

A service–academic partnership in primary care research: one practice’s experience

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SUMMARY

Further development of a strong research base for general practice is important if the profession is to respond appropriately to its central role in service provision. It can be difficult for general practitioners (GPs) who have not pursued an academic career path to make a significant contribution to research. The development of a service–academic partnership is described, together with an honest account of the difficulties encountered.

Keywords: service–academic partnership; lead research practices; research difficulties; research funding.

Introduction

NEW arrangements in primary care promote partnerships across all key activities. Key national bodies have agreed on the importance of a sound research base for primary care and the centrality of partnership between National Health Service (NHS) and academic units in achieving this.^{1,2} The establishment of Primary Care Trusts (PCTs) across the country is increasing the need for quality evidence to back up their decision making, with 75% of all NHS resources being directed through Trusts.

A number of mechanisms already exist to help interested practitioners or practices to become research active,^{3–6} and primary care teams may contribute to research at different levels. These have different implications for the practice (Box 1).

Collaborative working between practices and academic departments (service–academic partnership) is increasingly seen as the key to success,^{7–12} but reports on the realities of such partnerships in research are few. In this paper, we describe the development of research collaboration between a single general practice and its university department. We describe what has been achieved, and the difficulties and challenges faced.

Setting

The practice is large, with 14,000 patients and 7.75 whole-time-equivalent partners. It is semi-rural and works from purpose-built premises in a market town. All levels of research involvement have been experienced (Box 1). The practice is a long-serving member of the Medical Research Council (MRC) General Practice Research Framework (GPRF)¹³ and contributes to the General Practice Research Database.^{14,15} A research interest in diabetes has been developed, and a trial has been completed in this area.¹⁶ The time and energy involved in getting even such a small-scale study to publication did not deter the practice team from aspiring to lead further research. This coincided with the academic unit having funds available to support the development of the research capability of general practices through NHS Research and Development (R&D) funding.¹⁷

Identifying infrastructure needs

The possibility of funding led to a careful appraisal of the practice’s needs. The practice aimed to develop its research interest in diabetes, and it was of importance that this was a special interest of the local academic unit. After a series of exploratory meetings with the unit in 1998, the practice was able to obtain support funding as a ‘lead research practice’. Lead status meant that the practice was prepared to have a role in co-coordinating and encouraging research involving several practices. The practice bid successfully for staged

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Research carried out by the practice on behalf of an outside agency

For:

- administrative tasks are the responsibility of the organising agency. There is the opportunity to take active part in well-considered and organised research; for example, the MRC General Practice Research Framework.

Against:

- the practice is not usually involved in the development and design of the study and usually acts as data gatherer for the agency.

Research carried out by an outside agency using the patients of the practice

For:

- administration is the responsibility of the outside agency. This may be the most appropriate method for some kinds of research; for example, epidemiology, genetics and rare diseases. The practice acts as the host and provides access to its patients, and, possibly, physical space for the researchers.

Against:

- research may lack the perspective of active clinical workers. Care is required with the ethics of financial transactions. There is no increase in research skills for the practice.

Research conceived, organised and carried out entirely in primary care

For:

- total ownership and control of the project. Some high-quality work has been carried out in this way at relatively low cost.

Against:

- very demanding. Few have the skills, funding or time to maintain activity of this sort and meet the requirements of research governance.

Service-academic partnership

For:

- there is amalgamation of the skills and perspectives of academic and clinician, enhancing their roles; for example, administrative skills are shared. Academics are familiar with ethical and governance requirements, clinicians with service costs and feasibility.

Against:

- time and care needs to be invested in setting up and maintaining the relationship. There needs to be clear division of responsibilities, alongside shared goals and honest recognition of difficulties.

Box 1. Types of primary care research activity and their practice implications.

funding of £39,000 for carefully detailed infrastructure support over a three-year period (Box 2).

Overall, the effect of the funding has been to develop understanding between the academic and clinical sides, to considerably increase skills in the practice team, and to lay the foundations for a fruitful collaboration.

Outcomes

The partnership has already contributed to the development of individuals on both academic and service sides, and to substantive externally funded research. The achievements and difficulties of the project for the practice are summarised in Box 3.

