

Running nurse-led secondary prevention clinics for coronary heart disease in primary care: qualitative study of health professionals' perspectives

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ABSTRACT

Background

A randomised trial of nurse-led secondary prevention clinics for coronary heart disease resulted in improved secondary prevention and significantly lowered all-cause mortality at 4-year follow-up. This qualitative trial was conducted to explore the experience of health professionals that had been involved in running the clinics.

Aim

To identify the barriers and facilitators to establishing secondary prevention clinics for coronary heart disease within primary care.

Design of study

Semi-structured audiotaped telephone interviews with GPs and nurses involved in running clinics.

Setting

A stratified, random sample of 19 urban, suburban, and rural general practices in north-east Scotland.

Method

Semi-structured telephone interviews with 19 GPs and 17 practice-based nurses involved in running nurse-led clinics for the secondary prevention of coronary heart disease.

Results

Eight practices had run clinics continuously and 11 had stopped, with eight subsequently restarting. Participants accounted for these patterns by referring to advantages and disadvantages of the clinics in four areas: patient care, development of nursing skills, team working, and infrastructure. Most practitioners perceived benefits for patients from attending secondary prevention clinics, but some, from small rural practices, thought they were unnecessary. The extended role for nurses was welcomed, but was dependent on motivated staff, appropriate training and support. Clinics relied on, and could enhance, team working, however, some doctors were wary of delegating. With regard to infrastructure, staff shortages (especially nurses) and accommodation were as problematic as lack of funds.

Conclusions

Nurse-led secondary prevention clinics were viewed positively by most healthcare professionals that had been involved in running them, but barriers to their implementation had led most to stop running them at some point. Lack of space and staff shortages are likely to remain ongoing problems, but improvements in funding training and communication within practices could help clinics to be put into practice and sustained.

Keywords

coronary heart disease; primary care; secondary prevention.

INTRODUCTION

Patients with established coronary heart disease benefit from effective secondary prevention¹ and GPs are ideally placed to optimise secondary prevention for patients.² Between 1994 and 1995 a randomised trial of nurse-led clinics for secondary prevention of coronary heart disease was conducted in north-east Scotland.³⁻⁵ At 1 year, the clinic group had significantly better secondary prevention and health behaviour when compared with the control group. The control group received no formal nurse-led intervention but attended their GP as required during the study year. After 4.5 years, there were significantly fewer deaths in the original intervention group and a trend toward fewer coronary events (for example, coronary deaths and non-fatal myocardial infarctions).

Internationally, implementation of secondary prevention is being encouraged — in the UK, a new GP contract rewards the achievement of coronary heart disease secondary prevention targets.⁶ Nurse-led clinics are, to date, the most effective way to improve secondary prevention in patients with coronary heart disease.⁷ There remains the challenge

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of implementing clinics, however, and to facilitate this, barriers to change need to be identified and lifted.⁸ Qualitative methods 'can reach the parts other methods cannot reach' and enable access to the views of relevant primary care professionals.⁹ In this study we explored health professionals' practical experiences of running nurse-led secondary prevention clinics in order to determine the barriers and facilitators to their implementation.

METHOD

Participants and recruitment

This study was conducted in north-east Scotland in conjunction with a 4-year follow-up of a randomised trial of nurse-led clinics for secondary prevention of coronary heart disease.³⁻⁵ The 19 general practices that took part in the trial were selected by random sampling from four stratified groups representing large and small, rural and urban practices. The characteristics of participating practices are shown in Table 1.

Sampling was purposive¹⁰ so that the nurse and GP most closely associated with running the clinic in each practice were invited to participate. The researchers believed that these individuals would be best informed about all aspects of running the clinics.

In view of time pressures on primary care professionals, a single audiotaped telephone interview with each participant was viewed as the most practical method of data collection. This was done with the informed consent of the participants. Participating doctors and nurses were contacted in advance to arrange an appropriate time for the interview. Doctors and nurses were interviewed separately. The interviews were semi-structured and conducted according to an interview schedule. This schedule evolved over time in light of information emerging from the initial interviews. The first questions asked the interviewees whether the practice had continued to run nurse-led clinics or not, to describe any modifications to the clinic protocol, or discuss reasons for stopping clinics. The subsequent topic schedule was used to explore problems with, benefits of, and facilitators and barriers to running clinics. Data collection continued until all recruits had been interviewed. The interviewer was a GP.

