

Research activity, interest and skills in a health and social care setting, a snapshot of a primary care trust in northern England: implications for collaboration and capacity

Ruth Bacigalupo Department of General Practice and Primary Care, University of Sheffield, Sheffield, UK,
Jo Cooke Department of General Practice and Primary Care, University of Sheffield, Sheffield, UK and
Mark Hawley Barnsley District General Hospital NHS Trust, Barnsley, South Yorkshire, UK

International and UK National Health Service policy has focused attention on the need to develop research capacity in primary care, with the emphasis on collaboration between professional groups and across organizations including health and social care, and the academic context. The results of a survey of research activity, interest and skills in a health and social care community, in Northern England, are reported. The survey targeted primary care trust (PCT) staff, general practice staff and social services staff seconded to the PCT, and a response rate of 31% was achieved. Twelve per cent of respondents were involved in research, with research active professionals typically involved in between one and three projects. PCT staff reported a significantly higher level of research activity, research skills and research interest than general practice or social care staff. The holding of a master's degree was associated with a greater desire to lead or collaborate in research. All three groups expressed a preference for practice-based research training and other forms of research support were identified, including protected time, apprenticeship, mentoring and funding advice. The results of this survey have been valuable in terms of research governance, forming research strategy, and impact on capacity via training and support for the health and social care community within a newly formed research alliance between a district general hospital, a PCT and social services, including an academic advisory group. The paper concludes that a holistic approach to research capacity building should inform changing policy and research funding in the UK.

Key words: primary care; research activity; research capacity; research interest; research skills; social care

Received: December 2004; accepted: July 2005

Introduction

The international literature on research capacity building highlights efforts to build research capacity in primary care in areas such as Europe, America, Australia, Canada and developing countries (eg,

Bass, 1996; White, 2002; Curtis *et al.*, 2003; Watt, 2004; Whitworth *et al.*, 2004). An Australian research capacity building model has been suggested by Farmer and Weston (2002). Their six guiding principles for research capacity building include a whole system approach, accommodating diversity, reducing barriers to participation, enabling collaboration, mentoring and networking.

Grundy and Johnston (2003) found that strategies to strengthen research capacity in primary care in Australia included building on research collaborations, undertaking trials of social models

Address for correspondence: Dr Ruth Bacigalupo, Department of General Practice and Primary Care, University of Sheffield, Community Sciences Centre, Northern General Hospital, Sheffield S5 7AU, UK. Email: R.Bacigalupo@Sheffield.ac.uk

of care, and developing skills to produce research proposals based on local priorities and questions. This approach may fill major identified gaps in interventions-based research, and tackle health inequalities (Grundy and Johnston, 2003). Similarly, family medicine organizations in the USA developed a strategic plan that focused on training, funding, infrastructure, linkages between researchers and culture change to accept research as integral to the role (Yawn, 2002).

White (2002) has likened building research capacity in developing countries to building other kinds of organizational capacity, which involves two dimensions: strategic and operational. To ensure success reference to research should be made in the organizational mission statement.

However, despite the emergence of models of research capacity building there is a lack of information on the outcomes of different approaches to capacity building and skills obtained (Bryar, 2003).

The moves towards developing a 'primary care led' UK National Health Service (NHS) have focused attention on the need to develop research activity and capacity in primary care (Mant, 1997; Medical Research Council, 1997; Clarke, 1999). Primary care is seen as an essential component for producing research that is both relevant and important to services (Department of Health, 2000). Documents highlight the need for a joined-up approach to support research in primary care, including the input from different professional groups (Mant, 1997), and for collaborations with social care practitioners and organizations (Department of Health, 2000). However, these laudable aims have proven difficult to translate into practice. Successive policy documents (Mant, 1997) and surveys (Campbell *et al.*, 1999; Jowett *et al.*, 2000) have highlighted low levels of research activity and capability within general practice compared to secondary care, with little academic infrastructure and support to enable this (Lester *et al.*, 1998).

