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Networking

Evaluation of a primary care research network in rural Scotland

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Primary care research networks were established in Scotland to encourage research in primary care and build capacity. The aim of this descriptive study was to evaluate the primary care research network in Dumfries and Galloway, a rural area of Scotland, by describing the methods used and the outcomes in terms of research training and completed projects. All primary care professionals working in the region were offered an initial grant to buy time for research training to develop their own research ideas. Those attending the two day research training course were encouraged to submit a protocol for funding and Local Research Ethics Committee approval. Of the 605 and 717 primary care professionals circulated in the first and second years, 23 (4%) and 11 (2%), respectively applied for a research training grant. Of these, eight completed a research project together with a further six who had previous research training. Eleven (79%) of the 14 completed projects were the subject of oral presentations and 11 were submitted for publication in peer-reviewed journals. Only a small minority of professionals working in primary care will want to develop their own research, and this requires support, protected time and long-term mentoring. Building research capacity in primary care involves a number of activities ranging from funding academic units, to giving opportunities for non-academics to undertake research. These distinctions are important for decisions about appropriate funding and support.

Key words: primary care research; research capacity; research networks; rural health

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Introduction

In order to increase capacity in primary care research the Chief Scientist Office in Scotland established eight primary care research networks (PCRNs) during the late 1990s (Table 1). One of these networks was in Dumfries and Galloway, and the aim of this paper is to describe the methods used to encourage primary care research in this rural area and the outcomes in terms of research training and completed projects.

Table 1 PCRNs in Scotland

NHS Support Fund (Culyer)	1998	TayRen
		Forth Valley
	1999	Fresco
		Borders
Primary Care Support Fund	1998	Highlands and Islands
	1999	Lothian
	2000	Dumfries and Galloway
NHS and Primary Care Support Fund	1998	Westnet

Dumfries and Galloway is a predominantly rural area with a population of approximately 150 000. There are 130 general practitioners working from 36 practices, and 9 community hospitals. The region

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is served by one district hospital in Dumfries, to which the great majority of referrals are made. There is increasing co-operation between health and social services in the region, which was the first in Scotland to have produced a joint community care/health improvement plan. However, there was little research in primary care, apart from a few interested general practitioners.

The Dumfries and Galloway PCRN was established with a three year grant of £30 000 a year in July 2000, with the appointment of a Director for one day a week and a secretary/administrator for two days a week. Subsequently the third year funding was reduced to £15 000 with the winding up of all PCRNs in Scotland in 2003. Support for projects continued when the PCRN then amalgamated with the Research and Development Committee of the Acute Trust to form the Research and Development Support Unit (RDSU) of the combined Dumfries and Galloway Area Health Board. The total funding of £75 000 was therefore effectively spread over four years.

The aims of the PCRN were:

1) To develop a culture of research in primary care in South West Scotland.
2) To provide research training.
3) To provide support for researchers in primary care.
4) To develop and conduct non-commercial research which would inform the provision of primary care.

Methods

A steering committee was established consisting of the director, secretary/administrator, and representatives from the primary care trust, local health care co-operatives, academic sector and professions providing primary care.

The approach was bottom up, with the aim of involving all professionals working in primary care in the region, rather than particular individuals or groups, such as research practices. During 2000 and 2001 all primary care professionals in the region were circulated offering an initial grant of £500 to buy time to attend a two day training course to develop their own research ideas.

The director ran two day research training courses with help from a statistician and librarian. The topics covered were – research design; literature searches; reliability and validity; sampling; qualitative data collection and analysis; and quantitative data collection and analysis. Comprehensive handouts were provided, but the emphasis was on developing the participants' own research ideas.

Those attending research training were encouraged to submit a protocol for funding up to £1200 to undertake their research project. Two or three members of the management committee with research experience approved all projects submitted for funding, before they were submitted to the Local Research Ethics Committee (LREC). Those undertaking research projects had regular meetings with the director for mentoring and support.