Analysis

Telephone interviews were transcribed verbatim for systematic analysis. During first order analysis transcripts were read and reread before a coding system was developed and applied to all transcripts. Second order analysis was thematic.¹¹ Across the entire sample, coded text was grouped together in specific themes with similar and divergent perspectives noted. Further analysis compared the views of nurses and GPs involved in the clinics, as

How this fits in

We know that nurse-led clinics in primary care increase implementation of secondary prevention and survival in patients with coronary heart disease. Sustaining clinics in primary care is, however, difficult. We found many GPs and nurses were persuaded by the benefits of clinics to patient care, but barriers to implementation included lack of training and resources (especially staff), and problems with team working.

well as the views of participants continuing or stopping the clinics. The main researcher integrated knowledge derived from practical experience and practice visits with interview data in analysing the experiences described by both sets of health professionals.¹² A second GP researcher read and coded a random sample of transcripts to explore 'inter-rater reliability'.¹³ Comparison revealed high concordance in the key themes identified.

RESULTS

Thirty-six interviews were conducted (19 with GPs, 17 with practice-based nurses). In two cases the original nurse had retired and it was not possible to identify a suitable alternative. Interviews lasted between 15 and 27 minutes. Theoretical saturation was reached after 27 interviews with no new themes emerging from the final nine interviews. All GPs were male and all nurses female.

Table 1. Characteristics of study practices.

Practice number	Location	List size	Number of partners
1	Rural	<5000	3-5
2	Rural	<5000	1 or 2
3	Suburban	>10 000	>5
4	Urban	>10 000	>5
5	Urban	<5000	1 or 2
6	Urban	>10 000	>5
7	Suburban	5000-10 000	3-5
8	Suburban	>10 000	>5
9	Urban	>10 000	>5
10	Urban	>10 000	>5
11	Suburban	5000-10 000	3-5
12	Rural	<5000	1 or 2
13	Rural	<5000	1 or 2
14	Urban	>10 000	>5
15	Urban	<5000	3-5
16	Rural	5000-10 000	3-5
17	Urban	5000-10 000	3-5
18	Rural	5000-10 000	3-5
19	Urban	5000-10 000	3-5

Table 2. Main reasons given by nurses and GPs for stopping clinics.

Practice	Status	Nurse view	GP view
Practice 2	Restarted	'Mainly due to a change of GP and staffing levels within the team'	GP was unaware that there had been a break
Practice 5	Stopped (planning to restart)	New nurse; didn't know reasons	'More important things to do when I split and set up practice on my own'
Practice 6	Restarted	'Money and time ... just too busy'	'Lack of district nursing staff'
Practice 7	Restarted	'The original GP that was doing it with us, he left ... and also other sorts of staff problems'	New GP; 'Clinic had lapsed after my predecessors retirement'
Practice 8	Restarted	'Allowed to slip while renovations were taking place' and 'Doctor's weren't willing to hand patients on'	'Doctors weren't sending people through to the nursing people'
Practice 11	Restarted	'Just didn't take it up, nothing done with it'	Reasons unclear
Practice 12	Stopped	'Duplication'	'Duplication'
Practice 14	Stopped	'Duplication'	Stopped due to limited health visitor time and lost momentum
Practice 16	Restarted	'Time'	'Major concurrent administrative problems with the nursing side of our practice at the time'
Practice 17	Restarted	'Both of the original nurses retired'	'GP's weren't referring patients through to the nurse, plus a new cardiologist had been appointed (to the local hospital)'
Practice 19	Restarted	Nurse unavailable	'Original nurse was unenthusiastic and then left. There was no time to train her replacement'

The interviewees expressed their experiences of running clinics largely in terms of their perceived advantages and disadvantages, and the barriers they encountered. Many of these were mentioned by several participants. On the other hand, the balance that was struck between advantages, disadvantages, and barriers varied according to individual circumstances and expressed itself most forcibly in the patterns of clinic implementation that were reported: at interview eight practices had continued to run clinics, three had stopped, and another eight had stopped and subsequently restarted. Table 2 shows the reasons cited by the nurse and the GP for stopping or discontinuing clinics. Mainly these reasons relate to infrastructure, limited time, personnel, or major changes within the practice.