The picture for other professional groups within primary care, including nursing and allied health professionals shows less progress than for general practitioners (Campbell *et al.*, 1999), and a scoping exercise in social care highlighted a lack of infrastructure and training for social care practitioners in this context (Cooke *et al.*, 2002). With this in mind, primary care research networks and Research Support Units (RSU) have been centrally funded to support research in primary care (Griffiths *et al.*,

2000), some of which include the support of social care practitioners (Cooke *et al.*, 2002). Research alliances are also developing to enable the capacity building elements for primary care research, to build infrastructure and networks that would enable research capacity to grow, and research activity to develop. However, no work has been reported on the baseline assessment of multi-professional groups within primary care within a geographical location, or a comparison made between groups to build a strategy for research capacity across the groups.

This paper describes an initial baseline survey (Bacigalupo, 2003) to determine the level of activity and interest in one developing primary care research alliance in the north of England. The baseline was collected for two reasons: first to identify activity for research governance purposes and second to plan and build an infrastructure based on a needs assessment. This article also describes an alliance collaboration between health and social care, and how the baseline results have impacted on capacity through training and support and research strategy. The discussion is placed in the context of international literature on research capacity building.

The context

Barnsley primary care trust (PCT) is one of the largest in the country, encompassing one entire old health district. The PCT has unusually close working relationships with the local council's social services department and the district general hospital. This hospital was able, in the late 1990s, to secure research funding from the NHS, known as 'Culyer' funding, and has been atypical in being able to increase this funding over subsequent years. The hospital now hosts a substantial research programme funded largely by external grants from research councils, Department of Health, European Union and others.

As a result of the close working relationship with the PCT and social services, much of this research has a component of joint working across the health and social care community. The hospital has, for several years, funded a research fellow post to facilitate this joint working and to engage in capacity building within the PCT and social services, in collaboration with the Sheffield-based Trent Research Development Support Unit (RDSU).

Recently, the Barnsley Health and Social Care Research and Development Alliance has been formed to support research in the local health and social care community, and joint arrangements for research governance have been put into place. As part of this development, we wished to ascertain the baseline level of research activity, interest and skills within the Alliance. This was already known to a certain extent, for the hospital, through current arrangements. It was decided to carry out a baseline initially within the PCT and to include general practice staff and all social care staff seconded to the PCT. A follow-up survey will capture activity, interest and skills within the wider social services department and acute trust.

The baseline assessment may be useful to others with an interest in primary care research capacity building, as it describes activity, research capacity needs and attitudes towards research in three groups of practitioners under the governance umbrella of the PCT:

- General practice staff (general practitioners, practice nurses, management and administrative staff).
- PCT-employed staff (community nurses, school nurses, health visitors, allied health professionals, community psychiatric nurses and managerial staff).
- Social care staff seconded to the PCT (mainly social workers, managers and care assistants).

It was necessary to stagger the data collection into three stages over a period of a year, in order to achieve a co-ordinated approach and to develop access strategies sensitive to the different organizational structures for the three groups of staff (general practice, the PCT and social care).

The aims of the baseline assessment were to:

- ascertain the level, and type, of research activity across three groups of staff within the ambit of the PCT;
- identify the level of research skills within the three staff groups;
- determine the willingness of staff to engage with research;
- identify the nature and level of engagement of staff willing to undertake research activity;
- identify the nature and level of research training and support required by the staff within the PCT.

Method

The baseline assessment was carried out through the administration of a questionnaire to all practitioners within the PCT. The questionnaire included demographic details and three sections of questions. The first section identified research active staff and asked them to describe the nature and level of activity and research collaborations. The second and third sections asked about research skills (experience and training needs) and research interest (willingness to engage with research, and areas of interest). Questionnaires were distributed in three phases. Phase one included 'general practice' staff (general practitioners, practice nurses and managers) employed within general practices. A package of questionnaires was sent to practice managers of each of the 43 general practices within the PCT, who were asked to distribute to all medical, nursing and managerial staff within the practice. Reminder letters were sent by post and all practice managers received a telephone reminder.