- Improvement of data management, i.e. computer searches and report generation.
- Access to on-line databases: MEDLINE, EMBASE, the Cochrane Library, etc.
- The setting up of an e-mail facility for communication between the practice and the academic unit.
- Installation of a 'firewall' to prevent unauthorised access to confidential patient data.
- Protected time for the practice manager to take part in the development programme, to attend meetings, and to understand practice responsibilities for research governance.
- Support for staff at all levels who are interested in acquiring and developing research skills.
- Relevant members of the practice, including the lead GP, to be able to attend meetings to develop research proposals and make funding applications.
- Support for those interested in research in attending one appropriate conference per year.
- To identify key areas for R&D compatible with the interests of the academic unit.

Box 2. Practice infrastructure needs for lead research status.

Achievements

- Development of substantive research: £39,000 of investment has contributed to over £500,000 of research funding.
- Involvement with academic colleagues from other disciplines; for example, psychology, social anthropology, epidemiology, public health and statistics.
- Involvement in specific projects led directly to improvements in services.
- More members of the primary care team are actively involved in research and have received further training in appropriate areas.

Difficulties

- Resourcing needs to be realistic, with all of the costs of research incorporated into budgets.
- Cash flow was sometimes a problem.
- Conflicting demands of research agenda and clinical services caused occasional difficulties, some of them significant.
- Facilitating involvement of other practices was more difficult than anticipated.
- The administrative burden presented difficulties in an already busy practice, particularly with regard to employment issues.
- Information management is important.
- Acquisition and maintenance of skills requires resources, commitment and time.
- Moving from a project to a programme of research placed strain on the service partner.

Box 3. Achievements and difficulties.

Achievements

1. *Development of substantive research (the ProActive trial).* The partnership enabled the practice team to participate in the research process in its area of research interest from the pre-pilot stage to the full trial. The aim was to develop and evaluate a complex intervention¹⁸ to prevent diabetes by promoting physical activity among a high-risk group — the offspring of patients with type 2 diabetes. Practice members worked alongside epidemiologists, behavioural scientists, and primary care academics to embed the theoretical

underpinnings of the intervention in practice.¹⁹⁻²³ The pre-pilot work, funded by a grant from the MRC/DoH (Department of Health) joint nutrition initiative to the academic unit, consisted of a number of focus groups, hosted by the practice, which explored the acceptability and feasibility of the proposed approach with patients. The lead general practitioner (GP) and the university lecturer involved with the study then applied jointly to the Windebank Diabetes Fund of the Royal College of General Practitioners (RCGP) for funding of £40,000 for a pilot study, which was eventually extended to two years. During this phase of working with 15 pilot families, participant materials and training manuals for the facilitators were completed, recruitment approaches and measures were piloted, and a full trial-funding application was developed. The Windebank award was key to the developing partnership; it would not have been awarded without the active involvement of the practice, nor would the practice alone have had the expertise to put together a successful grant application. Funding of £500,000 has now been secured from the MRC for a multi-practice trial, entitled the ProActive study. After recruiting from 20 practices, the study should be completed in 2004.

2. Multi-disciplinary involvement. Working on the ProActive study extended the practice team's understanding of trial methodology, and in particular the epidemiological rationale for selecting the particular at-risk group and physical activity for study. It also led to an appreciation of the contribution of behavioural science in informing how best to motivate and support participants in achieving their goals. The partnership also offered an opportunity for a social anthropologist with an MRC studentship to work in the practice on her PhD thesis, which was linked to the National Service Framework for coronary heart disease. The anthropologist's interest was in the range of ways in which people understand risk in life in general and in relation to health. She made a material contribution to the audit work on coronary heart disease, but also sensitised us to the gap that exists between the use of risk data at the population level to inform resource allocation or treatment effort, and the wide range of perceptions of disease risk held by individual patients.²⁴

3. Improvements in service. All of the joint projects contributed to improved service; for example, through improved registers and audits, and skill and enthusiasm among the staff. The lead GP worked on one study with a public health research registrar who was undertaking an academic placement in primary care, the university lecturer in general practice, a medical statistician, and a clinical psychologist. This was a pilot study for a trial of an intervention to support adherence to medication (the SAM study) among patients prescribed complex multi-dose drug regimes. The study involved electronic monitoring of drug adherence among patients, and close working with our dispensary staff, contributing both to review of medication use among individual patients, and repeat prescribing in general.

