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Practice nurses' views of their diabetes care

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Diabetes is a heterogeneous group of disorders of carbohydrate, fat and protein metabolism characterized by chronic hyperglycaemia, degenerative vascular changes and neuropathy (Watson and Royle, 1987). Long-term complications associated with diabetes include coronary artery and peripheral vascular disease, stroke, renal disease, central and peripheral nerve damage, and amputations and blindness resulting in increased disability and reduced life expectancy (Brownlee, 1985; Ganda, 1985; Amos et al, 1997).

Currently, over 2% of the UK population has been diagnosed with diabetes (Department of Health (DH), 2003). The World Health Organization (WHO) has predicted that the incidence of diabetes will continue to rise, with the global incidence expected to double by 2010 (Amos et al, 1997). The publication of the standards and implementation strategy of the *National Service Framework [NSF] for Diabetes* (DH, 2001; 2003) indicates wide-ranging changes and standardization to current practice in England.

Since 1970 there has been a shift in responsibility from hospitals to primary care for the routine review of patients with diabetes (Wood, 1990; Griffin, 1998). Government legislation and research has identified primary care as the main resource for the effective management of chronic illnesses, including diabetes (NHS Executive, 1996; DH, 1997a; DH, 1997b). The St Vincent task force on

diabetes has identified practice nurses as providing a large share of diabetes care, together with other health professionals (WHO and International Diabetes Federation (IDF), 1990; Stearn and Sullivan, 1993; DH and British Diabetic Association (BDA), 1995; Anon, 1995; Laine and Caro, 1996).

Previous studies in diabetes and nursing have tended to focus on educational strategies, patient experiences and service organization (Ternulf-Nyhlin, 1990; Siddons and McAughey, 1992; Simons, 1992; Colagiuri et al, 1995; Gillibrand and Flynn, 2001). There have been a small number of studies, mainly in America, focusing on nurse perceptions, competencies and diabetes knowledge (Gossain et al, 1993; Baxley et al, 1997; McDonald et al, 1999). Peters et al (2001) have reported results of a large national UK Delphi survey, examining the views of practice nurses and diabetes specialist nurses on their roles in diabetes care. Descriptive comparisons were made between the perceptions of practice nurses and specialist nurses and it was found that similarities existed in approaches to patient education and treatment alterations.

Aim of the study

This study aims to explore practice nurses' perception of their care of people with diabetes in the context of current national guidelines and strategies.

Methods

A qualitative, exploratory method was adopted, using semi-structured interviews to gain insights into the perceptions by practice nurses of the care they deliver to people with diabetes.

Sample

A purposive sampling technique was employed to explore the experiences of a range of practice nurses with different levels of grade and experience in clinical practice. Nurses were contacted by postal invitation to be interviewed at their place of work, and were asked to provide written consent after receiving information about the study. Two focus group sessions were held at the

ABSTRACT

The aim of this qualitative study is to explore practice nurses' perceptions of their role in providing diabetes care. Semi-structured interviews were conducted with 15 purposively selected general practice nurses working in the Northwest of England. Five main themes were identified through coding and demonstrate that definitions of diabetes service are complex and that variations exist in perceptions of care. The main findings give an insight into practice nurses' perceptions of their scope and level of practice in primary diabetes care. This research highlights practice nurses' training needs in order to meet new national guidelines in diabetes care.

University of Central Lancashire, comprising an additional invited and selected sample of practice nurses. Standard research governance ethics procedures were followed with informed consent given by the participants.

Data collection

Semi-structured interviews were conducted with practice nurses working in the Northwest of England. The interview questions asked participants to describe their experiences in diabetes care, their perceptions of what constitutes their duties, what areas were of concern, and what were their perceptions of future care delivery. All the interviews and focus group sessions were tape-recorded and transcribed verbatim.

Data analysis

The transcriptions and field notes from the 15 individual interviews and two focus group sessions were analyzed using a coding and thematic identification process (Strauss, 1987). The researcher asked colleagues experienced in diabetes care to read the transcripts and the codes or categories formulated, in an attempt to validate the findings. In addition, five practice nurses with different nursing grades and levels of diabetes training were chosen from the focus groups to examine the main findings and thematic content of the study. All data in this article are reported anonymously to maintain confidentiality.

Results

Demography

The study population consisted of 15 female practice nurses, who were interviewed individually, and two focus groups that met on two separate occasions. Each focus group, consisting of three and six practice nurses respectively, had different participants. The participants' ages ranged from 32–53 years, with the mean age being 42.4 years. The nurses had been working in practices for 1–30 years (mean 9.6 years), and nursing grades ranged from E–I (mode F).