The second phase focused on PCT-employed staff. A list of practitioners' names was identified through the PCT payroll; 897 questionnaires were distributed through the internal mail system. Managers were asked to encourage staff to complete and return the forms, and reminder letters were sent by post.

The third phase involved working with the social services department to identify practitioners seconded to the PCT. A total of 311 questionnaires were sent to this group of staff. Again managers were asked to encourage staff to complete and return the forms, and reminders were sent. Completed questionnaires were returned to the research office and data were analysed using Microsoft Access database, and the chi-square test (Kinnear and Gray, 2000) was used to test whether differences between groups were significant. Open-ended written questions were thematically coded (Strauss and Corbin, 1990).

Results

A total response rate was 31% (467 out of the 1527 possible responses). Response rates varied from different practitioner groups (see Table 1).

The breakdown of professional groups within the general practice group is given in Table 2.

Table 1 Response rates for differing groups of staff

	Professional groups	Questionnaire sent out	Questionnaire returned	Response rate (%)
Phase one	General practice staff	319	95	30
Phase two	PCT staff	897	305	34
Phase three	Social care staff	311	67	22
Group total		1527	467	31

Table 2 Response rates from general practice staff

	Professional groups	Questionnaire sent out	Questionnaire returned	Response rate (%)
Phase one	General practitioners	114	27	24
	Practice nurses	76	21	28
	Practice managers	43	18	42
	Administrative staff	86	29	34

The level and nature of research activity

The survey data and validity of the research estimates should be treated with caution as some projects may not have been identified in the survey, and others may not be considered 'research' by Department of Health definitions, that is, as 'an attempt to derive generalizable new knowledge by addressing clearly defined questions with systematic and rigorous methods' (Department of Health, 2001). As with other research scoping exercises within primary care (Jowett *et al.*, 2000; Cooke *et al.*, 2002) the questionnaire was inclusive about the nature of project work the respondents should report within this exercise, to indicate the level of research skills within the workforce, and potential for research capacity. Therefore, the results may indicate higher levels of research activity than expected. Projects reported here may include service development and evaluation projects as well as audit and formal research.

Fifty-seven individuals were currently involved in research (12% of respondents) with 10 individuals being from general practice, 45 from the PCT and 2 from social care, indicating that groups of staff from the PCT were most engaged in research and social services staff least involved. Most research active professionals were involved in between one and three projects. However, one general practitioner was highly research active and was involved in 41 projects (all commercially sponsored). The examples of projects supplied by the respondents included small-scale projects, graduate and post-graduate

research, and collaborations with external researchers and academic networks. For example,

- A clinical nurse specialist exploring nurses perceptions of nursing practice.
- A clinical psychologist doing a PhD on fathers' experience of childbirth.
- A general practitioner running numerous clinical trials supported through drug companies.
- A health visitor planning a dissertation about education within primary health care.
- A podiatrist looking at the reasons new applicants have for seeking podiatry treatment.
- A social working studying issues in intermediate care.
- A unit manager evaluating use and satisfaction with the NHS web site.

Level of research skills

The questionnaire asked practitioners to indicate the level of research training already undertaken by them (Table 3).

The respondents showed reasonably high levels of research training experience, with 59% of the respondents having had some level of research training during their career (Table 3). Nearly 2% of respondents across the groupings have a PhD or MD. These practitioners were mainly PCT staff, and included six psychologists, one occupational therapist and one general practitioner. No social care practitioner had achieved this level of training.

Table 3 Levels of research training already undertaken

	Overall	GP staff (n = 95)	PCT staff (n = 305)	SC staff (n = 67)
MD	1 (0.2%)	0	1 (0.3%)	0
PhD or MPhil	8 (2%)	1 (1%)	7 (2%)	0
Taught master's degree involving research training	44 (9%)	4 (4%)	38 (12%)	2 (3%)
Modules on research training	106 (23%)	12 (13%)	90 (30%)	4 (6%)
Occasional study days on research	107 (23%)	17 (18%)	83 (27%)	7 (10%)

GP: general practice; SC: social care.

