

Building research capacity in south-west Sydney through a Primary and Community Health Research Unit

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Abstract. The Primary and Community Health Research Unit was established in 2010 in south-west Sydney to build research capacity in primary and community health services and help generate evidence to underpin clinical activities. In 2011, six project teams participated in a 12-month researcher mentoring program, undertaking projects in quality improvement and service evaluation. Project teams were linked with academic mentors and participated in four research skill development workshops covering research design, research ethics, statistical analysis and academic writing. All project teams presented their work at two or more research conferences, and all are preparing manuscripts for publication in peer-reviewed journals. The Primary and Community Health Research Unit's approach to research capacity building in primary and community health services appears to be effective in supporting novice researchers to undertake research in their clinical settings. Sustainability is dependent on securing ongoing funding. Further analysis is needed to identify strengths and weaknesses of this approach.

Additional keywords: research capacity building, research skills training.

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Introduction

Developing research capacity in primary and community health is recognised as an important endeavour in both the literature (Comino and Kemp 2008; Pickstone *et al.* 2008; Yen *et al.* 2010) and in Australia's current Primary Health Care policy (Australian Government Department of Health and Ageing 2009).

Disciplines within primary and community health, such as general practice, nursing, midwifery and allied health, have a low research skills base and may lack the research infrastructure needed to develop knowledge for evidence-based practice (Ilott 2004; Cooke *et al.* 2008). Several strategies to build research capacity in these disciplines have been reported in the UK (Cooke *et al.* 2008), the USA (Frontera *et al.* 2006) and Australia (Askew *et al.* 2008; McIntyre *et al.* 2011). However, few

published studies have discussed participation in research by clinicians in community-based settings in the Australian context (Yallop *et al.* 2006; Comino and Kemp 2008; Owen *et al.* 2008; Holden *et al.* 2012).

This paper describes the implementation and initial outcomes of a Researcher Mentoring Program conducted by a Primary and Community Health Research Unit (PCHRU) in south-west Sydney, Australia.

Context

South Western Sydney Local Health District (SWSLHD) includes the seven local government areas of Bankstown, Fairfield, Liverpool, Campbelltown, Camden, Wollondilly and Wingecarribee, and covers a population of around 820 000

What is known about the topic?

- Disciplines within primary and community health, such as general practice, nursing, midwifery and allied health, may lack the research infrastructure needed to develop knowledge for evidence-based practice.

What does this paper add?

- The Primary and Community Health Research Unit Researcher Mentoring Program offers a model of research capacity building that incorporates targeted research skills training, linking clinicians with a university-based mentor and encouraging dissemination of research.

people (South Western Sydney Local Health District 2011). Significantly, around 32% of the population within the SWSLHD do not speak English at home (South Western Sydney Local Health District 2011).

In 2009, the University of New South Wales Centre for Health Equity Training and Evaluation identified primary and community health in south-western Sydney as an area of interest for building research capacity. The PCHRU was established in collaboration with researchers and clinicians from across the (then) Sydney South West Area Health Service (SSWAHS), with the aims of building research capacity within primary and community health services and generating research evidence for primary and community health activities. A PCHRU Advisory Group was established with representatives from the University of New South Wales Centre for Primary Health Care and Equity, University of Western Sydney Department of General Practice and Centre for Applied Nursing Research, Sydney South West GP Link (formerly Macarthur Division of General Practice), the General Practice Unit at Fairfield, and the SSWAHS Directors of Community Health and Allied Health. When SSWAHS 'demerged' to form Sydney Local Health District and SWSLHD in 2011, PCHRU remained located within SWSLHD and retained its existing Advisory Group. The Ingham Institute for Applied Medical Research provided initial research infrastructure funding for 2 years beginning in 2011. This allowed PCHRU to employ a director, research officer and administrative officer on a part-time basis to coordinate and conduct research capacity-building activities within primary and community health.

