Research general practices: what, who and why?

LINDSAY F P SMITH

SUMMARY

Background: *By the autumn of 1995, 14 research general practices had been funded. These are service NHS general medical practices that are supportive of primary care research and have a lead GP who has research experience as evidenced by publication in peer-reviewed journals.*

Aim: *To ascertain the characteristics of those who have been successful in securing the first 14 grants, the effect the process has had on them, and the practical advice they would offer to future applicants and to future funding bodies.*

Method: *A confidential postal survey of research general practices.*

Results: *They are atypical practices (high level of research and teaching involvement, mostly non-urban) with atypical lead GPs (male, research degrees, possess MRCGP, publications and grants obtained). Practices contemplating applying for future research practice grants should consider planning ahead, use of grant monies, protection of research time, involving the primary health care team, and sources of both internal and external support. Funding bodies need to make adequate funding available for capital expenditure and running costs as well as staff and lead GP time.*

Conclusion: *Research general practices are ideal for integrating the core values of the medical profession, providing clinical care by medical generalists, teaching the discipline and researching its basis. Such practices should be funded on a rolling basis and throughout the United Kingdom. Future evaluation of funding such practices is needed and should confirm their utility both to the discipline and to patient care within the NHS.*

Keywords: research in general practice; research funding.

Introduction

ANY independent academic discipline needs a firm research base.[1] That of general practice is improving but is still limited.[2] One of the major problems has been that primary care has had no infrastructure in place for general practitioners who wish to execute research. Such an infrastructure with NHS Trusts funding academic sessions for most consultants has been present in secondary care for decades, but there has been no equivalent to the teaching hospital and service increment for training (SIFT) in primary care.[3]

The Royal College of General Practitioners (RCGP) sought to change this by funding two research general practices in October 1994 followed by two more a year later. This initiative was extended by the South and West Regional Research and Development Directorate, which funded 10 research practices in April 1995. What are research general practices?

They were first suggested in the peer-reviewed literature in 1991.[4] They are NHS general medical practices with at least one partner who is an experienced primary care researcher, as evidenced by publication in peer-reviewed journals. The South West region and the College used slightly different selection criteria, being a mixture of essential (such as lead GP holds MRCGP) and desirable (such as awarded a research grant in past), and funding was to be for infrastructure costs and not for any particular project.[5,6] The region provided a guide that monies might fund: lead GP protected research time (two sessions weekly), research assistant time (one session), secretarial support (one session) and minimal running costs (£500 per annum).

There are both logical and intellectual reasons for funding research general practices. Such funding is consistent with a primary care-led NHS,[7] which will need increasing evidence from primary care upon which to base its clinical care. Most NHS direct patient contact occurs in general practice. General practice research could be performed on primary care by those not working in practice or performed within primary care by those working in practice;[8] the latter is most likely to result in the most relevant, valid questions being asked and the results of research being interpreted most appropriately. The former is surely 'a modern form of colonization at intellectual and professional levels'.[9]

Thus, the introduction of research general practices should be beneficial both for the NHS and for the discipline of general practice. However, their introduction is an experiment that needs evaluation, which will be of interest to both GPs considering applying for future funding and potential funding authorities. This paper describes the characteristics of those who have been successful in securing the first 14 grants, and the effect the process has had on them; it provides practical advice and discusses these initiatives in the larger context of the discipline of general practice and the NHS as a whole.

Methods

The lead GPs of the research practices were sent a confidential anonymous questionnaire in the summer or autumn of 1995. One reminder letter was sent after four weeks. The questionnaire asked for details of background information about the practice (demographic, teaching and research activities); research partner (personal details, research training, grants and publications); beliefs (about the effect of acquiring a grant on the practice and advice to others); use of funding (lead GP, staff, capital and running costs). Non-parametric descriptive statistics (median and range) were used where appropriate as this was an exploratory study. Summary results were sent to practices for comment.

Results

All 14 (100%) research practices returned completed questionnaires. Except for the 1994 funded RCGP practices (£4500), all practices had been awarded £12 500 funding subject to annual review; regional ones for three years (April 1995) and RCGP ones for two years (two each in October 1994 and 1995).