Table 4 Number of master's degrees (with research training) in the PCT by professional group

Type of staff	Number of staff
Managers	8
Nurses	10
Allied health professional (including occupational therapy, podiatry, speech and language therapy)	10
Medical doctors	8
Dentists	2

Attendance at single training days and research modules was common amongst the respondents. Differences between the groups were identified, with the highest levels of attendance amongst PCT staff and lowest levels amongst social care and general practice staff. Nearly one-tenth (9.4%) of the respondents have a master's degree including four staff from general practice (three practice nurses and one general practitioner), and two from social care. However, most practitioners educated to master's level were employed by the PCT and the variety of professions with this qualification in the PCT is shown in Table 4.

Within the PCT, nurses and allied health professionals had the highest numbers of practitioners with master's degrees, and the nursing group included nurse specialists, district nurses, health visitors and ward staff within the mental health services of the PCT. Amongst the allied health professionals, podiatry had four practitioners with a master's degree, and occupational therapists and speech and language therapists three practitioners each. Managers and medical doctors showed similar numbers of respondents with master's degrees. No physiotherapist had a higher degree amongst the respondents. The doctors who had a master's degree worked in psychiatry or in paediatrics.

There was a high correlation between master's level research training and the desire to lead research, with nearly 73% of people with master's degrees wishing to design and carry out their own research projects. Similarly, out of the 44 people with master's degrees, 86% wished to collaborate with experienced researchers. Statistical differences were found between those who have undertaken a higher degree and the willingness to design their own research, or collaborate with experienced researchers (see Table 5).

Training and support needs

Two hundred and eighty-four individuals (61% of respondents) were interested in more research skills training. Table 6 shows how these figures break down into staff groups.

Respondents were asked about the level and nature of training they required (Table 7).

A small number of the health care respondents wished to study for a higher degree with up to 4% showing interest in conducting a higher degree by research (MD, PhD or MPhil). No social care staff wished to train to this level. A larger group of 32 (7%) – mainly from the PCT – showed an interest in studying for a taught master's degree. Only one member from social care and three general practice staff wanted to train for a higher degree.

Higher levels of interest were shown across all three staff groups where research training was practice focused: either based around a research project (26% interest) or based within practice teams (28%). However, higher levels of interest were consistently expressed amongst the PCT staff rather than the general practice or social care staff.

Most popular training was based on single study days. Distance learning approaches, either paper based or on-line based, were less popular than

Table 5 Level of research training applied to leading research and collaboration^a

		Masters		Total	Chi-square	P-value
		Yes	No			
Design own research	Yes	32	121	153	35.2209	<0.0001
	No	12	302	314		
Total		44	423	467		
Collaborate with experienced researchers	Yes	38	227	265	17.3616	<0.0001
	No	6	196	202		
Total		44	423	467		

^aDegrees of freedom = 1

Table 6 Training interest

	Overall (n = 467)	GP (n = 95)	PCT (n = 305)	SC (n = 67)
Interested in more training in research skills	284 (61%)	44 (46%)	209 (69%)	31 (46%)

Table 7 Types of research training interest

	Overall (n = 467)	GP staff (n = 95)	PCT staff (n = 305)	SC staff (n = 67)
MD	6 (1%)	3 (3%)	3 (1%)	0
PhD or MPhil	15 (3%)	1 (1%)	14 (5%)	0
Taught master's degree	32 (7%)	3 (3%)	28 (9%)	1 (1%)
A training programme linked to a specific research project of your choice	123 (26%)	9 (9%)	103 (34%)	11 (16%)
Modules on research skills	122 (26%)	20 (21%)	87 (29%)	15 (22%)
Occasional study days	173 (37%)	25 (26%)	127 (42%)	21 (31%)
Practice/team-based training	132 (28%)	30 (32%)	88 (29%)	14 (21%)
Paper-based distance learning	57 (12%)	13 (14%)	38 (12%)	6 (9%)
On-line distance learning	52 (11%)	12 (13%)	35 (11%)	5 (7%)
Secondment to a research team	92 (20%)	8 (8%)	77 (25%)	7 (10%)

face-to-face traditional methods of learning, although, when paper based and on-line distance learning methods were combined, the interest level was 23%. One-fifth of respondents were interested in being seconded to a research team.