Based on a previous study of research and research-related activities within SWSLHD (Comino and Kemp 2008), PCHRU recognised the need to support a broad range of research activities including quality improvement, defined as activities designed to monitor, evaluate or improve the quality of health care by an individual, service or organisation (National Health and Medical Research Council 2003), and evaluation, defined as activities designed to determine the effectiveness of a program, treatment, practice or policy (Polit *et al.* 2002).

Consulting the literature

Disciplines within primary and community health, such as general practice, nursing, midwifery and allied health, are often cited as clinical areas needing increased research capacity (Cooke

et al. 2008). Such disciplines have a low research skills base and may lack the research infrastructure needed to develop knowledge for evidence-based practice (Ilott 2004). Further, research in these disciplines is usually self-funded and less likely to be published in peer-reviewed journals (Cooke 2005).

A range of strategies to build research capacity in these disciplines has been reported in the Australian context. These include targeting individual clinicians and small clinical teams that express an interest in research (Askew *et al.* 2008; McIntyre *et al.* 2011; Pager *et al.* 2012), supporting clinicians to lead research in projects of interest in their clinical settings (Brauer *et al.* 2007; Naylor *et al.* 2007), offering targeted research-skills training and establishing links between clinical and academic researchers (Askew *et al.* 2008; Soós *et al.* 2010; McIntyre *et al.* 2011; Holden *et al.* 2012; Pager *et al.* 2012). Such approaches appear to address intrinsic (individual) and team-level factors shown to increase motivation for undertaking research (Holden *et al.* 2012; Pager *et al.* 2012). At the organisational level, organisations where research is valued and where managers are able to establish protected research time are also associated with increased research participation and research outcomes (Cooke *et al.* 2008).

Between 2000 and 2010, the Australian Government funded the Australian Primary Health Care Research, Evaluation and Development (PHCRED) strategy to build research capacity in general practice and the broader primary health care sector (Yen *et al.* 2010). The PHCRED strategy included scholarships and paid research placements in academic settings (Askew *et al.* 2008; McIntyre *et al.* 2011), research grants and an information exchange to support dissemination of research findings (Yen *et al.* 2010), and resulted in increased research output (Askew *et al.* 2008; McIntyre *et al.* 2011). Studies also suggest the PHCRED strategy resulted in additional benefits to participants, including staff development, impact on knowledge production and impact on policy (Kalucy *et al.* 2009; Reed *et al.* 2011).

PCHRU's Researcher Mentoring Program

PCHRU's Researcher Mentoring Program framework was modelled on the Researcher Development Program of the PHCRED Research Capacity Building Initiative (Australian Government Department of Health and Ageing 2005). PCHRU extended a 'Call for Projects' across primary and community health in SWSLHD in late 2010. Clinicians were invited to submit a short project outline that included background to the project, proposed methodology, relevance to their clinical work, and proposed research team. Clinicians were encouraged to contact the PCHRU Director and members of the PCHRU Advisory Group to discuss draft project ideas before submission. As part of the submission, clinicians were asked to submit a signed agreement from their team or department manager that confirmed (i) clinicians would be released from normal duties for approximately 1 day per week to undertake the project, (ii) clinicians would be given professional development leave to attend the four planned full-day research skills workshops, and (iii) that the lead investigator for each project would be released to attend the NSW Primary Health Care Short Course in Research Methods, developed through the PHCRED strategy (NSW PHC 2011), in March 2011. Mutually agreed outcomes for all projects

were a conference abstract or poster presentation at the 2011 Ingham Institute Teaching and Research Showcase, and publication in a peer-reviewed journal.

Participants

Eight submissions were received and reviewed by the PCHRU Advisory Group. Selection criteria included potential for research capacity building and skill building within the project, scientific quality, potential contribution to evidence in primary and community health, and likelihood that the project could be completed within the 12-month, part-time timeframe. Six projects were selected in the clinical disciplines of speech pathology, physiotherapy, counselling (sexual assault), community nursing, dietetics and paediatric psychology. All project teams came from SWSLHD (i.e. public health service). The speech pathology project also involved clinicians from Sydney Local Health District. A total of 32 individual clinicians participated in the program. All projects began in February 2011, and no teams withdrew during the 12-month timeframe.

