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Networking

Developing R&D capacity in primary care nursing: report of a research project

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The East London and Essex Network of Researchers (ELENoR) funded a project to develop R&D capacity among practice nurses. The ELENoR nurses forum chose the topic, which was 'Older people's experiences of primary care', using qualitative interviews as the main method. The project was designed to enable nurses to participate as much or as little as suited their individual circumstances, and whatever their previous R&D experience. Compulsory training was provided, and ELENoR paid for all the time which was given to the project, travel expenses incurred and so on. This paper reviews the project, drawing on oral and written communications by participants and the personal experience of the authors.

Nine nurses from eight practices carried out 58 interviews, and four collaborated in the analysis. Those participating report a number of outcomes. Their own confidence in their ability to do research has increased; the work enabled them to reflect on their practice and to make changes (e.g., to how they provide health education to those with diabetes; making appropriate referrals to specialist services); and as a result of the participating nurses' report, her practice team is reviewing particular aspects of how diabetes is managed. Two papers reporting the findings have been submitted for publication, one of which is published, and papers have been presented at national and international conferences.

The project represents a successful small-scale capacity building exercise achieved at a modest cost.

Key words: practice nurses; practitioner researchers; primary health care R&D networks; qualitative research; R&D capacity building

Introduction

The development of primary care research networks (PCRNs) in the UK (Thomas *et al.*, 2001) was supported by the Mant report (1997), which recommended investment in order to 'achieve an evidence-based culture in primary care'. As part of

the ensuing expansion, a PCRN was established across East London (north of the Thames) and Essex, and was therefore known as East London and Essex Network of Researchers (ELENoR). It embraced primary care settings over a wide geographical area serving a range of populations (inner city, suburban, commuter towns, coast and country), an area now served by 19 primary care trusts (PCTs). As a result of the formation of a Research and Development PCT consortium covering East London, the Essex Primary Care Research Network and ELENoR has now been dissolved (2003).

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ELENoR was one of the five PCRNs funded by the then North Thames Regional Health Authority, which also funded an evaluation (Harvey *et al.*, 2000). This study characterized ELENoR as having a 'winner' focus (i.e., basing the network on existing research capacity) as distinct from a focus on capacity building adopted by other PCRNs. In this case, the 'winners' were mainly general practitioners (GPs) with academic attachments to a medical school in East London. The perhaps inevitable result was that ELENoR tended to focus on medical rather than nursing primary care research.

However, the ELENoR management group was keen that primary care nursing research should not be neglected, and as a result, a forum of nurses interested in R&D was convened. In addition, the network funded a survey of the research aspirations and experiences of practice nurses (PNs) in East London and Essex (Davies *et al.*, 2002a; 2002b). This found that the main barriers to participation in R&D were perceived to be: lack of time, lack of support from some GPs, and poor access to higher education resources outside formal courses. PNs' research priorities reflected their work, i.e., chronic disease management. They were also interested in the PN role, and in evaluating their own activity.

These findings reflected those of other studies. Lack of time for research (Retsas and Nolan, 1999), a perennial problem for practitioners in the National Health Service (NHS), is particularly acute for PNs, who often suffer in addition from isolation (Douglas and Greenhalgh, 1997). Furthermore, their employers (GPs) may not support them as researchers (Atkin *et al.*, 1999).

ELENoR had three local co-ordinators, two of whom (the present authors) had a particular interest in nursing. C.G. is a nurse who set up an ELENoR nurses' forum. S.A. is a researcher in a School of Nursing. We therefore decided to attempt to build R&D capacity among PNs by giving them the opportunity for active participation in an actual research project.

This paper gives an account of how the project was developed and carried out, and to discuss the degree to which it succeeded in building R&D capacity among PNs. It is based on notes taken from discussions at the debriefing sessions, telephone contact between researchers and co-ordinators, and reports/comments sent via email or post by some researchers. The degree to which nurse researchers

contributed to the feedback process varied considerably, and the description that follows does not therefore necessarily represent a comprehensive account of their aggregate experience. Nevertheless, the feedback does illustrate some of the lessons learnt, which may be useful in informing similar projects elsewhere.