Demographic details of the research practices and partners are shown in Table 1. They have a median list size of 9675 (range 3000–28 000) for 4.75 (2–12.5) partners. Most are non-urban practices (10), are part of a research network (9) and have informal links (9) to a university department of general practice. Most are involved in teaching: 11 are GP training practices, five practices are more widely involved in the postgraduate education structure, and 12 teach undergraduates.

Lindsay FP Smith, MClinSci, MD, MRCP(UK), MRCGP, general practitioner, Ilchester Research General Practice, 17 Church Street, Ilchester, Somerset BA22 8LN.
Submitted: 24 May 1996; accepted: 2 October 1996.

Table 1. Demographic details of research practices and of lead general practitioner.

Practice	1	2	3	4	5	6	7	8	9	10*	11	12	13	14
RCGP or Region?	Reg	Reg	Reg	Reg	Reg	Reg	Reg	Reg	Reg	Reg	RCGP	RCGP	RCGP	RCGP
Practice														
Partners (number)	5.5	3.5	6	5	3.5	4.5	5.5	12.5	2	4	8.5	4	5.5	3
List size (total)	9850	6900	12000	11500	6700	9500	13000	28000	3000	8100	14800	6400	10900	4680
Location	Semi-r	Urban	Inner-c	Semi-r	Urban	Semi-r	Semi-r	Rural and urban	Semi-r	Semi-r	Semi-r	Inner-c	Semi-r	Rural
University link?	Yes	No	Yes	No	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Research network?	MRC	MRC WREN	RCGP	No	No	WREN	WREN	No	MRC	WREN	No	MRC	No	NoREN
Teaching?														
GP training practice	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes
medical students/year	5	4	8	1-2	0	2	2-3	0	5	13	4	23-24	6	2
PG education	PT	No	CO and PT	No	CO and RA	No	No	No	No	CO and PT	No	No	No	ARA
Lead GP														
Age	>50	31–40	41–50	41–50	31–40	>50	31–40	41–50	31–40	41–50	31–40	31–40	31–40	41–50
Gender	M	M	M	M	M	M	M	M	M	M	M	M	M	M
Years a GP	23	7	18	20	8	21	2	12	7	15	6	12	10	19
Personal list size	1700	NA	2100	2300	1700	2200	2500	2100	1500	2100	1250	NA	NA	NA
MRCGP or FRCGP	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MRCP	Yes	Yes	No	No	No	Yes	No	No	Yes	No	No	No	No	No
other qualifications	DRCOG DCH	DRCOG	No	DCH	DRCOG	No	DGM DLO	DRCOG DCH,DA	DRCOG	No	DCH	DRCOG	DRCOG	DRCOG MICGP
GP trainer?	No	Yes	Yes	No	Yes	No	No	No	No	No	No	Yes	Yes	Yes

PT, postgraduate/clinical tutor; CO, course organizer; (A)RA, (associate) regional adviser.
MRC, medical research council network; WREN, Wessex research network; RCGP, RCGP research network; NoREN, Northern research network.
*Job share partner.

All lead GPs are male; half are aged 31–40. They are experienced GPs [years in practice = 12 (2–23)]; 11 have only ever worked in one practice. Ten have personal lists [2100 (1250–2500)]. They are particularly well qualified, with half having four or more additional qualifications. Most (11) hold other honorary or substantive positions outside their practice as well as being a GP principal. These include positions as research fellow or associate (5), lecturer (3), RCGP faculty board (3), Wessex Research Network (WREN) steering group (2), GP clinical tutor (2), purchasing group member (to health commission) (2), hospital practitioner (2) and various others (7).

Research training and activity

Nine lead GPs have a research degree, with only one having no formal research education or training. All have published papers, the median number being 7.5 (3–28). A minority (6) have averaged more than one paper per year of practice. Four lead GPs had partners with research training who had published and who had also received research grants, whereas five had partners without any of these characteristics.