Research mentoring and skills training

PCHRU linked each clinical team with a university-based academic mentor in their discipline. Academic mentors were identified by members of the PCHRU Advisory Group through their existing clinical and academic networks. The PCHRU Director and Research Officer maintained regular contact with the project teams and offered advice on research methods and publications advice via email, phone and face-to-face meetings.

PCHRU hosted four research workshops through 2011, covering topics including developing a research question, data-collection tools, statistical analysis, writing abstracts, developing conference presentations and writing for peer-reviewed journals. Workshops incorporated didactic teaching components and hands-on sessions that reflected key milestones for dissemination and publication. For example, the third workshop included a discussion on writing abstracts, followed by free writing time where each project team could work on abstracts for the Ingham Institute Research and Teaching Showcase. The fourth workshop focussed on conference presentations, allowing project teams to rehearse presentations for Ingham Institute Teaching and Research Showcase and receive feedback from the group. The workshop also addressed preparing and submitting papers to peer-reviewed journals.

Research output

All project teams had abstracts accepted for the Ingham Institute Teaching and Research Showcase, held in November 2011 (Allan *et al.* 2011; Amanatidis *et al.* 2011; Louwen *et al.* 2011; Murray-Parahi and Edgar 2011; Schippers *et al.* 2011; Yoong *et al.* 2011). All project teams presented initial results from their work at either the SWSLHD Allied Health Research Day in July 2011 or the Fairfield Community Health Quality Street Forum in August 2011. By February 2012, all projects had completed data collection and were working on analysis. Only one team had submitted a manuscript for publication in a peer-reviewed journal by July 2012. Most project teams reported disseminating their work in forums such as team meetings and journal clubs.

Research facilitators and barriers

PCHRU sought feedback on the program and participants' experiences with the research process during each research-training workshop, and held a semi-structured focus group discussion in the second workshop to identify facilitators and barriers to undertaking research. Clinicians reported that their managers were supportive of the project and granted time-release from clinical duties to attend research training and work on their research project, as was agreed at the outset. Managers also encouraged project teams to present their work at forums such as meetings and clinical in-services. Project teams were generally keen to attend research-training workshops and appreciated opportunities to discuss research, and to develop skills through 'hands-on' activities. Project teams reported benefits, such as increased knowledge of their clinical area and networking, from working with university-based content experts and were hopeful that results from their research would inform services planning in their clinical teams.

Several barriers to completing research projects emerged. Project teams generally lacked access to research reference materials and software (such as electronic databases, internet, referencing software and statistical analysis software) in their clinical services. Project teams using existing validated data-collection instruments reported difficulties in translating the instruments into languages suitable for the culturally and linguistically diverse populations within SWSLHD. This also had implications for the validity of instruments used in the projects. Project teams reported 'lack of time' as a significant problem, partly due to fluctuating staffing levels and changing clinical caseloads within small teams. Some participants also noted that the time they had allocated to the project was insufficient for the amount of work involved. Clinicians also found the additional time needed to recruit participants and collect data during clinical consultations problematic.

Although all project teams gained approval from the relevant Human Research Ethics Committees, for some this took 6 months. Project teams working across two Local Health Districts found it difficult to navigate the research governance and human research ethics committee requirements for multi-site projects. Finally, although project teams completed data collection and analysis, none were able to submit a manuscript to a peer-reviewed journal within the 12-month timeframe.