4. Staff involvement and development. The staff, including the practice manager, computer operators, receptionists, and nurses, have taken on new roles and responsibilities

through the partnership. Two nurses within the practice have now completed the second year of MSc courses at the University of East Anglia. Both receive funding equivalent to half-time pay, together with expenses, from regional R&D access funds (Enterprise Awards, which are now discontinued). They are due to complete their degrees in 2004.

Difficulties faced and lessons learned

Although both parties are strongly committed to making the venture a success, there have been difficulties. General practice is a demand-led service, and there are times when the pressures of research deadlines and practice service commitments conflict. The preliminary meetings and respectful negotiations started the partnership off with a stock of 'goodwill', but this must be continuously built on, or it will erode under the kind of pressures discussed below.

1. Realistic resourcing. Although it was acknowledged early on that protected time for the lead GP was important, this was not possible until the third year of the scheme because of existing commitments within the practice and teaching within the academic unit. In the third year, relinquishing teaching commitments reduced the workload and the load became more manageable. It is easy to become over-committed because of the excitement and stimulation of academic work. It is important for all parties to recognise that unpaid extra work can lead to difficulties for the participants and resentment among colleagues.

All of the research procedure costs need to be realistically assessed and adequately and promptly reimbursed. Service support costs (such as for postage, telephone calls, photocopying, extra drug costs, additional laboratory investigations, and secretarial and receptionist time spent dealing with research-oriented enquiries) need to be negotiated with practice teams and realistically included in service support costings for research.

2. Cash flow arrangements. There need to be robust arrangements for efficient transfer of funds committed to the service partner. From time to time the practice had to use its own cash to support the research programme. At one stage the cash flow deficit of £15,000 for nearly three months was so large that the practice considered withdrawing from the collaboration. A system of payments 'on-account' with topping up at regular intervals, against approved expenditure, seems the best option. The MRC General Practice Research Framework has used this system for many years without difficulty. It ensures that collaboration is at least cost-neutral to the practice.

3. Conflicting demands. Tensions also arose when, for example, searches needed to be done, letters prepared and sent out, and appointments made for trial participants at a time when practice secretarial time was at a premium because of sickness and holiday. Although we felt initially that the practice's needs and those of the research programme could be met by flexible working, this proved in some instances not to be the case. Secretarial support for research activities needs to be clearly defined and time protected.

4. *Facilitating research in other practices.* Despite willingness, the practice has not yet realised the aspiration of co-ordinating and encouraging research in other practices. Indeed, the apparent ease with which the practice led the pilot study to identify participants for the Proactive study led the academic partners to expect too much from some other participants in the main study, who preferred departmental researchers to carry out patient recruitment with minimal involvement of practice personnel. This may reflect the increased pressure on time and resources that all practices are currently experiencing.

5. *Contracts, budgets and governance.* Administration, budget management, and secretarial support for the ProActive pilot study and the SAM study were managed by the practice manager and the practice, which also acted as the employer for several project members. Some difficulties ensued with employed members being unsure of where their priorities lay. For the employees there was confusion about lines of responsibility — were they responsible to the practice, to the university, or to the research administrator? How would grievances be dealt with?

Employment contracts for researchers are probably best managed centrally by the academic department unless a research division is set up within a lead practice or PCT. In our experience, the holding of some contracts by the practice caused unexpected difficulties, as outlined above. If contracts are held by the PCT or the practice, then they should also be involved with interviews, induction, and line management.

Employment tension also arose when maternity leave for one project member stretched beyond the practice's involvement with the RCGP-funded ProActive pilot.

Project budgets are also probably best administered centrally, especially where very large sums of money are involved. The complexities of managing such budgets put a considerable strain on an experienced practice manager. Managing a practice budget and a research budget are very different, and this needs consideration as PCTs consider how to manage their research infrastructure.