Results

Of those circulated 23 (4%) in the first year and 11 (2%) in the second year accepted the offer of support for training (Table 2). These 34 were asked about their training needs and identified research methods, information technology, and statistics as their main requirements. During the first year two training courses were held, and in the second year one such course. Feedback was positive and the main comment was for more time, especially for literature searches.

Of the 30 projects developed during the two day research training courses, over half did not proceed further for the reasons shown in Table 3. Of those that were submitted to the LREC, eight were funded with a second stage grant of up to £1200. In addition, a further six projects were funded for those with previous research training, giving a total of 14 funded projects in all.

These projects covered a wide variety of topics, all of which stemmed from the research interest of the investigators, who represented a broad spectrum of those working in primary care (Table 4). All the projects were written up as research reports for the RDSU of the Health Board, and were circulated to interested parties.

Eleven (79%) of the projects were the subject of oral presentations, and 11 were submitted to peer-reviewed journals for publication, of which three have so far been published (Hannay and Jones, 2002; Sparrow *et al.*, 2005; Connechen and

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Table 2 Response from primary care professionals to offer of training grant

Group	2000		2001	
	Numbers circulated	Positive response	Numbers circulated	Positive response
Independent contractors				
General practitioners	130	6	142	3
Dentists	43	1	37	
Optometrists	17		60	
Pharmacists	42	2	73	1
Allied health professions				
Physiotherapists	30	1	25	1
Occupational therapists	30	3	20	
Podiatrists	26	1	23	
Speech therapists	29	3	26	
Nursing staff				
Practice nurses	52	1	52	2
District nurses	60	2	65	
Health visitors	62	2	47	
Midwives	13		21	
Community psychiatric nurses	33		35	1
Learning disability nurses	30	1	36	1
State registered nurses	8		8	
Other nurses			29	2
Others				
Community dentists			8	
Community hospital staff			10	
Total	605	23 (4%)	717	11 (2%)

In 2001 the circulation was extended to include optometrists, other nurses, community dentists and community hospital staff.

