How nurse prescribing is being utilised in diabetes services: views of nurses and team members

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ABSTRACT

Aim

The aim was to explore nurses, doctors, non-nurse prescribers and administrative staff views on how nurse prescribing is being utilised in diabetes services.

Background

Nurse-led services enhance care and improve outcomes for patients with diabetes. Research indicates that care delivered by nurse prescribers can improve efficiency and support new ways of working. There is no evidence available which explores nurses and team member views on how nurse prescribing is being utilised in diabetes services.

Method

A collective case study of nine practice settings across England in which nurses prescribed medicines for patients with diabetes. A thematic analysis of semi-structured interview data collected during 2007 and 2008. Participants were qualified nurse prescribers, administrative staff, doctors and non-prescribing nurses.

Findings

Nurse prescribing was reported to enhance and support a variety of models of diabetes care. It enabled nurses to work more independently, and provide a more streamlined service. Maintaining a team approach ensured that nurses continued to learn and maintained good relationships with doctors.

Conclusion

Nurse prescribing is being successfully used to support and develop more streamlined services for patients with diabetes. Individual and organizational factors, as well as the interpretation of policy initiatives are reported to influence how prescribing is used in practice. Understanding the implications of these forces is important if the full potential of this new and developing role is to be realised.

Relevance to Clinical Practice

Nurses have an important role to play in the medicines management of patients with diabetes. Nurse prescribing supports and enhances established diabetes services. Prescribing allows nurses to develop diabetes services around the needs of the individual, and introduce new ways of working such as the single review process.

Key words

Nurse prescribing, diabetes, services

INTRODUCTION

Diabetes Mellitus (DM) is a serious, long term and progressive disease (Healthcare Commission 2007). During recent years concerns have been raised about the prevalence of this disease in the developed world (Clark 1998). It is estimated that 194 million people worldwide or 5.1% of the population currently have diabetes, and by 2025, this will rise to 300 million (Deakin *et al.* 2005).

The care of people with diabetes is complex. A quarter of people living with this disease also experience three or more other long-term conditions (Audit Commission 2000). In addition to the personal effects of such co-morbidities, the costs to the National Health Service (NHS) are considerable. Over 5% of total healthcare expenditure (approximately £25 million a day) in the United Kingdom (UK) is spent on the management of diabetes and its associated complications (Healthcare Commission 2007). Much of this expense however, could be reduced with good healthcare and good self-management (DoH 2003a).

In order to improve the quality of care that patients receive, the NHS has undergone extensive reform and modernisation, a key component of which is to provide services that are both flexible and accessible to patients (DoH 1999, DoH 2000). While diabetes has traditionally been treated in hospitals, in recent years the proportion of routine care provided in general practice (GP) and the community has steadily increased (Audit Commission 2000, DoH 2007). It is recognised that nurses have an important role to play in the services that patients with diabetes receive (DoH 2003a, Carey & Courtenay 2007a), and that nurse prescribing is an important part of the care that they provide (DoH 2007).

Policy surrounding the prescription of medicines by nurses in the UK has undergone several recent changes (DoH 2002, DoH 2003b, DoH 2005b, DoH 2006b); this has effectively provided around 14,000 nurses virtually the same prescribing rights as doctors (NMC 2007). Recent evidence suggests that nearly a third of these nurses prescribe for patients with diabetes (Courtenay & Carey 2008a). It is evident from this national survey conducted in the UK in 2006 that patients with diabetes receive care from nurses who work in a variety of roles and settings. This care is predominantly provided in the community, via nurses working in general practice (Carey & Courtenay 2007b). Further examination of the prescribing patterns of these nurses suggests that the majority prescribe more than 6 items a week, and frequently prescribe oral hypoglycaemic medication, insulin, antihypertensive and lipid regulating drugs (Carey & Courtenay 2008, Courtenay & Carey 2008b). However, there is no evidence exploring how nurse prescribing is being adopted and utilised in diabetes services.