The project

The nurses' forum identified the topic for research, which was: 'Older people's experiences of diabetes care.' The forum agreed that the study should be qualitative, and its discussion of the topic formed the basis of the question schedule used in the research. Successive drafts of the schedule were circulated to forum members for comment (e.g., Were the questions comprehensive? Were they comprehensible? Did they reflect the reality of diabetes care in general practice?).

ELENoR publicized the project using a number of local NHS networks and mailing lists. About 20 people expressed an interest in participating. Of these, most were PNs, although others (a health visitor, a salaried GP, and specialist diabetes nurses) also expressed interest. In the event, nine nurses took part. Of the remaining 11, some explained that pressure of work or reorganization at the practice prevented them from participating; others failed to reply to contacts from the project co-ordinators.

Seven of the nine who took part were PNs, working in six practices in four PCTs (one in East London and three in Essex); one was a community diabetes specialist nurse based in one of the Essex PCTs, and one worked as a specialist diabetes nurse in an outpatients clinic in Essex.

Of the nine nurse researchers who participated, three had already done some recent research (either at their practice or as part of a second degree) and a fourth was beginning to be involved in other research at her practice. The remainder had done little except audit work since qualifying as a nurse, and had no experience of qualitative work.

A successful application to ELENoR for funding (by S.A. on behalf of the research team) meant that all costs to nurses, including their time, were covered; these were to be paid to the nurses themselves or their practices as appropriate. S.A. applied for multi-centre research ethics committee approval, and wrote standard letters requesting PCT and GP

approval which nurses sent to the appropriate people. Nurses did not themselves take part in the preliminary activities, partly because it was felt that their scarce time should be used in actual research rather than bureaucratic processes, and partly because until the study was funded and approved, there was no money to pay for their participation. It was central to the project's intention that nurses should not have to undertake work in their spare time, a state of affairs which would replicate the existing and unsatisfactory situation whereby nurse participation in research is often only achieved at a high personal cost (e.g., using leisure time to undertake an MSc or other academic course).

The research study has been described elsewhere (Abbott and Gunnell, 2004a; 2000b). It explored:

- older patients' experience of receiving diabetes services;
- their experience and understanding of self-management and self-monitoring;
- the values and preferences which emerge from those experiences.

Data were gathered by structured interviews which included both yes/no and tick-box questions on the one hand, and open-ended questions on the other. We believed that a structured interview schedule would give all members of the team confidence that data were being gathered in a similar way. This was important because researchers could not meet regularly to discuss their work in order to ensure consistency. Secondly, a detailed and explicit schedule meant that nurses did not need to acquire a comprehensive grasp of issues before they undertook interviews.

Interviews were also taped, so that interviewers could check and supplement their notes after the interviews (Abbott and Gunnell, 2004a).

Each nurse researcher attended a compulsory training session conducted by the project co-ordinators. All were encouraged to communicate freely with the project co-ordinators, if they chose, during the data-gathering period (the first four months of 2003). It was crucial to the project that it was inclusive as possible, and that nurses should be able to participate even if the time they could commit was limited (some carried out five or fewer interviews). Periodic email requests from S.A. for feedback and additional data (e.g., clinical outcomes) were also sent to researchers during this period.

Fifty-eight interviews were carried out by nine nurse researchers. Of the 58 interviews, four were excluded from the analysis, because the data recorded were so brief and factual that it appeared that the interviews could not be described as qualitative.

Two debriefing sessions were held, in June and December 2003, to review the project, discuss its strengths and weaknesses, and to identify outcomes, as well as to discuss analyses of the data. Some nurses analysed their own data, and these analyses informed the analysis of the data set as a whole (Abbott and Gunnell, 2004b).

The successes and failures of the projects are considered under these headings: the research process, capacity building, effects on practice, outputs, and costs.

The research process

In general, nurse researchers reported a positive experience of carrying out research. First, conducting interviews was enjoyable. Secondly, the research was informative:

I have also found it quite an insight into seeing how people manage day to day with diabetes, and their feelings about diabetes.