Table 3 Development of research projects

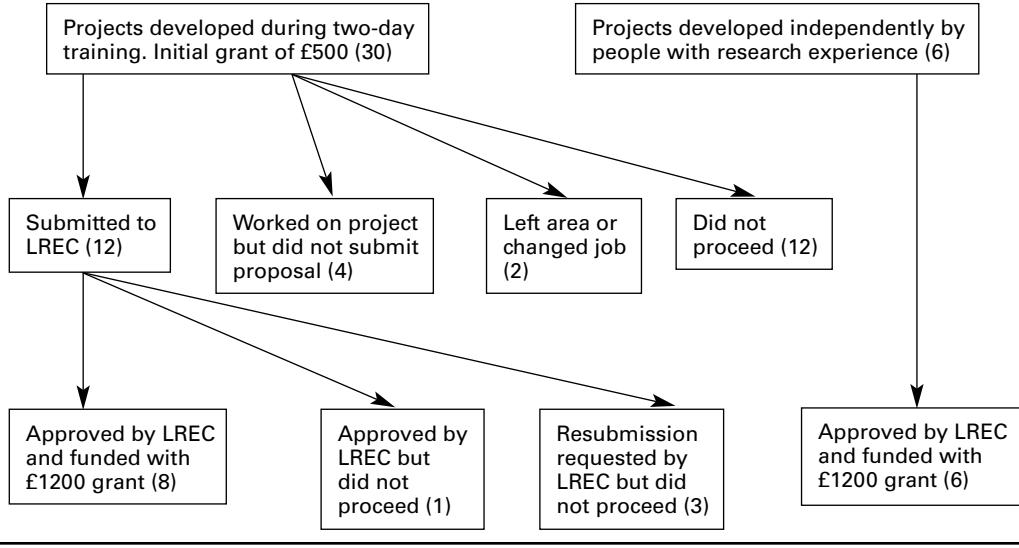

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Table 4 Completed projects

Title	Researcher	Type of research	Presentations	Publications
Cross-sectional survey of lorry drivers and commercial travelers to determine prevalence of coronary heart disease risk factors and genital chlamydia	General practitioner	Descriptive	One oral	Submitted three times
Community learning disability nurses in Scotland and their caseload	Learning disability nurse	Descriptive	Two oral	Submitted once
The effectiveness of biofeedback in the treatment of osteoarthritis of the knee	Physiotherapist	Randomized control trial		
Patients' and carers' satisfaction with community services following stroke[a]	District nurse	Qualitative	One oral	Submitted twice
Health education via the Internet for school children	Information technology postgraduate	Descriptive	One oral	Submitted once
How appropriate is telephone advice for same day appointment requests in general practice?	Practice manager	Descriptive	Two oral	One paper published
An investigation of the pharmaceutical care of elderly patients after hospital discharge	Pharmacist	Descriptive		Submitted once
Factors associated with teenage pregnancy in Dumfries and Galloway	Family planning doctor	Descriptive	Two oral	Submitted once
The effects of foot and mouth on the health of those involved in farming and tourism in Dumfries and Galloway	General practitioner	Descriptive	Two oral, one poster	One paper published
What are the perceived needs of parents or carers of preschool children in Dumfries?	Health visitor	Descriptive		Submitted once
Do patients with learning disability have equal access to general preventive health measures compared with patients of normal intellectual abilities?	General practitioner	Comparative	One oral	
The Canonbie Experience 2001: A study of the impact of foot and mouth disease on the health of farmers and their families in a rural general practice[b]	Nurse practitioner	Qualitative	One oral	
Community dentists attitudes towards stainless steel crowns as a technique for routine use in children	Community dentist	Qualitative	One oral	Submitted twice
Child health clinics and the needs of preschool children and their carers	Health visitor	Qualitative	One oral	One paper published

[a] Bob Scott Brown Memorial Prize, Institute of Health Care Management.
[b] Masters dissertation, University of Northumbria.

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Walter, 2006). One project was a successful Masters dissertation and another won an award for health care management. The average cost to the network of each completed project was £1028, excluding £500 per research training where required.

A questionnaire was sent out to all those who had attended the research training courses, or had completed a project, a total of 39, of which 25 were returned. Three of these were not completed as the person had changed jobs and gone away. Of the remaining 22 (56%), 17 had attended the research training courses. The reasons given for not developing a project after the research training were: client group not willing to participate, project beyond scope of small practice population, lack of time, and financial constraints. Those who prepared a project proposal but did not complete it often gave lack of time as the main reason, with one mentioning lack of management support and another being discouraged by a feeling that the LREC did not seem to understand qualitative research.

Those who had completed a project were asked how it had affected their career and practice. Some said it had given them an awareness of the research process and others that it had improved their critical reading or helped their practice in a pragmatic way. One had gone on to do two more projects before moving to a management position, and another nurse practitioner had become a partner in her practice.

Twelve respondents mentioned the importance of the encouragement and support given by the PCRN, and three remarked on the quality of teaching in the research training courses. 'Research course excellent and stimulating – made one realize that research is not just for boffins'. Other comments on the PCRN included allowing it to continue so that more colleagues could pursue research interests, and that there was an interesting group of participants.

When asked for suggestions about encouraging research in primary care, the most frequent comments were about the need for protected time. 'Need time and encouragement; hard to take on extra with demanding day job'. Some suggested encouraging small project to start with, or linking beginners to projects that are underway so that they could gain experience. Two respondents commented that the role of the LREC needed to be reviewed.