Themes

Five main themes describing the perceptions of the care delivered by practice nurses in primary diabetes services were identified. These were:

- Perceived diabetes care
- What informs their care
- How the effectiveness of their care is evaluated

- The barriers restricting service delivery
- Training in diabetes care.

Perceived diabetes care

All the practice nurses perceived themselves as integral members of a wider diabetes team, delivering multifaceted, holistic care to patients with diabetes. The nurses perceived their areas of responsibility in the team as identifying undiagnosed diabetes, maintaining the health and wellbeing of patients, and preventing complications associated with diabetes.

Performing physical monitoring tasks on patients forms an essential but time-consuming aspect of the diabetes care. Checks performed at non-annual diabetic appointments frequently include patient height, weight, blood pressure and random blood glucose.

All the participants identified patient education as the most important aspect of diabetes care. More of the interview and focus group time was spent on discussing this aspect of the service than any other. The education of patients about their condition and its treatment was regarded as vital for maintaining patient wellbeing, preventing complications associated with diabetes and improving patient concordance with treatment. Practice nurses used many educational materials to reinforce verbal information presented to patients. For most nurses this consisted of written literature explaining the pathophysiology of diabetes, its medical treatment, and consequential life-style changes.

The nurses highlighted the problems of gaining access to, and resources for, educational materials. They also expressed a desire to expand existing educational materials and incorporate other modes of education, e.g. videos and computer software.

Living with diabetes and, in particular, being diagnosed with diabetes was regarded by the nurses as placing increased emotional demands on patients. Addressing the emotional and/or psychological needs of patients was identified as an important aspect of primary diabetes care. In addition, many practice nurses made reference to the correlation between patients' emotional state and self-management. During these periods practice nurse care focuses on underlying emotional problems that affect the patient's self-management. How this is achieved is not clear, but it appears to result from consultations with patients; the importance of recog-

nizing psychosocial issues is gaining wider recognition (Gillibrand and Flynn, 2001).

All practice nurses perceived screening for people with undiagnosed diabetes to be part of their service in primary care. However, levels of screening varied significantly between practice nurses. Without exception all nurses screened patients presenting with classic symptoms of diabetes. The majority of practice nurses also routinely screened groups perceived to be at risk for developing diabetes.

The participants reported liaising with other health professionals (e.g. GPs) regarding patient management. Diabetes specialist nurses were also consulted on specialist issues that were deemed beyond the scope of knowledge possessed by either the practice nurse or GP. Almost unequivocally, all health professionals, in particular, the diabetes specialist nurses, were perceived positively. However, a number of nurses highlighted difficulties in gaining access to and receiving information back from health professionals outside the GP surgery.

All practice nurses in the study identified adjusting the treatment regimens of patients as an aspect of their care. However, the amount of responsibility assumed by practice nurses varied between surgeries, ranging from highlighting problems to the GP to sole responsibility for changing treatment modalities.

The participants' opinions varied on the issue of nurse prescribing and any extension to their care in adjusting medication. Although a majority expressed a desire for increased training in the treatment of diabetes, only a limited number wanted to assume the duties of nurse prescriber. A number of reasons were identified for the variety of views about nurse prescribing. Some considered adjusting or prescribing medication to be outside the scope of a practice nurse's duties, some lacked confidence for assuming this additional responsibility, and a number of practice nurses said nurse prescribing might detract from other aspects of their current diabetes care service.

I wouldn't want that role [nurse prescriber] to take me away from the nursing role . . . I wouldn't want my time to be taken up with a more medical model, rather than a more social model. Looking after the patient, I'd rather still be with that, than go down the medical route. (Participant (P) 12)

Just under half of the practice nurses in the study were involved in the organization and implementation of diabetes clinics. The reasons why some surgeries chose not to provide specialist clinics included the belief that clinics were restrictive for patients, or that they reduce patient attendance. MacKinnon (1998) recommends that general practice care be organized through systematic recall clinics with protocols for annual and interim reviews, performed by the practice team.