The median number of grants received was two, including three who had never received one. Grants have generally been small (n=31; median size £5000 to £10 000) and have come from two major sources: regional R&D (n=10), and the Scientific Foundation Board of the RCGP (n=11). Six practices had made a total of 12 grant applications since being appointed; eight had yet to make an application.

Use of funding

All had used funding to have dedicated research partner time during the usual working week [7 (2.5–8) hours]. This time was usually protected from practice clinical work in 10 practices, with seven employing a locum and three using non-practice time; only seven had such protection in the event of holidays or sickness of partners. Only one had changed its partnership agreement to reflect the new arrangements.

Seven practices had employed extra staff by the time of the survey, with five extending the hours of existing staff; two had used monies to reimburse existing staff hours but had not increased them. Eight practices now had dedicated secretarial time and seven had a research assistant. Four had funded other support personnel: practice manager (2), practice nurse (1) and a statistician (1). Capital expenditure had been incurred by half of the practices, most frequently for upgrading their computer, printer and software (4) and installing a dedicated telephone line (4).

All practices had set up a separate practice research account against which research expenditure was being charged. Six practices were not retaining any part of the monies as a charge for practice overheads; four were still discussing arrangements; three were charging variable amounts (one not known). All 14 were paying research staff costs out of the account and 11 were funding research partner time. Many were not making any running cost charges against the account: stationery (yes = 9), postage (8), telephone (6), photocopying (6), heat and light (2), computer maintenance (0). Ten received monies quarterly in advance (all four RCGP practices) and five stated that there were problems with payment mechanisms (none of the RCGP practices).

Preparation for funding application

In most practices (12), the grant preparation work had been done solely by the lead GP and had only been thought about and started when the advertisements for the research practices had been seen.

Most lead GPs (9) stated that the most positive effect of preparing the application was that this focused their mind on exactly what research they wished to perform and encouraged

Table 2. Research training and activity.

Practice	1	2	3	4	5	6	7	8	9	10*	11	12	13	14
RCGP or region?	Reg	Reg	Reg	Reg	Reg	Reg	Reg	Reg	Reg	Reg	RCGP	RCGP	RCGP	RCGP
Lead GP														
Research degree	No	BMedSc	No	MD	MPhil	No	No	BSc	BSc MClinSc	BSc	PhD MA	No	BSc	MD
Other research training	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No	Yes	No	Yes	Yes	Y es
Papers published -														
Principal GP journals**	1	1	8	13	2	4	0	2	6	2	3	6	6	9
Other refereed journals	2	2	14	15	1	12	3	2	18	3	13	2	1	14
Grants received	2	0	3	4	2	2	0	0	8	2	3	4	2	1
Partners of lead GP														
Any research training?	No	No	No	No	Yes	No	No	No	No	Yes	Yes	Yes	No	Yes
Any publications?	No	No	5-6	1	>20	2	No	No	No	NK	3	1	1	1
Grants?	No	No	1	No	1	1	No	No	No	NK	1	2	No	3

*Job share partner. ** BMJ, Lancet, Family Practitioner or British Journal of General Practice.

them to discuss research ideas openly with their partners (4); the most positive effect on the practice was that it stimulated partners' interest in research (5). Other positive effects were noted: one practice realized that it was well placed to do research; another was forced to think of what it wanted to achieve; another made performing research a central objective of the practice; and another was stimulated to cooperate on formalizing a practice plan.

There were some problems with preparing the application, most commonly time (11). Other problems were infrequently mentioned: getting all the required information from partners (2); lack of secretarial support; lack of experience in writing grant applications; and where to put the new computer and research assistant.

Effect of being awarded a grant

By far the most frequently cited effect was that of having funded time to do research (11), with six GPs mentioning that it was not just the funding that mattered but the recognition of the need for protected funded time for GPs to perform primary care research. Other positive effects were the perception that GP research was changing from an amateur to a professional activity (3), with a team focus on and commitment to research (2). More practical positive effects were the funding of previously hidden (borne by practice) miscellaneous research running costs (3); being enabled to do research (3); having secretarial support (2); and a dedicated area within the practice for research (2).