Discussion

A bottom-up approach offered all primary care professionals in the region research training, but only a small minority was interested. Out of the 30 projects proposed by those doing the research training, only eight (27%) were eventually completed, although another six were completed by people with previous experience of research. The main reason given for dropping out was lack of protected time. Rather than episodic evenings and weekends it is better to have blocks of time, especially to design and write up research, but this requires funding as well as support from colleagues and management.

Practitioners who do not have research experience need a reasonable overall length of time to undertake a project. It takes time to develop a research proposal, and most people require constant support and encouragement to complete a project, especially in writing up. Three years is probably the minimum for anything to be achieved, and in this case projects were still being written up and submitted for publication after four years.

Although most projects were the subject of oral presentations and were submitted to peer-reviewed journals, few were accepted for publication. For those who are not academics there is little motivation to resubmit to different journals, although this is often necessary (Hannay, 1981). The solution adopted was for projects to be written up as research papers from the RDSU. In this way there was an archived record, and results could be circulated to interested parties.

Novice researchers often found presentations to the LREC daunting, but feedback from the committee on ethical issues was invariably helpful. Sometimes problems arose over the methods proposed and distinctions between audit and research, with supervisors not always agreeing with the committee. This made it difficult for inexperienced researchers, but these problems are now being resolved by closer liaison between the LREC and the RDSU, with prior vetting of projects.

Although there are increasing opportunities for research training as part of Masters courses, there is still the need for support and mentoring at a local level, especially with the requirements of research governance. Such support is now being provided by the RDSU of the combined Health Board, with which the PCRN amalgamated. This makes sense,

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because many projects originating in primary care also involve aspects of secondary care, and the same methods are applicable to both.

PCRNs were part of a strategy to strengthen and develop the research base of primary care (Carter *et al.*, 2000). As such it was agreed that there was a need to assess their productivity, not only in terms of traditional outputs such as publications, but also process measures (Griffiths *et al.*, 2000) which formed the bulk of the headings required by the Chief Scientist Office for annual reports from PCRNs in Scotland (Ryan and Wyke, 2001). Comparing such measures between similar organizations is difficult, especially when PCRNs in Scotland varied so widely.

Both Westnet (The West of Scotland Primary Care Research and Development Network) and TayRen (Tayside Primary Care Research and Development Network) were established in 1998 with annual funding of £80 000 and £140 000, respectively, and were based on university departments with experienced researchers which enabled them to attract external funding and to start with an output of peer-reviewed publications. New researchers were usually based in research practices (TayRen Annual Report, 2000; WestNet Annual Report, 2000; Pitkethly and Sullivan, 2003).

A more comparable situation to Dumfries and Galloway is provided by the Stockport Primary Care Trust Research and Development Network, which was established with £50 000 a year for three years, with a part-time academic tutor. It offered 20 sessions a year to release staff to develop their research. Of the initial 31 applicants, 11 were accepted of whom five continued into the second year when they were joined by a further seven. By the third year, two participants had achieved their objective and a further five were continuing their research (Boaden, 2004).

WestNet and TayRen were very different networks from those in Stockport and in Dumfries and Galloway, which had no academic base and relied on part-time directors to train and support inexperienced researchers. Such mentoring takes time and commitment, which may be lost at a local level with the current policy of focusing on fewer networks, which are co-ordinated centrally.

Building research capacity in primary care covers a spectrum of initiatives, ranging from the provision of additional resources for university departments, through encouraging research active practices (such as the Royal College of General Practitioners' Primary Care Research Team Assessment and the Medical Research Council General Practice Research Framework), to enabling individuals working in primary care to develop their own research ideas. The distinctions between these approaches are important for decisions about appropriate funding and support.

The findings of this evaluation suggest that it is important to be realistic about what can be achieved with the level of resources that was available and without an established academic base. Encouraging professionals in primary care to undertake their own research takes time and patience. Some who express an initial interest will drop out because of lack of time and commitment; some have difficulty in clarifying their ideas and others are starters but not finishers. Towards the end, constant encouragement is required to get projects written up and submitted for publication.

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