BACKGROUND

A review of the literature suggests that services provided by nurses enhance the care that patients with diabetes receive, and improve patient outcomes (Carey & Courtenay 2007a). There is some evidence to suggest that nurses are also effectively managing some of the common complications, including hypertension, hyperlipidemia, and cardiovascular disease (Denver *et al.* 2003, New *et al.* 2003). For example, a UK based randomised controlled trial (RCT) (involving over 1500 patients) was used by New *et al.* (2003) to examine the effect of specialist nurse on raised blood pressure, raised total cholesterol, and mortality. It was evident from the findings that in addition to the significant reduction in patient mortality, a higher number of patients seen by

the specialist nurse achieved their treatment targets. Further support for these findings is provided by Denver *et al.* (2003). Similarly adopting a RCT, in this study of 120 patients, it was evident that those who attended a UK based nurse-led clinic were three times more likely to reach a target systolic BP < 140 mmHg, and experience a significant reduction in 10 year coronary heart disease and stroke risk scores.

Emerging evidence suggests that nurse prescribing may benefit the delivery of services in a variety of ways. Although not specifically looking at diabetes services, several studies have described how nurse prescribing is being used to support and enhance patient services (Courtenay & Berry 2007, Bradley & Nolan 2007, Carey *et al.* 2009). A recent case study of dermatology nurse prescribing (Carey *et al.* 2009) reported how stakeholders believed nurse prescribing both supported and facilitated the modernisation of dermatology services, whereby both patients and staff benefited by the adoption of this role by nurses. Participants reported how the ability to prescribe allowed nurses to work independently and as a result new clinics and nurse-led services had been introduced in both dermatology outpatients and primary care. Similarly, the 45 nurse prescribers interviewed by Bradley & Nolan (2007) reported that nurse-led clinics, which served to reduce waiting times and free up other team members, also arose from the opportunity prescribing created.

Additional benefits reported to arise when nurses adopt the prescribing role include increased efficiency and continuity of care (Avery *et al.* 2004, Courtenay & Berry 2007, Stenner & Courtenay 2008a), improvements to team working and sharing of knowledge (Courtenay & Berry 2007, Stenner & Courtenay 2008b).

However, it is evident that effective implementation of the prescribing role can be influenced by a number of factors including individual expectations, lack of clinical skills, access to support and inadequate workforce planning and preparation (Bradley & Nolan 2007, Stenner & Courtenay 2008a, Carey *et al.* 2008).

There is no evidence available which has explored nurses and team members' views on how nurse prescribing is used in diabetes services. This is important given the need to improve services for this group of patients, and the large number of nurses prescribing for this complex condition.

THE STUDY

Aim

The aim was to explore nurses, doctors, non-nurse prescribers and administrative staff views on how nurse prescribing is being utilised in diabetes services.

METHODOLOGY

Design

This paper reports on a set of interview data that formed part of a larger two phase study exploring the treatment management of patients with diabetes. In this stage, phase 2, a collective case study approach (Stake 1995) was adopted and several methods of data collection (i.e. interviews, patient questionnaires, video consultations, and prescriptions) were used. Findings from phase 1 of this study, a national survey of nurse independent and supplementary prescribers who prescribed medicines for patients with diabetes, have previously been reported (Carey & Courtenay 2008, Courtenay & Carey 2008b).

Case sites (n=9) were selected, using criteria that emerged from the national survey, and represented practice settings in which nurses prescribed medicines for patients with diabetes. This paper reports on interview data collected from nurse prescribers, doctors, administrative staff, and non-prescribing nurses. Additional findings from phase 2 of the study (including patient questionnaires, video consultations, and prescriptions) are reported elsewhere (Courtenay *et al.* 2009, Courtenay *et al.* 2008).

Participants

In order to represent different geographical locations in England and services provided for patients with diabetes, a purposive sample of cases was selected to represent nurses working in primary and secondary care, and those who used nurse independent and or nurse supplementary prescribing. Situated across urban and rural England case studies included diabetes specialist nurses (DSNs) (n=4) working across primary and secondary care; practice nurses (n=2) and nurse practitioners (n=4) working in primary care based general practice (see Table 1). In addition to the nurse prescriber (NP), within each site, interview data were collected from a purposive sample of administrative staff, doctors and non-prescribing nurses who worked alongside the nurse prescriber.

DATA COLLECTION

Case study data collection took place between October 2007 and September 2008. A total of 31 semi-structured interviews were conducted. Interviews were held at a convenient time and location at the case study site. All participants gave permission

for the interviews to be audio-taped and transcribed. A researcher from the University of Reading conducted all the interviews.

Findings from a national survey exploring nurse prescribing in diabetes (Carey & Courtenay 2008, Courtenay & Carey 2008b) and a literature review (Carey & Courtenay 2007a) were used to inform the interview schedule. The interview schedule covered general views and experiences of prescribing for patients with diabetes, role changes resulting from prescribing, difficulties arising from prescribing, support and supervision.