This practice has never . . . run clinics of any sort because we've always felt that they were too restrictive . . . people should be able to come in at any time, at their convenience. (P4)

We don't actually run . . . a set diabetic clinic because we've found . . . if you had set days for each [clinic], the attendance wasn't very good. (P9)

What informs practice nurses' diabetes care

A number of modes of information were identified as informing and guiding the duties of practice nurses in diabetes care. The guidelines produced by both local health authorities and Diabetes UK, were perceived as beneficial for both the practice nurses and their patients. The guidelines were viewed as ensuring the optimal management for patients with diabetes, and practice nurses valued the added security and uniformity of care that the guidelines provided.

The guidelines, yes it's been useful to know that they're there . . . we cover ourselves, make sure that you do everything that's safe for the patient, because we're all working towards the same targets . . . (P3)

Both diabetes registers and practice protocols were regarded as safeguarding the attendance and continued treatment of patients. However, both were also perceived as infringing on practice nurse time, leading to many practice nurses having to use time outside their contracted hours to complete them.

Because we're so busy in clinics, I don't actually have any time for administration so you end up doing it in your lunch, or else taking it home to finish it. (P13)

How the effectiveness of practice nurses' care is evaluated

Practice nurses use a number of methods to monitor the effectiveness of the care they provide patients with diabetes. Those who participated in a diabetes register received audit packs annually, which provided information on how well the practice performed on various aspects of diabetes care. An area of omission from the audit packs, in the view of most practice nurses, was the lack of any auditing for patient satisfaction. Consequently, practice nurses participating in a diabetic register tended to address patient satisfaction through discussion with each patient.

The one big thing that I do is patient satisfaction. That isn't actually recorded on [the audit pack] . . . I do check with people verbally and I ask them how they feel their diabetes is being managed . . . so I do try to audit . . . on a personal level, the care I'm giving. (P5)

Those not participating in a diabetes register tended to evaluate the effectiveness of the diabetes care based on indicators of diabetes control, as well as feedback from the patient on his/her wellbeing.

Barriers to service delivery

A number of barriers were identified which were perceived as impinging on, or restricting the duties of, practice nurses (*Table 1*). The biggest barrier restricting practice nurse care of patients with diabetes was a lack of time. The study revealed that consultation times ranged from 10–30 minutes. Nearly all participants perceived this amount of time as being insufficient to successfully incorporate the diverse aspects of their service. This lack of adequate time was perceived as having consequences for both practice nurses and their patients because not all issues relating to patient care could be covered during a consultation. Aspects of diabetes care, in particular, those aside from the physical monitoring checks, were often neglected by practice nurses because of a lack of available time.

Lack of adequate communication links between health professionals was viewed by practice nurses as a barrier that impinged on patient care, and delayed the initiation of treatments and procedures.

Often you get a delay before we get the letter back, and we rely on the patient

Table 1. Selected barriers to effective diabetes care identified by practice nurses

Barrier	Consequences
Lack of sufficient time for consultation	Issues aside from physical monitoring may have to be overlooked in consultation
Lack of adequate communication with other health professionals	Delays the initiation of treatment or procedures
Lack of resources for educational materials and monitoring equipment	Less effective care
Lack of knowledge of diabetes by personnel	Less effective care
Patient non-concordance	Less effective care
GP's lack of motivation	Less effective care
Language barriers	Communication with patients difficult

telling us what's happened in clinic . . . so that's a barrier. We all need to communicate better than we are doing. I think perhaps individually we're all doing a good job, but we could do it better if we share our knowledge and share what we're each doing for that individual. (Focus group (FG) 1)

Two methods suggested by practice nurses to resolve this barrier were the creation of shared care cards, to be relayed by diabetes patients to all health professionals involved in their care, and the setting up of computer links between all health professionals caring for patients with diabetes. These measures are being implemented by some practices involved in the study. The NSF for diabetes (DH, 2003) details intervention models based on effective computerized links and patient recording systems.

Further barriers perceived as restricting the service delivery of practice nurses included a lack of resources for educational materials and monitoring equipment, a lack of personnel with knowledge about or training in diabetes, patient non-concordance, GP's lack of motivation and/or sufficient knowledge of diabetes, and language barriers in areas of high ethnic diversity.

Training in diabetes care

Half of the practice nurses in the study had not completed diabetes training. The reasons for this included:

- Difficulty in obtaining time away from the practice to complete training
- Problems of gaining funding from the practice to pay for training

KEY POINTS

- Diabetes care is predominantly provided by primary care services in England
- Some practice nurses have increasing responsibilities for delivering diabetes care
- The findings of the study give an insight into, and illuminate the perceptions of, diabetes care service diversity and the scope of practice in this nursing group
- This study aims to increase awareness of the role of practice nurses in diabetes care and the problems they face

- A lack of recognized courses in diabetes for nurses.