Training is only one element of providing research support. The questionnaire also asked for other support they needed in order to conduct research; 236 individuals (51% of respondents) listed the type of support that would help them to become more

involved in research. These responses were thematically coded and included:

- *Protected time* to do research, with bank support to replace practitioners when doing research.
- *Apprenticeship*, working alongside someone who is experienced in research.
- *Mentorship* having someone available to give practical advice and guidance throughout (and before) the lifetime of a project.

Table 8 Attitudes to being involved in research. Level of agreement by respondent to the listed statements^a

	Total responses (n = 467)	GP staff (n = 95)	PCT (n = 305)	SC (n = 67)	Chi-square	P-value
I would like to design and carry out my own research projects	154 (33%)	19 (20%)	126 (41%)	9 (13%)	28.4	<0.0001
I would like to collaborate with experienced researchers on research carried out within the practice/community	268 (57%)	38 (40%)	208 (78%)	22 (33%)	44.35	<0.0001
I would like to be more involved in research but lack the skills and experience	220 (47%)	24 (25%)	172 (56%)	24 (36%)	32.1	<0.0001
I would like to be more involved in research but lack the opportunity	199 (43%)	26 (27%)	147 (48%)	26 (39%)	13.25	<0.0013
I would be willing to share data but do not wish to be actively involved in collecting it	120 (26%)	24 (25%)	84 (28%)	12 (18%)	2.66	<0.26

^aDegrees of freedom = 2

- *Funding advice* as well as support to apply for funding.

Willingness and nature of potential research involvement

A summary of the attitudes to being involved in research is given in Table 8.

There was a positive attitude towards being involved as collaborators in research in the majority of those that responded to the questionnaire. Over 57% (268) practitioners said they were willing to be collaborators in research, particularly in the PCT-employed staff (78%). Significant statistical differences were found between the three groups of practitioners in four out of five questions. PCT-employed staff were more willing to collaborate in research, but they also wished to develop their own ideas compared to other groups of staff. These practitioners were also more likely to feel that they lacked the skills, opportunity and experience to do this. The social care group responded least positively to being involved in research and being a source of data. Only 18% said they would be willing to share information without being actively involved with the research process. The level of willingness to engage in research as leads, collaborators or providers of data was lowest in the social care group.

Research topics

Two hundred and twenty-one individuals (47% of respondents) reported a wide range of work-related

topics in which they were interested in researching. Examples of research topics by staff group included:

- Social care staff
 - Intermediate care outcomes and the effectiveness of community care services in preventing hospital admissions.
 - Employment issues for disabled people.
 - Dementia care and assessment tools for dementia.
- PCT staff
 - Management of postnatal depression.
 - Public health approaches in community nursing.
 - Mouth care maintenance for the terminally ill.
 - Benefits of tai chi for older adults.
 - Diabetic pregnancy outcomes.
 - Staff attitudes to change.
- General practice staff
 - Quality and use of data on general practice computer systems.
 - Sexual health for teenagers.
 - Mental health management in primary care.

The research topics identified by individuals are diverse but there is also scope for overlap, with some cross-cutting themes across staff groups, including intermediate care and working with certain vulnerable groups (older adults and people with mental health problems). This may provide opportunities for research collaborations between and across service providers, and inform research strategy and capacity building.

Discussion and conclusions

This baseline assessment has shown high levels of research skills and enthusiasm to conduct research in primary care. Although the response rate was low – approximately one-third of the workforce – the level of skills and willingness to conduct research alongside practice amounts to a critical mass, within the PCT, to develop research activity. Over 1 in 10 of the respondents had achieved a higher degree, which reflects experience and research skills, and over half of respondents said they would be willing to collaborate with experienced researchers.

Clear differences between the staff groups are apparent and this has implications for research capacity building and training. Social care staff showed lower levels of research skills, desire to conduct research, and enthusiasm to engage with formal research training. The literature points us to understand why this may be the case. Poor infrastructure to support research in social care organizations may leave a legacy of a weak research culture. This lack of investment in research training and support may have an impact on confidence to conduct research and understanding of its usefulness for practice.