Ethical considerations

Study approval was granted by the NHS research ethics committees and the university.

Participants in the national survey who met the sampling criteria and indicated they may be interested in phase 2 of the research were initially approached. Once an interest and managerial support was confirmed, participants were given the project protocol and an introductory letter. Other team members were subsequently approached by the nurse prescriber and asked to participate in an interview. Participants had the opportunity to ask questions before the interview, and were informed that all responses would be anonymised.

DATA ANALYSIS

Data from nurse prescribers, doctors, administrative staff and non-nurse prescribers were selected as the unit of analysis for the purpose of the paper and subjected to thematic analysis (Braun & Clark 2006). Initial coding and identification of patterns

across the data was managed by Atlas.ti, a qualitative data analysis software package. This was followed by discussion and further interpretation between two researchers (NC & KS) to identify areas of data convergence and overall interpretation of the themes. Saturation of the data was achieved. Once themes were developed data was further analysed by job title (i.e. specialist nurses versus nurses in general practice) and setting to identify any differences.

Rigour

Triangulation of the data was used to validate common themes and enhance the comprehensiveness of the findings. Transcripts were independently assessed by two experienced qualitative researchers, who then discussed and resolved any minor differences that were identified. Member validation occurred in that interim findings were presented and discussed at a network meeting of diabetes prescribers in October 2008. A high level of agreement and acknowledgement of the relevance of the findings were reported.

FINDINGS

Across the 9 case study sites 31 interviews were conducted including nurse prescribers (n=10), doctors (n=9), administrative staff (n=9) and non-prescribing nurses (n=3) (see Table 1).

Specialist nurses predominantly treated patients with poorly controlled diabetes and prescribed a narrow range of medicines (e.g. insulin and oral hypoglycaemic agents (OHA)). By contrast, GP nurses tended to look after patients whose diabetes was

more controlled, and prescribed a broader range of medicines for diabetes and its related co-morbidities (i.e. hypertension, hyperlipidemia and cardiovascular disease).

The analysis resulted in four themes relating to how nurse prescribing was being utilised in the care of patients with diabetes: organisation of care, scope of practice, role of policy changes, and team working. Rather than being mutually exclusive, the four themes were interrelated and overlapping and demonstrated how nurse prescribing was being used in primary and secondary care to support a range of diabetes services.

In order to protect anonymity of participants, references to names or places have been replaced by an 'x'. Quotations are followed by a code referring to the case study site (cs) and the participant group of the person quoted. Participant groups have been abbreviated to Dr=Doctor, NP= nurse prescriber, NNP= non-prescribing nurse, Rec= administrative or reception staff.

1. Organisation of care

Nurses, both GP and specialists, used various models of care (which they reported were largely unchanged by their capacity prescribe) to deliver care to patients with diabetes. The majority of nurses in GP (5/6) described how they were responsible for patients with diabetes who had multiple co-morbidities. Several GP nurses reported that they reviewed diabetes and these other conditions at the same time. In some of the GP sites, patients with less complex needs were looked after by non-prescribing practice nurses:

What we try to do in the practice is be smart about our recall. If you have got a diabetic patient you have also probably got a patient that has got X disease and

you may have a patient who has had a Y or has Z, so I focus in on the patients with more than one condition. So the basic diabetic check for Mr A, who has only got a bit of diabetes, his blood pressure is well controlled, he goes to the practice nurses. (np1-general practice)

In comparison, the work of specialist nurses focused on patients, with poorly controlled diabetes, who were predominantly treated with insulin therapy:

I rarely prescribe oral hyperglycaemic agents, it is mostly insulin that I prescribe, and that is really because we don't see so many people on OHA's, they are mainly managed in the [GP] practices. (np4-community DSN)

Several nurses in GP, and one community based DSN, reported how as result of their ability to prescribe set clinic times had been abandoned, which allowed patients greater flexibility in their appointment time:

They don't often come in without an appointment but I do see them. I am seeing somebody tonight at 5pm on his way back from work because he has difficulty getting time off from work. Now I know there will be a GP in the surgery, but things like that I can do. I don't have to think if there is going to be a doctor around to get a prescription signed. (np9-community DSN)

2. Scope of Practice

The scope of practice and confidence to practice independently varied across case sites. A number of factors were reported to influence the scope of nurses' prescribing practice e.g. setting (such as traditional roles and activities of DSN's and established

working practices in GP), individual factors (such as level of training, competence and confidence, and national and local organizational issues (such as the drive for insulin initiation to be conducted in general practice).