Four main themes, which cut across both advantages and disadvantages to running clinics, emerged from analysis: effects on patient care, development of nursing skills, team-working issues, and practice infrastructure issues (Table 3). These themes are detailed below, together with examples of instances when the perceived disadvantages and barriers outweighed the perceived advantages to the extent that the clinics were stopped permanently or temporarily.

Patient care

Most GPs and nurses thought establishing clinics had led to an improved service for patients. Clinics were also viewed as effective in improving scope and structure of care delivery, implementing best evidence, and demonstrating a commitment to improving patient care:

'I think we all feel we are providing a more comprehensive service for patients. I think we all feel much more comfortable, that our coronary heart disease patients are getting a good deal.' (GP 1: had 'continued' to run clinics.)

'Well, it's a good way to audit. We have all got to do that nowadays and it really forces you to do that.' (Nurse 4: 'continued'.)

The clinics were thought to enable the early identification of problems with patients and provide something of a 'safety net' for patients:

'Clinics ensure that people with significant cardiac disease are being assessed and given every possible help. If you leave it to "just come and see me when you want" people will get

missed. It's a safety net.' (GP 7: 'restarted'.)

'I can tell by the kind of patients or the kind of situations that we are being asked to see that we are not having nearly so many crisis contacts, either in surgery or at home, on the cardiac side.' (GP 18: 'continued'.)

GPs and nurses thought patients were satisfied by clinics, viewing them positively and appreciating increased input. We did not interview patients to confirm this impression, but it appeared to be a motivating factor for clinicians:

'I think they are very grateful that somebody is keeping a check on them. It's very seldom we get non-attenders, they are all very positive about it and like the idea that somebody is keeping a check on them.' (Nurse 1: 'continued'.)

Several nurses mentioned that clinics had provided education to patients, which improved their motivation and allowed them to make choices about their lifestyle and treatment:

'I think it gives patients ... information and choice. They then make the decision to make lifestyle adjustments, to enhance their quality of life.' (Nurse 17: 'continued'.)

In some practices, however, clinics were viewed as unnecessary duplication of services already provided by the GP. Of the three practices that stopped clinics and did not restart, two were small rural practices and one a medium-sized rural practice. In both small practices GPs felt that they could deal with secondary prevention during routine consultations. Nurses at these practices agreed:

'I'm not sure how necessary all these clinics are in a single-handed situation because I know my patients very well. I don't think the issue is picking out these people and identifying the risk factors because for me that's not important. The issue is if telling them about risk factors can make them change their minds.' (GP 6: 'stopped'.)

It appears, then, that one of the principal factors determining whether practices attempted to run clinics in the medium-to-long term was whether they perceived the clinics to improve patient care or not.

Development of nursing skills

Both GPs and nurses thought that running clinics extended the nurse's role, increasing confidence, skills and job satisfaction:

Table 3. Perceived advantages and disadvantages of running clinics within four main themes

	Perceived advantages	Perceived disadvantages and barriers
Patient care	Implementing and monitoring best practice Preventing acute problems Liked by patients Perceived patient empowerment	Unnecessary duplication
Nursing skills	Developing role Developing rapport	Lack of training Isolation from other nurses running clinics
Team working	Team building Within practice communication enhanced	Isolation within practice Inconsistent advice to patients Threatening to GPs
Infrastructure	Provides model for chronic disease management Fewer emergency appointments	Lack of financial incentive Notional time Prescribing costs Finding accommodation Lack of administrative support

'Practice nurses are very well suited to doing this sort of thing. I mean it's an extension of the nursing role.' (Nurse 12: 'stopped'.)

Nurses were particularly positive about increased time with patients, permitting enhanced relationships with resultant benefits for both patients and professionals:

'You get to know your patients very well. It's more organised and you know that the patients are being reviewed regularly and you can pick up the ones more easily that are not being reviewed, and it's much more structured, and actually I find it very friendly. You get a good rapport with your patients, you get longer with them than normal and you get to know them and they get to know you. Then if they do phone up and ask for anything, they know who to ask for, so I think that helps, if you have got someone that knows you.' (Nurse 7: 'restarted'.)

This development of skills and the enhanced level of continuity were clearly perceived as positive factors. On the other hand, lack of structured training for skills development was seen as problematic. GPs and nurses both agreed training was essential, but several nurses had no formal training. As GP 10 ('stopped') commented, 'there's a very clear need for

some training for these folk'. Others praised training provided at the start of the study but felt that updates were lacking.