It is important to note that all the practice nurses who had completed post-registration training in diabetes reported that the training had a positive impact on their delivery of diabetes care. When those practice nurses who had completed diabetes courses were asked if all practice nurses assuming responsibility for patients with diabetes should be required to complete some form of specialist training in diabetes, the answer was positive.

You've definitely got to do some sort of recognized course before you start looking after patients. (P2)

The registered general nurse [qualification] is not sufficient to run specialist clinics. Yes we've all got the base knowledge. Yes we can all give advice. But to actually run a clinic, specialist clinics, no it isn't enough. You have to get the knowledge for that particular subject before you do it. (FG2)

You need a course to deliver the care. You can't do it without the education. (P8)

Opinions were mixed regarding the level of training practice nurses should complete before assuming responsibility for patients with diabetes. Many emphasized the need to reward the experience of those who already run diabetes clinics and/or assume responsibility for their patients with diabetes, without having completed post-registration training. Many practice nurses also emphasized the need for ongoing training to keep up to date.

Discussion

A qualitative, exploratory approach was adopted for this study in order to elicit an understanding of perceptions of the practice nurse's diabetes care service. The study has shown that the diabetes care service is diverse and complex. These findings, while an addition to the wealth of existing research, will have only limited application because of the confined geographical area examined and the methods employed. The issue of application is confounded further by regional differences and inconsistencies in diabetes management (MacKinnon, 1998; Audit Commission, 1999). This is something that the NSF for diabetes seeks to address (DH, 2003).

Practice nurses tended to perceive themselves as being an integral part of a wider diabetes team, delivering multifaceted, holistic care to patients with diabetes. Although a number of areas of direct intervention were identified in the practice nurse's diabetes care service, practice nurses were almost unanimous in identifying education of the patient about the condition and its treatment as the most important aspect. Education was regarded as vital for maintaining patient wellbeing, preventing complications associated with diabetes and improving patient concordance. These findings suggest that practice nurses are in accord with the current ethos for the treatment of patients with diabetes, i.e. that practice nurses should primarily be helping patients make informed choices (DH, 2001; 2003).

The study also found a strong correlation between the diabetes care services of practice nurses and diabetes specialist nurses. For example, Sigurdardotti (1999) and Peters (2001) identified the role of diabetes specialist nurses to be primarily concerned with educating patients and facilitating their self-management.

Levels of responsibility assumed by practice nurses for adjusting the treatment regimens of patients with diabetes varied between practices. Responsibility ranged from those whose only diabetes care service was to highlight to the GP the possible need to alter patients' treatment regimens, to those who assumed sole responsibility for adjusting the medication doses of patients with diabetes, and who only consulted the GP about altering a type of medication for their patients. This demonstrates the possibilities for increasing practice nurses' responsibility and autonomy in the delivery of diabetes care.

Conclusion

Two of the key areas of concern highlighted in this study are the lack of evaluation of care provided by practice nurses not participating in a diabetes register, and disparities in the post-registration training of practice nurses. Following the WHO and IDF recommendations (1990) district diabetes registers were established in England to provide a central database listing all people with diabetes, and providing a source of audit and developmental data for general practices. However, the use of diabetes registers is yet to become universal, leaving disparities between regions and the levels of care received by patients (Audit Commission, 1999).

The study revealed that 46% of the practice nurses who took part had not completed post-registration training. This is surprising considering that government legislation and research has identified primary care as the main resource for the effective management of diabetes (NHS Executive, 1996; DH, 1997a; DH, 1997b; DH, 2001; 2003). The benefit of increased education in diabetes has been highlighted by both the practice nurses in this study and previous research (Gossain et al, 1993). It is these disparities that the NSF for diabetes seeks to eliminate (DH, 2001; 2003).

A patient-centered approach has been identified as a strong motivator for practice nurses (DH, 1997b; BDA, 1997). An area of commonality throughout this study was the need for the NSF and diabetes registers to reflect this approach. This is exemplified by the importance practice nurses attached to patient satisfaction when evaluating the effectiveness of their care.

However, the area deemed most important to patients with diabetes in England are the barriers limiting the diabetes care service of practice nurses. Practice nurses perceive themselves as critical to the care of people with diabetes in their communities and, while they recognize that their diabetes care service is complex and diverse, this study has shown that they require more training to meet patients' needs.

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