There were more varied problems owing to the award of the grant, with only one practice not mentioning any problems. These can be divided into financial, time, practical and support. Inadequate funding was a problem of capital items — running costs and overall costs (RCGP practices). Protecting research time was difficult owing to problems in getting regular reliable locums, preventing clinical and administration overspill from the practice, covering in times of sickness; and, even when protected, there was still not enough time (4). Practical problems included finding suitable research office space in the practice (3); clashing demands on practice telephone lines; setting up computer hardware and software; and lack of experience in appointing and interviewing research staff. Finally, lacking support was stated by some as a problem: sense of geographical isolation; lack of immediate research support staff within the practice; relative inexperience at getting grants. Three practices also mentioned that they felt pressured having been funded as a result of the high expectations put on them to deliver the research 'goods'.

Advice to potential research practice applicants

Various pieces of advice were given by respondents that can be divided into four areas: planning, team involvement, practical steps and future use of monies. Planning advice included having research on the agenda for practice away days (2); preparing applications in advance as they take time (2); getting advice from 'experts' in primary care research (2); and trying to get some funded protected time, e.g. Wessex Research Network bursary to prepare application. Involving the team — both partners and other staff were seen as crucial to success by six GPs — meant developing the grant application with partners and staff, considering research potential of the practice and staff, and deciding whether research would be a corporate, small team or individual activity.

Practical tips included getting some research training, doing some small research projects to see if it suits you, having one or two potential projects 'on the shelf', keeping all partners' CVs up to date, being fully computerized, being realistic about future funding opportunities, and not being afraid to apply. There were several comments about not just planning the application but also considering changes and organization needs if awarded a grant. These included agreeing how to protect lead GP time (2), losing some present commitments (2), agreeing how to use the monies, looking at infrastructure needs, considering how the primary health care team will be practically involved, and considering a job share.

Discussion

It was not the aim of this survey to evaluate the research outcomes of these two initiatives, but it does provide evidence of appropriate use of monies for practice research infrastructure and information for others contemplating applying for, or funding, such initiatives elsewhere in the United Kingdom (UK). It highlights the problem of lack of funding for capital expenditure (e.g. computer upgrade) and, particularly, running costs. Most practices have coped with the latter by not charging it against the research account. This means that practices still continue to subsidize research. Practices must identify such hidden costs and secure adequate funding if primary care research is to perform on a 'level playing field'.[3]

The survey provides useful practical advice for future potential research practices. First, the whole primary health care team needs to be involved from planning the research application through performing research to interpreting its findings. Such involvement could be a major strength of research practices. Secondly, it is important to plan ahead — the application, the research to be done and how monies would be used if successful. Thirdly, both internal and external (e.g. from other experienced primary care researchers) support for the lead GP is essential both in applying and afterwards. Protected time is required to develop the application, and afterwards research time needs full protection against foreseeable circumstances. Perhaps fewer practices should be awarded larger grants for longer so that part-time partners can be appointed to ensure maximum protected time. Finally, various practical matters need to be considered. These include consideration of where will the new research staff come from, where they and their computer will be sited within the practice, how they will be selected, whether capital expenditure will be incurred, and how running costs will be fully identified and charged against the research account.

This first cohort of research practices found both positive and negative effects on them and their practice. Principally, this was concerned with research activity: having protected time to do research; actually doing more research because of this; and the morale boost of knowing that at last the need for infrastructure support is recognized. Until this experiment, there was no recognition of, or funding for, the infrastructure costs of primary care research.