Study and personal development time were also lacking — so much so that some nurses used their own time. There were also complaints by some of feeling isolated and unsupported; these nurses suggested a centralised support structure. The value of contact and discussion with other nurses was expressed frequently:

'I do feel on my own, I just don't know how good I am personally.' (Nurse 11: 'restarted'.)

'I think it would be valuable to have some sort of training and updating process, or maybe regular meetings, a group or forum, a support group for all the people running clinics so that they know they are getting things right and are not out on a limb.' (Nurse 10: 'continued'.)

The lack of training opportunities and dependency of clinics on motivated individuals resulted in particular problems when the individual nurse responsible for running a clinic left a practice. In two practices, this eventuality resulted in the clinics being suspended.

Team working

Several GPs and nurses viewed establishing clinics as a 'team building' exercise. Additionally, implementing and running clinics motivated and educated the practice team:

'It's a good use of the extended team, a good example [of] something you can do for care involving different members of the team. It's a good team building exercise.' (GP 1: 'continued'.)

In some practices the clinics had enhanced communication. Nurses generally viewed GP colleagues as supportive. In several practices a nominated GP supported the clinic. Nurse 2 ('restarted') stated that, 'there is one GP that I go to because that's her special interest'. The importance of GP support for nurses undertaking the clinics was emphasised by the suspension of clinics in two practices where the nominated GP had left, although it should also be noted that in both practices the clinics had been restarted at the time of the study. Sometimes, however, nurses identified poor communication or lack of GP interest as a barrier to effective clinics. Nurse 3 ('continued') commented that, 'I just felt that I was on my own'. In another practice where the nurse suggested that poor communication had hindered the functioning

of clinics, the GP was not even aware that there had been a break in clinic provision.

Another problem encountered was 'getting everyone to sing from the same hymn sheet' (Nurse 15: 'continued'). Both GPs and nurses found some GPs were reluctant to devolve responsibility to nurses — in two practices reluctance by GPs to refer to the nurses was at least partly responsible for clinics stopping:

'For some GPs it seemed to be threatening, for nurses to be taking over or to be perceived to be taking over that area of care.' (Nurse 15: 'continued'.)

One GP offered an explanation for this:

'I think there are a lot of GPs who are very wary about what they hand over. I mean even within our own practice there are GPs that are hesitant about handing over responsibility for continuing care of various chronic disease groups. We fear that one day we will be left clutching a pile of Med 3's. Doomsday.' (GP 19: 'restarted'.)

Infrastructure

Another theme was infrastructure; several GPs felt that running clinics had improved practice systems and provided lessons for other areas of care:

'It has forced our practice to look at how we organise chronic disease management and I think the lesson learnt from that can be extrapolated to other areas like diabetes or asthma.' (GP 17: 'restarted'.)

GPs and nurses mentioned a positive impact on workload. Some nurses thought that clinics reduced the number of patients making appointments with GPs to deal with secondary prevention issues and, interestingly, three GPs felt there had been fewer cardiac emergencies since starting clinics:

'Patients aren't making appointments to see the GP unnecessarily.' (Nurse 1: 'continued'.)

'It's saving on GP time, you're acting before a patient becomes really ill and needs a house call.' (Nurse 10: 'continued'.)

'In terms of the impact on the practice, it hasn't increased my workload in any way whatsoever.' (GP 18: 'continued'.)

These comments reflect perceptions but are consistent with our previous finding of no overall

change in GP appointments and reductions in hospital admissions.⁴ Despite this, nurses and GPs were hindered by infrastructure problems.

Protected time to develop and set up clinics was difficult in busy practices and clinics were vulnerable to changing practice priorities. They were viewed as costly in terms of time and prescribing; GP 12 ('restarted') clearly stated that, 'there is no financial benefit. There is no incentive,' while GP 16 ('continued') explained that, 'it costs us, increases prescribing costs and increases notional GP time'. In other cases doctors acknowledged increased costs but suggested these were offset by other benefits:

'I have the patients' interests at heart really, rather than the financial impact' (GP 4: 'continued').

Another frequent problem was staff shortages, that is, lack of nurses for the most part, but also sometimes insufficient administrative support. Some participants also attributed opportunity costs to clinics, particularly taking nurses away from routine work. Appropriate accommodation was sometimes problematic, particularly in older buildings. These infrastructure problems were important for sustaining clinics: staff shortages or limited nurse time were mentioned in five practices and accommodation shortages in another.