Thirdly, the project provided opportunities lacking in most practices:

Good to have time to find out what patients do think – you can't normally just turn round and ask them.

However, knowing what patients think could be uncomfortable: one PN working at the time in a practice, which she regarded as very dysfunctional was troubled by:

patients' perception of receiving good care, when you know it's really not very good at all ... patients are unaware of what they are missing.

Fourthly, the experience developed confidence. The first interview was daunting. Specifically, one reported initially talking too much:

almost answering the questions, leading them through it, jumping in ... Initially, it was difficult to stop trying to answer the question for the patient.

But interviews became much easier:

I feel that I have become better at conducting the interview and have improved my listening skills.

My own confidence has developed and my ability to prompt for more detail and understand/interpret what people are trying to say.

Far less scared of using the tape.

It was interesting, and possible, to adopt a style for research different from that used in a consultation. But there could be conflict between clinical and research roles:

it has been difficult not to interject when you know something they've said is incorrect.

Feedback at debriefing about the success of the interview schedule was mixed. One person said:

At first I could not have dealt with a less specific topic guide and found it was helpful to have many detailed questions. But this amount of detail had rapidly become less necessary to me.

Others, however, felt constrained by the schedule, feeling that they were not allowed to ask other questions (although the training sessions had been intended to encourage them to do so). This means that in some cases the data we collected limited the nurse researchers' experience of data gathering (and perhaps also failed to reflect the richness of what the patients could have said).

The debriefing sessions also provided detailed comments on how some questions could be improved. Details needing attention included references to treatments which were unfamiliar to some patients and nurses (e.g., urine tablets); some of the questions needed clarification, often due to differences in lay and professional vocabulary (e.g., 'eye specialist' to most patients meant an optician who prescribes glasses for poor eyesight, rather than someone carrying out retinopathy).

An abiding problem was that informants often said that they understood various aspects of diabetes and its care without demonstrating that they did so. Although it was a conscious decision not to appear to be 'testing' or 'quizzing' patients, the result was that interviewers were left unconvinced

by some patient claims to understanding, but felt unable to explore further.

Also,

I (and the interviewees) do find the questionnaire a little long, and I've found that towards the last few questions people are really starting to flag.

The use of tape recorders was reassuring: it was sometimes difficult to write down the relevant information at the time, but by playing back the tape, one could add extra detail to notes taken during the interview. Patients had not objected to the use of the tape recorder.

The difficulty of finding time to do research, which the survey had identified as a perennial barrier to participation in research (Davies *et al.*, 2002a) was reported by some of the nurses:

Finding patients to interview has not been a problem, but finding the time to do the interviews has been. Because I work full-time, I am trying to fit in into the working day and if other members of the team are off on annual leave or sick it is difficult to do.

However, for some, the commitment to an actual research project, combined with the flexibility with which it had been designed, had made it possible to find the opportunity:

Time is always an issue but I find I can make time for things I'm interested in!

Another felt:

I can't very well justify wasted time when people don't turn up. A whole session in a week is time I could have 10 appointments. Also, interpreting time is precious, so routine consultations are missing the interpreting time as the interviews need an interpreter.

The training was generally described by participants as useful, and role-playing an interview had been particularly helpful. However, one part of the training had emphasized the importance of not asking leading questions, and this had had the unintended result of inhibiting some nurse researchers who had wished to explore issues further. This illustrates how constraints on nurse researchers' time, which limited the number and

length of training sessions, limited in turn the gathering of data.

Capacity building

As detailed above, five of the nine nurses had little experience of using research techniques, particularly qualitative techniques. In these cases, the project enabled the participation in research of nurses who otherwise lacked such opportunities.

Two participants left their posts during the period for reasons unconnected with the research, and one went on maternity leave. Of the other six, four attended one or both briefing sessions and were keen to develop and carry out a second research project on a related topic. This is currently being developed.

In addition, one nurse subsequently began doing unstructured interviews for a local Coronary Heart Disease Collaborative, and felt that nothing could be done by a nurse without the confidence gained from doing structured interviews.

