifying blood results	2
Shared computer records via modem	1
Shared protocols	1

Table 5. Areas in which nurses felt they required more support

Areas included in the questionnaire	Number (%) who selected the area
Advice on new oral agents	22 (73%)
Management of patients with type 1 diabetes	20 (67%)
Advice regarding patients with complications	18 (60%)
Changes in insulin prescribing	18 (60%)
Education of newly diagnosed patients	13 (43%)
Structure and organisation of clinics	8 (27%)
Management of patients with type 2 diabetes	6 (20%)

Discussion

Two main themes emerged from analysis of the data:

- There are barriers to effective communication, particularly regarding access to immediate advice and exchange of clinical information.
- There is a need for more in-depth training particularly in relation to type 1 patients.

Barriers to effective communication

Of the nurses who never contacted the DSN, reasons given included lack of knowledge of the range of support available. This would suggest that the DSN needs to raise his/her profile in primary care by establishing more regular contact with PNs (thereby ‘putting a face to the name’, as one respondent commented).

It is noteworthy that 81% of the nurses stated that they would benefit if the DSN visited their practice. This need for DSNs to promote their skills and expertise is a view reiterated by several commentators in the diabetes nursing field (Rodgers, 1998b). With the advent of primary care groups and local health care co-operatives, DSNs need to consider how they can most effectively liaise with their primary care colleagues.

Some nurses who did contact the service encountered practical difficulties. Some respondents regarded the answerphone service as unsatisfactory, particularly if advice was required immediately or the patient was at the surgery. One possible solution is for the DSN to earmark a set time each day to respond to calls. This could be difficult in practical terms as the DSN covers a wide geographical area and cannot always guarantee that he/she will always be at a central base at a given time. There can be up to 35 messages left on the answerphone every day. Messages are usually dealt with at lunchtime or following afternoon diabetes clinics.

Integrated records

The study highlighted the need for integrated clinical records. Local experience of using patient-held records indicated they have not been particularly successful because patients do not always bring the card to the consultation or because healthcare professionals do not complete them.

In Lanarkshire, initiatives are underway to link general practice and separate hospital databases. An area-wide database has been introduced and the process of care is measured according to defined standards of care.

Integrating electronic records will also allow access to guidelines and advice on first-line treatment. Another advantage is that electronic records will facilitate clinical audit thus helping to meet one of the requirements for clinical governance.

The need for in-depth training

Training and Professional Development in Diabetes Care (BDA, 1996) highlighted the importance of local training and development of healthcare professionals.

The results of this local survey demonstrated that only 10% of respondents have attended an accredited course, although a third have attended shorter unaccredited courses. Pierce and Agarwal (1999) found that because accredited courses were geographically scattered, it was sometimes difficult for PNs to obtain leave. They suggested distance learning based on everyday practice.

The introduction of a modular distance learning course in 1999 addresses the shortage of accredited courses in Lanarkshire. The Diploma is based on experiential learning methods as recommended by the BDA. Since its inception, some participants have asked to visit the diabetes screening clinic and have asked the DSN to act as mentor. This is in line with the BDA's recommendations for formal provision of mentor schemes.

The majority of PNs cited the need for more training on the management of type 1 diabetes. A large proportion of DSN time involves initiating insulin therapy and subsequent regular review of these patients. The increasing number of type 2 patients transferring from tablets to insulin will put pressure on the DSN service. As a result, it is likely that PNs will become much more involved in their care.

Currently, 80% of patients are commenced on insulin at home resulting in a backlog of patients awaiting transfer. Many PNs do not feel confident about initiating insulin, particularly without regular updates. Some have also expressed concern about the inevitable increase in their workload.

Limitations of the study

One of the obvious weaknesses of the study was its small sample size, which makes it difficult to extrapolate the results to other areas. Although the questionnaire yielded constructive information, interviews with a small number of nurses would perhaps have enriched the study by yielding more comprehensive information.

Recommendations

This study identified deficiencies in the current service provided to PNs by DSNs in one part of Lanarkshire. A business case for another whole-time DSN, whose role would primarily encompass PN facilitation, has been submitted to the Trust. However in the meantime, strategies were recommended for improving the collaboration between PNs and the DSN service, and all but two have already been implemented. The strategies identified are as follows:

- Establishment of a database of PNs who run diabetes clinics (to facilitate referrals from DSN clinics to PN clinics).
- Distribution of an information leaflet to all PNs to include details of how and when to contact the DSN service and outlining the range of support available, e.g. visits to diabetes screening clinics.
- The DSN will earmark set time for PNs to contact them. In view of potential

PAGE POINTS

1. Initiatives are currently underway to link separate hospital and general practice databases.
2. The introduction of a modular distance-learning course has addressed the shortage of accredited courses.
3. The increasing number of patients with type 2 diabetes transferring to insulin has put pressure on the DSN service.

Practice nurses play a major role in the running of diabetes clinics; however, there is sometimes a lack of confidence, knowledge or experience. Hence, it is important that the DSN service is easily accessible for support and education.

PAGE POINTS

1 Recommendations aimed at improving collaboration between practice nurses and the DSN have been implemented.

2 More research is required to evaluate the effectiveness of DSN training and support, and their impact on diabetes care.

practical difficulties, the scheme will be piloted for two months.

- Arrangement, through the LDG, of ongoing practical workshops on insulin regimens and management.
- In the future, a list of information leaflets provided by the pharmaceutical companies and the Diabetes UK (formerly the BDA) should be circulated to all PNs.

Conclusion

A recurring theme in this study was the importance of developing the relationship between secondary and primary care as a means of improving the quality of diabetes care. The study demonstrated enthusiasm on the part of PNs to participate in diabetes care. This was reflected in the response rate and the number of constructive suggestions for improving the service.

The study highlighted the potential of DSNs to influence the quality of care to people with diabetes — not only people they see directly but people seen by other healthcare professionals. However, more research is required to evaluate the effectiveness of DSN training and support initiatives in primary care and their impact on diabetes care. ■

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