The general practice group showed significantly less interest in conducting their own research and was less likely to see a lack of skills or opportunity as a reason for not conducting research. Again this may suggest a weak research culture within this staff group, or may reflect fewer opportunities to have time out of practice to attend courses or to get locum cover to support research activity.

Collaboration between health and social care: research alliance

The alliance places emphasis on partnership between health (acute and PCT) and social care, and encourages and facilitates care pathway research across organizations, rather than restricting research to within organizations. The advantages of the alliance are that it offers a powerful and comprehensive approach to managing research governance, facilitates communication and collaboration, and builds overall research capacity across the district. Given the importance of delivering research governance in social care and the need to further

develop research activity, a social care baseline follow-up has been conducted and the results will further inform research strategy.

The alliance has two main research themes, which are promoting seamless services across the primary, secondary and social care interface, and fit for the future public health research. The alliance also contributes to three other programmes led by the hospital including older people, cardiovascular disease and diabetes, and cancer.

Impact on capacity: training and support

This baseline survey has shown that research training significantly influences both the ability and willingness to conduct research. There was a high level of interest in research training within the whole group (61%), and just under half of the social care and general practice groups wished to have more training. The Alliance is considering how to improve both social care and general practice accessibility to training. One way of doing this may be to engage with outreach training that is team based and supported by the research and development support unit (RDSU). The study has also highlighted that other support mechanisms should be in place to support research activity. This includes supporting protected time to conduct research with appropriate backfill arrangements for practitioners. It also means providing mentorship throughout the research process.

Apart from informing Alliance research strategy (Hawley and Bacigalupo, 2004), the baseline survey has enabled initiatives to be undertaken to support researchers, which go some way towards satisfying the principles put forward by Farmer and Weston (2002), Grundy and Johnson (2003) and Yawn (2002). The Alliance facilitates health and social care practitioners to undertake research by providing research fellow support, and access to training and resources. An introduction to research course was designed and conducted in a community setting. A small projects fund provides pump-priming grants for pilot research projects in order to improve the opportunities for researchers to apply for external funding for future research work (six projects were funded in 2004–5). Four master's degrees in research were funded in 2004–5, and short courses and backfill funds are available.

There is the opportunity to join both the research skilled people with those wishing to collaborate

to facilitate research to take place. Cross-cutting themes of research interest have also been identified with this baseline assessment, and the research alliance can build on these to link enthusiasts to build research programmes. By utilizing a strategic and operational approach (White, 2002) we hope to build research capacity across the district. Outcomes in terms of skills obtained are beginning to be measured (Bryar, 2003) and we are developing further outcomes such as number of publications and projects.

Changing policy and research funding in the UK: impact on research activity

The UK Department of Health currently funds research through the policy research programme and the NHS Research and Development Programme (Department of Health, 2005a). A coordinating centre, the Clinical Research Collaboration (UKCRC) has been created (Department of Health, 2005b) to build up the NHS clinical research infrastructure and workforce. The collaboration will coordinate clinical research funding, develop incentives for NHS research and streamline governance and regulatory processes. The UKCRC is building up the NHS research infrastructure with networks to underpin all clinical research. Networks include cancer, mental health, stroke, Alzheimers, diabetes and medicine for children.

Initiatives such as the advent of the UKCRC (Department of Health, 2005b) are encouraging and relate to clinical research in certain areas. Whilst it is imperative that these areas of research are developed, it is nevertheless important that a holistic approach to research capacity building to support all kinds of research, such as the activities and areas reported here, is supported in the future. The orientation to clinical research may have monetary implications for health and social services departments if holistic research capacity building is not funded centrally.

Acknowledgements

The authors would like to thank health and social care staff for filling in the baseline survey to inform future research strategy. Prof. Mike Campbell and Alan Rigby (University of Sheffield) provided advice on the statistical calculations.