In our partnership, research governance issues were managed project by project, led by the academic partner. Practice teams have specific responsibilities regarding knowledge of research activity, its ethics, consent and confidentiality, which will be quality assured through sponsors in the future.²⁵

6. *Information.* A practice team involved in research activity needs to have information that is relevant, succinct and tailored to its individual needs. Information also needs refreshing and updating from time to time. It is useful to have a named, easily contactable link person at both ends of the collaboration, so that information and queries can be dealt with courteously, promptly and accurately. Good communication resolved most of the difficulties we faced, and, conversely, many of the difficulties experienced were caused by problems communicating at the right time with the right person.

7. *Acquisition and maintenance of skills.* A wide variety of opportunities now exists for developing research skills.²⁶ However, few GPs are able to devote a substantial amount of their time to acquiring and using these skills. They cover

a wide range, for example, developing a research proposal, statistics, organisation, governance, funding, writing and publishing, and they require continued practice to maintain them. Many interested GPs have found that ongoing support from full-time academics, in the form of a mentoring role, is desirable in order to foster and maintain their research interest and capabilities.²⁷ Other colleagues and staff also need the opportunity to practise new skills and extend them.

8. *Projects and programmes.* Moving from one single research project to a pattern of sustained research activity involves an increased level of commitment from all parties, and increases strain on the system. It is likely that an increasingly research-active practice will have to address the problem of how to maintain the quality and volume of its clinical services as the demands of research eat into General Medical Services time. This will present particular difficulties if all members of the practice do not embrace the research activity, and if the time commitment is not recognised, allowed for and funded.

Conclusion

The practice team has been enthused and enabled by the collaboration, and a particular benefit has been the spreading of research interest, involvement and experience beyond that of the lead GP. He continues to be supported to complete existing research projects and to write up papers from his educational attachment. National Health Service R&D support is evolving into Support for Science, complemented by Priorities and Needs.²⁷ The practice will be exploring these possibilities, having already registered as being research active. The College's research accreditation scheme²⁹ is also looking more attractive now that funding has been promised from central sources to help defray the cost.

The practice intends to lead further research in the future. Developments in general practice look certain to increase the involvement of nursing and other staff in the delivery of care, and this offers considerable opportunities for fruitful research activity. We see the collaboration with the academic unit continuing to be a cornerstone of our activities. Overall, team members are more, rather than less, interested in research involvement. An investment of £39,000 over three years has enabled the collaboration to obtain over £500,000 in research grants, with one study (ProActive) already expanded to multi-practice level. Further expansion of roles is likely to occur and to benefit the personal and professional satisfaction of practice staff.

For the academic department, the value of close ties with clinical colleagues has been emphasised. This enables the academic unit to remain 'grounded' in service. The enthusiasm and dedication of front-line practice staff remains inspirational. In spite of the unending pressure of service commitments, we have found service partners aspiring to do their best in difficult circumstances. These experiences have contributed to the development of a broader service-academic partnership framework: between our local PCTs, our general practice deanery, and the academic department. This framework recognises the importance of linking R&D in primary care with clinical governance, and workforce recruitment and retention, if the participation of larger numbers of

general practices is to be secured. Research in primary care is likely to remain a minority activity. We need to facilitate high-quality research in interested practices, small and large, with PCT support. We recognise that turning potential into reality requires a number of careful steps along the way — from encouragement, through nurture, opportunities to enhance skills, to productivity and quality assurance. To realise these aims, academic departments must be adequately staffed, with sufficient resources and the right kind of personnel. Researchers committed to their own publications and careers are not necessarily the most appropriate people to support service partners to develop their own skills. PCTs, workforce confederations and NHS R&D will need to consider the support of service-academic partnerships with care if they are to become a mature and fruitful enterprise.

For general practice research in general, the inception of PCTs presents both opportunities and threats. We are in a new area, with little in the way of ground rules. Competing priorities for funding and time mean that research will once again have to fight for resources. We hope that this account may encourage PCTs to develop systems to support service-academic partnerships, while avoiding some of the pitfalls. Perhaps our experience offers one means by which primary care teams with an interest in research, yet who have limited experience, may be encouraged to become involved, to the mutual benefit of their practices, local services and the academic department.