For example, some GP nurses initiated insulin whereas others lacked confidence and training to undertake this task:

I do feel a bit wobbly with... I am happy when people are already on insulin, I struggle when people need to be put on insulin. (np1-general practice)

Other examples were given where historical patterns of working had failed to be challenged. Resistance from consultants had prevented one DSN prescribing for hospital in-patients. This then resulted in them making a recommendation about what medicine to prescribe to junior medical staff which ultimately caused confusion and frustration:

I do lots of inpatient visits as well. I think the nurses there can be a bit frustrated... and the medical staff are perhaps more so frustrated that we don't change the in-patient prescriptions, but leave them a note with our suggestions (np2-hospital DSN)

In another case in GP, the doctor continued to receive blood test results for patients under the care of the nurse prescriber:

I think it is probably historical. I have never challenged that actually [seeing blood results for patients with diabetes]. (np1-general practice)

The level of responsibility NP had for the organisation of diabetes care varied across case sites. In some sites, general practitioners maintained control over the allocation of patients and their care, and monitored nurses prescribing decisions. For example, two nurses were responsible for making prescribing decisions with the patient but did not always issue a prescription during the consultation. In these cases prescriptions were signed later by a doctor:

I review the medication but he [the GP] actually reauthorizes it, rather. So I will do the review, I'll say that they are taking the tablets correctly and they are ordering the correct amount of repeats, but then I will present that to Dr X and he will then re-authorise for the next six months. (np5-general practice)

In contrast, in another GP site two NPs, both trained nurse practitioners, were responsible for the whole organisation and management of diabetes (and its co-morbidities) with minimal input from doctors in the practice:

Certainly over the last 5 years we have had quite a significant shift in the nursing team as to how things are organised and who is responsible for what and we have actually developed in the team. (np6(2)-general practice)

The ability to prescribe supported subtle changes to the roles of both GP and specialist nurses. For example, three GP nurses, who had a high level of independence, described how their role was becoming more focused on medicines management.

Consequently, other more traditional aspects of care, such as lifestyle advice, were now delegated to the non-prescribing practice nurse.

We all do education but I probably will talk to them more about their medicines, she [the practice nurse] will talk to them about what they are eating and what they are doing and that kind of thing. (np8-general practice)

Similarly, one community based DSN reported that since becoming a prescriber her role had changed whereby she was increasingly responsible for newly diagnosed patients with diabetes.

I get more people who are newly diagnosed first off, whereas before they might have seen the GP who would have initiated the treatment and then they would be referred to me to monitor or educate or whatever, but I think now I tend to do the whole thing much more often. (np9-community DSN)

3. Role of policy changes

Although, the organisation of care provided by GP and specialist nurses was predominantly unchanged by their ability to prescribe, the majority of doctors, both GPs and diabetologists, reported that the type and content of their workloads were changing as they increasingly saw patients with more complex needs. NP was reported to facilitate rather than be the sole cause of change. Policy initiatives to shift the focus of diabetes services to the community were cited as the main driver for change:

I do now tend to see the more complicated patients, but I don't see that as a change because of prescribing. It is partly due to that they are very experienced in lots of things so I can allocate a patient and they can just get on with it, and largely because so much is coming out of secondary care in terms of the insulin patients. We are managing a lot more in-house than previously.
(np8-general practice)

The changing nature of diabetes, and drive to deliver care in primary care were also reported to have caused similar changes to the workload of consultant diabetologists:

I am seeing more and more of the complex patients and that is also to do with the changes in diabetes itself, because more and more GP's are seeing the straight forward ones, so we see more complex one's. (dr7-hospital)

The increase in complex patients was balanced out by doctor's ability to delegate work to nurse prescribers:

It has made a huge beneficial difference. It's because we are able to spread the workload around to different people. It's what my partner would call 'skill mix'. I think it [nurse prescribing] enables the work to roll out amongst more of the medical community, enabling us to do more complex stuff. (1dr-general practice)

The shift of mainstream diabetes management from secondary to primary care also meant an increase in in-house insulin management within general practice. During the

period of data collection a number of nurses in GP reported that they were undergoing training for insulin initiation or had recently taken this area of practice on board. Rather than choosing to extend their practice in this area, two nurses reported that their practices were under pressure to undertake this additional aspect of care:

We were told in no uncertain terms that we needn't rely on that [DSN] as a service anymore, we would have to get used to initiating patients on insulin, end of story. (np3-general practice)

4. Team working

The complex nature of diabetes management and the multiple medications involved was said by some respondents (NNPs, Drs and NPs) to necessitate a team approach, whereby nurses felt it was important to keep medical staff and other members of the healthcare team informed of any major changes to patients' medication regimens:

Because our patients have chronic diseases, you see the patient very regularly and as a team you go through a lot of changes with that patient. So you are constantly keeping each other updated about what you are doing. (nnp7-hospital)

Say she [the doctor] wasn't here for a week and I made a decision and started a patient on a medication or whatever - usually, when she came back then I would say what I had done. In other areas, less so, because diabetes is kind of different to other areas that I work in. (np8-general practice)

Numerous mechanisms of communication were reported. Although many were well established their significance changed once nurses had adopted the prescribing role, as demonstrated in the following quote:

It [nurse prescribing] is handy if I do get any queries on the diabetic prescriptions, because quite often the patients scribble little notes on, or they want to change their things. So I can just come and ask X for her advice rather than bothering a doctor. (rec3-general practice)

Nurses valued the continued and open access to medical colleagues and the opportunity this provided to discuss individual cases and more strategic events such as the introduction of new medicines:

If there has been a new drug, there has to be a discussion. But we work quite well as a practice, we have things like journal clubs and things. So you are not making a new judgement about a drug totally in isolation, we sit down and discuss it before we decide what we are going to do about using something that is new. (np6(1)-general practice)

Overall nurses reported good and close working relationships with doctors and other members of the healthcare team in their area of clinical practice.

I like the fact that I can go to him at any time, really, even in-between patients, He is always there. I mean some days I am on my own, I work in the surgery on my own sometimes, but he is always on the end of the telephone. (np5-general practice)

According to all participant groups, prescribing had not changed the status of nurses within teams, however there were other subtle changes to team dynamics. The extent of nurses learning and expertise in diabetes prescribing altered the content of conversations and the way that team members interacted with each other.

X [the nurse prescriber] bought some interesting diabetic medication things to journal club. We do journal club once a week. So yes you do learn, I wouldn't say more, but you do now learn different things from each other as a team at the surgery (nnp6-general practice)

Some doctors additionally felt there was more shared territory for discussing clinical issues since the nurses had undertaken the prescribing role:

Certainly we will discuss therapeutics rather more than- in the past it was more of a 'This is what I am going to do. This is my territory', but now it is a more shared territory, so there is a bit more discussion about therapeutics (dr7-hospital)

DISCUSSION

This study is the first to specifically report nurses and team member views on how nurse prescribing is being utilised in services for patients with diabetes across a range of practice settings. This study is limited to the views of team members who worked alongside a nurse providing diabetes services. These views may therefore be biased towards supporting nurse prescribing. We acknowledge that the study is limited to the views of team members working in this disease area. Further work, using different

research methods is required in order that the views of patients with diabetes, and the impact of prescribing on diabetes services can be evaluated further.

Our findings suggest that nurse prescribing enabled nurses to work more independently, and provide a more streamlined service for patients with diabetes. Nurses were able to make more effective use of their knowledge and skills which was felt to support more flexible working across the healthcare team, and enhance the quality of the services provided. Maintaining a team approach to the management of this group of patients ensured that nurses continued to learn, and were able to maintain good working relationships with doctors. This was felt to be particularly important given the complex nature of diabetes, and multiple medications frequently prescribed. Thus emphasizing that while prescribing improves independent working to an extent, complete autonomy was not considered appropriate for this group of patients.

In this study, improvements to services were considered particularly important as the care of patients with diabetes is complex, and often complicated by co-morbidities such as hypertension and cardiovascular disease. Because of this complexity, it is difficult to establish the precise impact of prescribing on practice. Both individual and organisational aspects were felt to influence the extent to which prescribing had affected independent working across practice settings. Individual factors, such as the level of individual training and competence affected nurses scope of practice, as did organisational factors such as the level of control doctors maintained over nurses prescribing decisions, and the drive for insulin initiation to be conducted in general practice.