Once established, clinics appeared to function with minimal practical problems, but resource problems continued. Such problems most commonly consisted of finding time to run the clinics, but also included accommodation and lack of administrative support in some practices. GPs and nurses were concerned about lack of external support for establishing and maintaining clinics:

'... there is very little governmental or well-structured support for the clinics.' (GP 2: 'continued'.)

As GP 1 ('continued') questioned:

'When you identify hurdles, who do you phone for advice?'

DISCUSSION

Summary of main findings

In this study, many GPs and nurses were convinced of the benefits of secondary prevention clinics, but there remain barriers to their implementation — training and resources in particular, but also team working in some locations.

Comparison with existing literature

Encouragingly, most GPs and nurses in this study believed that secondary prevention clinics improve

patient care; this is consistent with a systematic review of secondary prevention programmes for coronary heart disease.¹⁵ Furthermore, GPs and nurses believed that patients valued nurse-led follow-up, a view supported by previous research with patients.¹⁶ Despite this view, however, over half the practices had stopped running clinics at some point, illustrating the difficulties practices can have in sustaining desirable interventions.

Strengths and limitations of this study

This qualitative data complements a well-designed randomised trial demonstrating significant improvements in secondary prevention and mortality in people attending clinics.⁷ The interviewer spent up to 2 days in each practice prior to the study, allowing interviews to be analysed in context. The results provide data on the experience of health professionals providing secondary prevention in primary care, a need for which has been highlighted.¹⁴

Several limitations of the study must be acknowledged. The study was conducted in only one area of Scotland; however, professionals working in urban, suburban, and rural practices were included so findings are likely to be widely applicable. All GPs interviewed were male and all nurses were female, so different gender perspectives could not be observed. In terms of qualitative research, interviews were comparatively short, although this approach was viewed as practical in view of time restrictions for GPs and nurses. Interviews with nurses tended to be longer, and so more detailed than those conducted with the GPs.

Data analysis was conducted manually, rather than using a software package such as NUD*IST or NVIVO. These packages have advantages, for example to facilitate coding and data retrieval. We felt, however, that conducting a manual analysis would allow us to keep account of the context within each practice.¹² Many of the nurses and GPs perceived that patients were positive about attending clinics and this seemed to motivate professionals, particularly nurses. We did not, however, actually explore patient experiences — that remains a fruitful area for future research. Two of the authors, who conducted the data collection and analysis, are both GPs with practical experience of secondary prevention and some of the associated practice issues. This must be considered in interpretation. Furthermore, we acknowledge that nurse-led care can be more diverse than the model described here. In this study we have used a clinic as a distinct model of nurse-led care to facilitate assessment in a clinical trial. We have not independently tested the individual components and characteristics of this complex intervention.

Implications for clinical practice and future research

Some of these barriers were unique to individual practices, such as organisational characteristics, professional relationships, and communication within these practices. Others, however, were almost universal. One of these barriers was financial – in the UK, the new GP contract rewards practices for meeting coronary heart disease secondary prevention quality targets, thereby reducing this disincentive.⁶

However, other barriers remain that the new contract does not address. In particular time, staff, training, and accommodation problems will continue, compounded by recruitment problems.^{17,18} Particularly challenging will be fulfilling training needs. Many nurses highlighted the need for structured and ongoing training. Previous studies identify training needs as a barrier to an extended nurse's role.¹⁹ Effective training is, therefore, essential and must be organised and funded appropriately.

Our findings also emphasise the importance of good interprofessional communication. Generally, GPs and nurses reported good communication within practices. Some problems were highlighted however, in keeping with previous studies, identifying communication difficulties between professionals as a barrier to optimal patient care.²⁰

General practice is uniquely placed for delivering effective secondary prevention to patients with coronary heart disease. Demands to deliver systematic care to such patients are increasing and nurse-led secondary prevention clinics in primary care are an effective way of fulfilling these.^{1,5,21} Financial disincentives, training needs, and problems with interprofessional communication are all potentially surmountable barriers and ought to be tackled by politicians, health service managers, and practitioners. More difficult problems include lack of time and the shortage of staff. By tackling what is surmountable, however, we should help to ensure that an effective and desirable intervention is put into practice.

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Ethics committee

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Competing interests

None

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