References

- Bacigalupo, R.** 2003: Barnsley Primary Care Trust (BPCT) research activity baseline results. Unpublished internal report.
- Bass, M.J.** 1996: Dissemination research in primary care: impacting the real world of the practitioner. *Canadian Journal of Public Health. Revue Canadienne de Sante Publique* 87 (Suppl 2), S71–74.
- Bryar, R.M.** 2003: Practitioner research: an approach to developing research capacity in primary care. *NT Research* 8, 101–14.
- Campbell, S., Roland, M., Bentley, E., Dowell, J., Hassall, K., Pooley, J. and Price, H.** 1999: Research capacity in UK primary care. *British Journal of General Practice* 49, 967–70.
- Clarke.** 1999: NHS R&D strategic review in primary care: Report of Topic Working Group. London: Department of Health.
- Cooke, J., Owen, J. and Wilson, A.** 2002: Research and development at the health and social care interface in primary care: a scoping exercise in one National Health Service region. *Health and Social Care in the Community* 10, 435–44.
- Curtis, P., Dickinson, P., Steiner, J. and Lanphear, B.** 2003: Building capacity for research in family medicine: is the blueprint faulty? *Family Medicine* 35, 124–30.
- Department of Health.** 2000: *Research and development for a first class service*. Leeds: Department of Health.
- Department of Health.** 2001: *Research governance framework for health and social care*. London: Department of Health. Retrieved 15 October 2003 from, <http://www.doh.gov.uk/research/rd3/nhsrandd/researchgovernance/pdf/researchgovframework.pdf>
- Department of Health.** 2005a: *About research and development*. Retrieved 11 April 2005 from, <http://www.dh.gov.uk/PolicyAndGuidance/ResearchAndDevelopment/fs/en>
- Department of Health.** 2005b: *What is the UK clinical research collaboration (UKCRC)?* Retrieved 11 April 2005 from, <http://www.ukcrc.org/>
- Farmer, E. and Weston, K.** 2002: A conceptual model for capacity building in Australian primary health care research. *Australian Family Physician* 31, 1139–42.
- Griffiths, F., Wild, A., Harvey, J. and Fenton, E.** 2000: The productivity of primary care research networks. *British Journal of General Practice* 50, 913–15.
- Grundy, J. and Johnston, F.** 2003: Building research capacity in primary health care settings in the Northern Territory. *Australian Journal of Primary Health* 9, 9–17.
- Hawley, M. and Bacigalupo, R.** 2004: Barnsley Health and Social Care Research and Development Alliance Strategic Statement. Unpublished internal report.
- Jowett, S., Macleod, J., Wilson, S. and Hobbs, F.** 2000: Research in primary care: extent of involvement and perceived determinants among practitioners for one English region. *British Journal of General Practice* 50, 387–89.

- Kinney, P.R.** and **Gray, C.D.** 2000: *SPSS for windows made simple: release 10*. East Sussex: Psychology Press Ltd.
- Lester, H., Carter, Y., Dassu, D.** and **Hobbs, F.** 1998: Survey of research activity, training needs, departmental support, career intentions of junior academic general practitioners. *British Journal of General Practice* 48, 1322–26.
- Mant, D.** 1997: *National working party on research and development in primary care, Final Report*. London: NHSE South and West.
- Medical Research Council.** 1997: *Topic review: primary health care*. London: Medical Research Council.
- Strauss, A.** and **Corbin, J.** 1990: *Basics of qualitative research: grounded theory procedures and techniques*. London: Sage Publications.
- Watt, G.** 2004: The long march: the development of academic general practice in the UK and Ireland. *European Journal of General Practice* 10, 98–102.
- White, F.** 2002: Capacity-building for health research in developing countries: a manager's approach. *Pan American Journal of Public Health* 12, 165–72.
- Whitworth, J.A., Phillips, M.** and **Jack, J.** 2004: The Wellcome Trust in Australasia: return on investment. *Internal Medicine Journal* 34, 211–14.
- Yawn, B.** 2002: What does it mean to build research capacity? *Family Medicine* 34, 678–84.