That there is no clear evidence of what is the most efficient or acceptable model of diabetes care, in terms of clinical outcomes or patient satisfaction (Audit Commission 2000), may help explain why so many aspects influenced prescribing practice, and the various models of care witnessed in this study. The diverse nature of diabetes services has previously been reported in the literature (Audit Commission 2000, Carey & Courtenay 2007b). For example, findings reported by Carey & Courtenay (2007b) identified that although the majority of care was provided by nurses working in GP, diabetes services were also provided by nurses working in a variety of roles such as midwife, community matron, community psychiatric nurse, and children's nurse specialist. The contribution of these different nurses therefore warrants further investigation.

While prescribing itself was not identified as the main driver of change, our findings indicate that it was used to enhance a range of diabetes services in both primary and secondary care. Some nurses, mainly specialists, who tended to treat patients with poorly controlled diabetes, used prescribing to improve the efficiency of their existing practice. By contrast other nurses, particularly those working in general practice, used prescribing to support the development of new ways of working. This was achieved primarily by the introduction of a single review process for patients. This meant that in addition to diabetes, nurses were able to consider the management of other co-morbidities, such as hypertension and cardiovascular disease, at the same time, thus providing a more cohesive and simplified approach to patient care. Similarly, the realignment of doctors' workloads, whereby GPs increasingly saw patients with more complex multiple pathologies, and diabetiologists increasingly focused on patients

with poorly controlled diabetes, although supported by NP were felt to reflect wider policy initiatives such as the Quality and Outcomes Framework of the new General Medical Services Contract (DoH 2005a), and the drive to deliver services closer to patients' homes in the community (DoH 2007).

Our findings suggest that the flexibility offered by prescribing created an opportunity for nurses and healthcare teams to work differently, and the impetus to reconsider the approach to the management of patients with diabetes. Nurses were able to develop services around the needs of the individual, as demonstrated by the implementation of the single review process in general practice, and provide greater consistency and continuity of care. Providing a single comprehensive and patient centred review is a central theme of recent policy guidance on diabetes care (DoH 2006a, Healthcare Commission 2007). Given that a number of shortfalls in diabetes services have previously been reported (Audit Commission 2000, DoH 2003a), such developments are encouraging, and are consistent with the originally anticipated benefits of nurse prescribing (DoH 2002, DoH 2006b).

This study and others in the area of nurse prescribing (Humphries & Green 2000, Otway 2002, Avery *et al.* 2004, Bradley & Nolan 2007, Carey *et al.* 2008) are beginning to identify the forces that determine the implementation and use of the prescribing role in practice. This paper demonstrates that the needs of an organisation and how it interprets policy initiatives are factors that can influence this. This is in-line with recent guidance that emphasizes prescribing should be developed around the needs of the organisation (DoH 2002, NMC 2006, DoH 2006b). Characteristics and expectations of individuals are other forces that need to be considered. Other research

points for the need for a strategic approach to the prescribing role (Carey *et al.* 2008). It would seem that individual and organisational need should be aligned. Nurses should be aware that they may be asked to develop their prescribing practice in ways they may not have anticipated, as shown by nurses in this study who were asked to undertake insulin initiation.

CONCLUSION

Nurse prescribing is being successfully used to support and develop more streamlined services for patients with diabetes. Individual and organizational factors, as well as the interpretation of policy initiatives are reported to influence how prescribing is used in practice. Understanding the implications of the forces that can drive and restrain the implementation of the prescribing role is important if the full potential of this new and developing role is to be realised.

RELEVANCE TO CLINICAL PRACTICE

Nurses have an important role to play in the medicines management of patients with diabetes. This is important given the complex nature of diabetes and multiple medications frequently prescribed. Nurse prescribing supports and enhances established diabetes services. Prescribing allows nurses to develop diabetes services around the needs of the individual, and introduce new ways of working such as the single review process.

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Table 1: Data collected from each case study site

Case Study	Job Title	Setting	Number of nurses	Interviews			
				Nurse prescriber	Doctor	Admin staff	Non-nurse prescriber
1	NP	GP	1	1	1	1	0
2	DSN	H	1	1	1	1	0
3	PN	GP	1	1	1	1	0
4	DSN	C	1	1	1	1	0
5	NP	GP	1	1	1	1	0
6	NP	GP	2	2	1	1	1
7	DSN	H	1	1	1	1	1
8	PN	GP	1	1	1	1	1
9	DSN	C	1	1	1	1	0
Total			10	10	9	9	3

Code DSN=Diabetes Specialist Nurse, PN=Practice Nurse, NP= Nurse Practitioner, GP=General practice, C=Community clinics, H=Hospital