Workplace outcomes

Nurse researchers believed that the research had made them more informed and reflective about their practice. For example, the lack of patient knowledge about their diabetes was startling and disheartening:

They have all been educated re diabetes, but it is surprising to find out how misinformed some of them are.

It has made me stop and think how I put information across.

Other nurse researchers also reported that they are taking more time to explain things, and providing more opportunities for questions.

A number of other workplace outcomes were noted. On the basis of the research, one nurse had recommended that the practice where the nurse worked should be more flexible in arranging diabetic clinic appointments, giving patients more choice rather than simply allocating times. A meeting with the local lead podiatrist has been requested to discuss services and referral criteria, and the use of care plans was being considered. Patients with diabetes were being asked to bring

in their blood sugar level meters for checking, and the practice was looking at the scope for telephone consultations. It should be noted that these recommendations emerged from just five interviews.

Another wrote:

I have spent an hour discussing the patients with our district nurse diabetic nurse which was most helpful. This informed her and she was able to act upon the findings ...

Another has, as a result of the interviews,

been able to make referrals not done already.

Outputs

An original research project was carried out and completed in an area significantly under-represented in the literature on diabetes. In focusing on older people's experience of diabetes care, it reflected not only the interests of the nurses' forum, but also national research and service agendas (the patient experience, older people, diabetes).

The project co-ordinators regarded it as very important that a project designed to give nurses an adequate and satisfactory experience of research should result in the dissemination of findings, as this is an essential part of the research process. Although the present authors led the dissemination programme, nurse researchers were shown drafts of material, and were invited to co-present at a conference (although none were able to do so). As already mentioned, two papers have been submitted for publication, one of which has been published (Abbott and Gunnell, 2004b; Abbott and Gunnell, unpublished data). Another has already been published, describing the project prior to its implementation (Abbott and Gunnell, 2004a). In 2003, S.A. presented the project to a conference in Canada (Abbott and Gunnell, 2003), and C.G. to a national conference of PCRN in Birmingham (Gunnell, 2003), and at a local primary care nursing R&D conference in East London. Posters have been presented at other local conferences. One of the nurse researchers has presented the work in the workplace, and is preparing a video about diabetes for patients which will draw on research.

Other PCRN have expressed to the authors an interest in carrying out similar projects, although to

our knowledge, none are as yet underway or in preparation.

Costs

Nurses' costs and expenses (including training and de-briefing days) amounted to only £4000 approximately. The co-ordination of the project and analysis of the data (S.A.) was relatively labour intensive at times (e.g., preparation of the MREC applications) but amounted to no more than 25 working days, while C.G.'s contribution represents 10 working days. Thus, the cost of the project was no more than £10500.

Discussion

How successful do we judge the project to have been? It has produced an original piece of research in an under-researched area. It has involved nurses in a research project, at least some of whom would not otherwise have had any research opportunities. Several nurses are keen to develop a further piece of work arising out of this project, and some of the practices where the nurse researchers work have been given the opportunity to review their practice in the light of feedback from patients which otherwise would not have been collected.

Although the detailed process of carrying out the research was inevitably fragmented and unpredictable, it was not markedly more so than any other multi-centre research, and we are largely using the same model in developing a further study. However, the assumption that a very detailed interview schedule would be helpful turned out to be mistaken, and will not be repeated. Using much simpler topic guides for semi-structured interviews may mean that inexperienced nurse researchers need more training (particularly role play) in order to feel confident, so we will build this in to the training programme. It is of course possible that these researchers will ultimately report that a more structured schedule would have been useful!

Due to the relatively small numbers participating, the project represents a modest rather than an extensive achievement in R&D capacity building.

However it was achieved at a modest cost, and thus represents, in our view, a very good return on investment in developing R&D capacity and generating useful research.

We hope that this paper will encourage others to set up similar projects, and would be happy to share further details of our experience should anyone find that helpful. Our email addresses are s.j.abbott@city.ac.uk and caroline.gunnell@epping-pct.nhs.uk.

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