Only a minority of GPs may contemplate performing practice-based research,[9,10] but they are essential to the development of the discipline. What characteristics should those thinking of applying possess? This first cohort of research general practices, and their lead GPs, are atypical. They are heavily involved in both postgraduate and undergraduate teaching, already have research network links and tend to be non-urban. All lead partners are male, have many non-practice academic commitments and additional qualifications. All are members of the RCGP, have published at least one peer-reviewed paper (both were essential criteria for appointment) and most had received research grants or had research training. Importantly, a number had not received training or grants. Their partners were supportive (essential criterion) but generally had little research experience, a parallel situation to those GPs who supported an earlier College-led initiative: the introduction of GP vocational training in the 1960s.[11]

Why should such practices be funded elsewhere? The NHS is to be 'primary care led',[7] although what this means in practice is open to interpretation.[12] Logic suggests that research should thus also become primary care led, as most clinical care is increasingly provided outside hospitals. Good clinical care needs to be based on good relevant clinical research.[13] There will be an increasing need for primary care research, and for the training of GPs to perform it through suitable education.[14] Such research can be performed in primary care by primary care health workers or on primary care by those working outside it;[8] both are needed. More emphasis on the former should result in more valid research questions being asked and more appropriate interpretations.

The existing departments of general practice have a remit to execute research as well as teach undergraduates. Closer links between them and the regional vocational training and continuing medical education (CME) network would enhance both.[2] However, such linkage would still not be ideal, as the latter perform little research and the former mainly teach undergraduates basic clinical skills or communication skills. The new research general practices are perhaps the ideal site for core values,[15] clinical care based on core clinical competencies,[10] general practice teaching (undergraduate *and* postgraduate) and primary care research to be integrated into a coherent whole. Such integration, together with these individual components, is essential for the development of any independent discipline.

Conclusion

Following a central initiative, 14 research general practices have been established on the theoretical basis that those working within general practice will produce high-quality research evidence from within primary care that will improve patient care. Whether this happens remains to be seen and future evaluation of this experiment is essential. The practices funded to date are atypical. Their lead GPs are also atypical, being different from ordinary GPs and from senior academic GPs with posts in departments of general practice. They are likely to ask different questions and perform different research. They are ideally placed to bridge the intellectual and philosophical divide between these academic departments and ordinary GPs. Unlike academic departments, the research general practices and their partners are highly involved in both undergraduate and postgraduate teaching of the discipline of general practice. Thus, research general practices are perhaps the ideal, or even the only, place to integrate the teaching of, clinical provision of and research into the discipline of general practice. The theoretical arguments are so strong that more research practices should become established throughout the UK, while evaluation of outcomes is awaited.

References

1. McWhinney IR. General practice as an academic discipline. *Lancet* 1966; **1:** 419-423.
2. Allen J, Wilson A, Fraser R, Gray DP. The academic base for general practice. *BMJ* 1993; **307:** 719-722.
3. Gray DP. Research general practices. *Br J Gen Pract* 1995; **45:** 516-517.
4. Gray DP. Research in general practice: law of inverse opportunity. *BMJ* 1991; **302:** 1380-1382.
5. *RCGP research practices: further particulars.* London: RCGP, 1995.
6. *Research and development general practice scheme: supporting information.* Bristol: South and West Regional Health Authority, 1995.
7. NHS Executive. *Towards a primary care-led NHS.* Leeds: NHSE, 1994.
8. *Research and general practice.* Conference of academic organizations in General Practice: Exeter, 1994.
9. O'Dowd T. Research in general practice: who is calling the tune. *Br J Gen Pract* 1995; **45:** 515.
10. *The nature of general medical practice.* Report 27. RCGP: London, 1996.
11. The story of postgraduate education. In: *Forty years on.* London: RCGP, 1993. pp. 109-117.
12. *Statement on a primary care led NHS.* London: RCGP, 1996.
13. Van Weel C. General practice: a suitable place for clinical research. *Eur J Gen Pract* 1995; **1:** 6-7.
14. Smith LFP. Higher professional training in general practice: provision of Master's degree courses in the United Kingdom in 1993. *BMJ* 1994; **308:** 1679-1682.
15. *Core values for the medical profession in the 21st century.* Report of conference. Core values initiative. London: BMA, 1995.

Acknowledgements

I would like to thank all of the research practices for returning questionnaires, and Professor D J Pereira Gray and Dr N Beale for helpful comments on the manuscript.

Address for correspondence

Dr L F P Smith, Ilchester Research General Practice, 17 Church Street, Ilchester, Somerset BA22 8LN.