Learning from this case

PCHRU's strategy to build research capacity within primary and community health services and generate research evidence for primary and community health activities achieved good outcomes in terms of developing research skills amongst participants and increasing dissemination of findings by clinicians working in primary and community health. The Researcher Mentoring Program framework, which included offering targeted research skills training and establishing links between each project team and a university-based mentor, reflects approaches to research capacity building in primary and community health settings elsewhere in Australia (Askew *et al.* 2008; Soós *et al.* 2010; McIntyre *et al.* 2011; Holden *et al.* 2012; Pager *et al.* 2012) and internationally (Cooke 2005; Pickstone *et al.* 2008). The Researcher Mentoring Program fostered

‘clinician-led’ research, which has proven successful in other studies on building research capacity (Brauer *et al.* 2007; Pager *et al.* 2012). Future studies should consider the impact of evidence generated through the Researcher Development Program on service planning and delivery within primary and community health in SWSLHD. Buxton and Hanney’s Payback framework (Donovan and Hanney 2011) is emerging as a useful tool for this purpose in the Australian context (Kalucy *et al.* 2009).

PCHRU’s research training workshops utilised both didactic and ‘hands-on’ learning activities, giving participants opportunity to immediately apply and practice new research skills (Pickstone *et al.* 2008). Workshops also gave participants an avenue to discuss resource-related research barriers as they arose, allowing PCHRU to identify and implement solutions. For example, after discussions about research software at the workshops, PCHRU was able to organise access to the University of New South Wales’ computers in Liverpool with SPSS (IBM, St Leonards, Australia) and Endnote (Laurieton, Australia). PCHRU’s experience is consistent with recent studies suggesting barriers to undertaking research are more likely to be extrinsic and external to the individuals or teams wanting to undertake research (Pager *et al.* 2012). ‘Lack of time’ to conduct research is common across Australian studies on research capacity building (Comino and Kemp 2008; McIntyre *et al.* 2011; Pager *et al.* 2012), and occurred even where clinicians were employed in part-time, paid research positions through the PHCRED program (McIntyre *et al.* 2011). High levels of staff turnover and vacancy, and large numbers of part-time staff prevalent across the primary and community health workforce, are known workforce barriers to undertaking and completing research (Productivity Commission 2005). The negative impact of significant structural changes to clinical and research governance at local, state and federal levels is also a barrier to undertaking research (Pager *et al.* 2010; Holden *et al.* 2012). For PCHRU’s Researcher Mentoring Program participants, some workload issues could be attributed to significant structural changes occurring within the wider health care service throughout 2011. The ‘demerging’ of SSWAHS to create two Local Health Districts caused changes to management and reporting arrangements across community health, and changes to processes and policies for research governance. This significantly increased time taken for projects to gain clearance from relevant human research ethics committees. Subsequent delays in data collection and analysis also affected the capacity of project teams to publish their work in peer-reviewed journals. Other researchers have suggested a timeframe of 2 years for supporting novice researchers from inception of the project to the manuscript submission stage (Holden *et al.* 2012).

PCHRU distributed the ‘Call for Projects’ across primary and community health in SWSLHD including through the local Divisions of General Practice and University Departments of General Practice; however, it did not receive any project proposals from GPs. Further research is needed to identify strategies to target GPs more effectively, particularly without financial reimbursement for participation such as that offered through the previous PHCRED strategy (Askew *et al.* 2008). Sustainability of research capacity building initiatives such as the NSW PHC Short Course in Research Methods is now in question, with the end of funding for the PHCRED Research Capacity Building Initiative. The sustainability of PCHRU

itself is also dependent on securing ongoing funding beyond 2012.

Conclusion

PCHRU’s Researcher Mentoring Program appears to be a successful and efficient model for developing research skills and facilitating dissemination of research findings amongst clinicians in primary and community health in SWSLHD. Further analysis is needed to understand the strengths and weaknesses of this approach, particularly around barriers to conducting research in clinical settings and timeframes needed to support novice researchers through the research process. The impact of evidence generated through this process on service delivery and policy also requires evaluation. Development of research and research-related activities in primary and community health will require ongoing engagement with primary and community health services as health structures change.

Conflicts of interest

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