References

- Mant D. *National working group on R&D in primary care: final report*. London: NHS Executive, 1997.
- Medical Research Council. *Primary health care*. (MRC topic review.) London: MRC, 1997.
- Pierce M. Doing research in general practice: advice for the uninitiated. *Diabet Med* 1998; **15**(supp 3): S25-S28.
- Smith F, Fuller J, Hilton S, Freeman G. The London Academic Training Scheme (LATS): an evaluation. *Fam Pract* 1998; **15**(supp 1): S40-S44.
- RCGP Information Services. *Research in general practice*. (Information sheet no 12.) London: RCGP, 1996.
- RCGP website. URL: www.rcgp.org.uk/rcgp/research (accessed 17 June 2003).
- Howie JG. Research in general practice: international problems — international solutions. *Fam Pract* 1994; **11**(4): 351-357.
- Smith LFP. Research general practices: what, who and why? *Br J Gen Pract* 1997; **47**: 83-86.
- NHS R&D Strategic Review. *Primary care. The Clarke Report*. London: DoH, 1999.
- Campbell SM, Roland MO, Bentley E, et al. Research capacity in UK primary care. *Br J Gen Pract* 1999; **49**: 967-970.
- Hilton S, Carter YH. Academic careers in general practice and primary care. *Med Educ* 2000; **34**: 910-915.
- Kernick D, Stead J, Dixon M. Moving the research agenda to where it matters. [Editorial.] *BMJ* 1999; **319**: 206-207.
- Vickers M, Hand L, Hand C. The MRC General Practice Research Framework. In: Carter Y, Thomas C (eds). *Research opportunities in primary care*. Abingdon: Radcliffe Medical Press, 1999.
- Garcia Rodriguez LA, Perez Gutthann S. Use of the UK General Practice Research Database for pharmacoepidemiology. *Br J Clin Pharmacol* 1998; **45**: 419-425.
- An extensive bibliography is available from the General Practice Research Database at the Medicines Control Agency, 15th Floor Market Towers, 1 Nine Elms Lane, London SW8 5NQ or from the GPRD website, URL: www.gprd.com
- Mengham LH, Morris BF, Palmer CR, White AJS. Is intensive dietetic intervention effective for overweight patients with diabetes mellitus? A randomized controlled study in a general practice. *Practical Diabetes International* 1999; **16**: 5-8.
- Research and Development Task Force. *Supporting research and development in the NHS*. London: HMSO, 1994. (A report to the Minister of Health by a research and development task force chaired by Professor Anthony Culyer.)
- Campbell M, Fitzpatrick R, Haines A, et al. Framework for design and evaluation of complex interventions to improve health. *BMJ* 2000; **321**: 694-696.
- Ajzen I. The theory of planned behaviour. *Organizational Behavior and Human Decision Processes* 1991; **50**: 179-211.
- Hardeman W, Johnston M, Johnston DW, et al. Application of the theory of planned behaviour in behaviour change interventions: a systematic review. *Psychol Health* 2002; **17**(2): 123-158.
- Godin G, Kok GJ. The theory of planned behaviour: a review of its applications to health-related behaviours. *Am J Health Promot* 1996; **11**: 87-98.
- Griffin SJ, Kinmonth AL, Skinner C, Kelly J. *Educational and psychosocial interventions for adults with diabetes*. London: British Diabetic Association, 1999.
- Pierce MB. *Non-insulin dependent diabetes and its complications: beliefs, perceptions and prospects for risk reduction*. [Thesis.] London: University of London, 1997.
- Kinmonth AL. Understanding and meaning in research and practice. [Editorial.] *Fam Pract* 1995; **12**: 1-2.
- Halligan A, Donaldson L. Implementing clinical governance: turning vision into reality. *BMJ* 2001; **321**: 1428.
- Royal College of General Practitioners website. URL: <http://www.rcgp.org.uk/rcgp/research/resources/index.asp>
- Bateman H, Kinmonth AL. Journeys and pathways: exploring the role of professional development advice and educational guidance for practitioners expressing interest in research. *Med Educ* 2001; **35**: 49-55.
- Department of Health. *Notes on becoming eligible for NHS Support for Science*. London: DoH, 2001. (Also available with other details on the website, URL: www.doh.gov.uk/research/rd3/sfseligibilitynotes.pdf)
- Royal College of General Practitioners. *Primary care research team assessment — schedule and written guidance for candidates*. London: RCGP, 2001.

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