research

Building research capacity

An exploratory model of GPs' training needs and barriers to research involvement

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AIMS To determine general practitioners' research training needs, and the barriers to involvement in research.
METHOD Semi-structured interviews with 11 GPs in rural and metropolitan South Australia, analysed using a grounded theory approach.
RESULTS General practitioners' perceptions about their research needs were limited by their own experience and focussed at an individual level. Overlapping needs and barriers emerged, categorised as: 'individual issues' (a lack of research training or experience, concepts and attitudes to research, and research interest) and 'systems issues' (funding arrangements for general practice, access to resources, opportunity for publication and the role of The Royal Australian College of General Practitioners [RACGP]).
DISCUSSION Our data provide an exploratory model that may assist in developing suitable strategies for research capacity building programs. General practitioners perceived both individual and systems solutions to building research capacity, including multifaceted interventions.

Less research is done in general practice than in other disciplines such as medicine, surgery and public health.[1] In 2000, the Commonwealth Department of Health and Ageing established the Primary Health Care Research Evaluation and Development (PHCRED) program to increase research capacity in primary care. To achieve this increase, there is a need to determine primary health care practitioners' research training needs and develop a research culture.

In the United Kingdom, the focus has been on the value of multidisciplinary research collaboration, the need for research relevant to primary care,[2–5] the need to set research priorities,[6] the value of research in promoting the use of evidence based medicine,[7–10] the need for dissemination strategies,[11–13] and frameworks for research in primary care.[8,14] Although research networks have been promoted as a way of developing research capacity in general practice and primary health care, there is little evidence of their effectiveness.[15,16]

Barriers to general practice or primary health participation in research include a:

- lack of feedback from funding bodies on unsuccessful applications[17]
- lack of awareness of the research resources available[18]
- culture that does not encourage GPs to

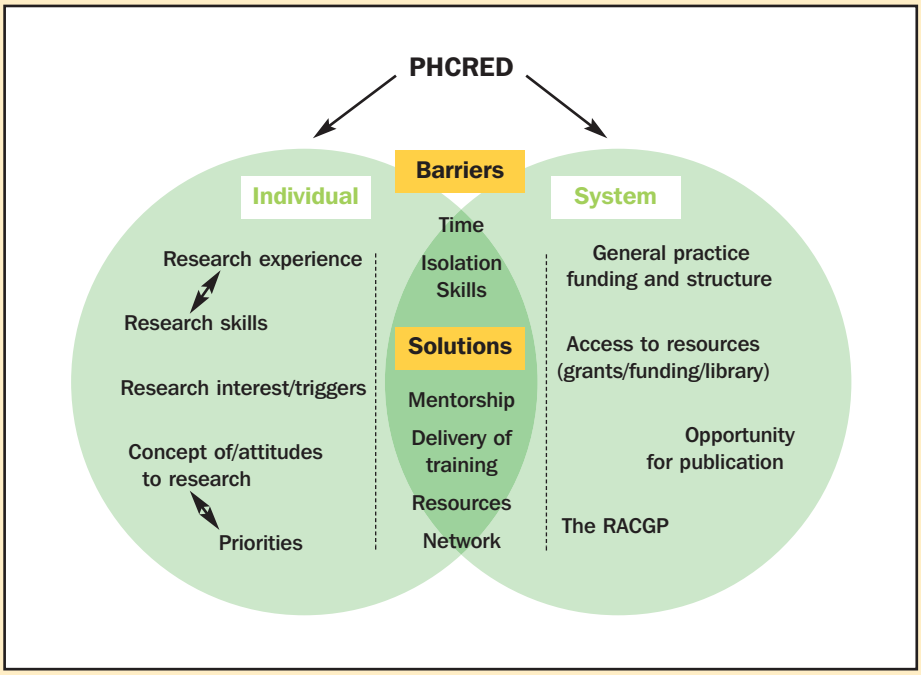

Figure 1. Emergent model

ask research questions,[18] and
- lack of time and staff to collect data, and lack of funding.[19]

We identified a need for further research to assist strategic development of the PHCRED program in South Australia, through allowing the GPs to set the agenda for research capacity building. General practitioners' attitudes and involvement in research have been reported.[18] We extended this study with specific reference to PHCRED, developing an exploratory conceptual model based on qualitative analysis, to assist the development of strategies for research capacity building in the GP workforce.

Method

Two rural and three urban divisions of general practice in South Australia agreed to distribute a flyer with their newsletter, asking GPs with an interest in doing research to fax back their agreement to participate in the study. In total, 665 GPs were invited to participate in the survey. Additionally, the three university departments provided details of GPs with a known interest in research.

From the 28 flyers faxed backed and the names provided by the PHCRED program coordinators, a convenience sample of 11 GPs available for interview during the study period was selected, and times arranged for either a telephone interview (n=10) or face-to-face interview (n=1). Selection ensured a cross section of rural and urban GPs. Interviews lasted 5–20 minutes. A predetermined interview schedule included a brief outline of the PHCRED program, questions designed to explore interviewees' experiences with research, their levels of research skills, and perceived barriers to undertaking research. All interviews were tape-recorded and transcribed for analysis. A grounded theory approach was used to identify and group emergent themes into an exploratory model.[20] Concepts were identified and a consensus on the coding framework reached.

Results

Figure 1 illustrates the range of identified concepts. Concepts were categorised as individual issues or systems issues. Overlapping barriers and solutions are shown.

Individual issues

Nine GPs reported having done some research, understating its significance (*Table 1A*). Individual research interests were often related to clinical practice (*Table 1B*). Some responses highlighted the gap between what might be considered research and practice based studies that GPs could readily conduct. For instance, some thought research was randomised controlled trials and statistical analysis that required advanced skills. Even though one interviewee saw a role for audit and collecting data for those purposes, s/he suggested that 'research' was more about statistical analysis of data. Different attitudes to the role of research in general practice emerged.

Some felt they lacked specific research skills and they perceived this as a barrier to undertaking research. Perceived training needs often related to data collection and analysis, particularly statistical, rather than fundamental requirements such as framing a research question. Paradoxically, interviewees with little or no research experience were not in a position to say what skills they needed to acquire (*Table 1C*). Other specific needs were referencing software, how to conduct literature searches using electronic databases and obtaining ethics approval.

Systems

Lack of time was considered a major barrier to research. Despite the resources of PHCRED, including bursaries and fellowships, interviewees often saw no way out of their current time constraints. The fee-for-service funding of GPs, the business structure of service provision, and workloads were also considered barriers. One interviewee suggested the funding of a practice nurse would alleviate workload demands (*Table 1D*).

General practitioners were asked whether they were members of the RACGP and whether they perceived a role for the college in helping GPs

Table 1. Representative comments

Individual issues

A 'Yeah a little bit (of research), not very much…I have done a survey that I hope to publish…but I haven't got any further with that. We coordinated and did a combined survey and we used a few instruments and tools to try and increase the validity of the survey…and I just wanted to publish how successful our process was'.

B 'My interests are women's health and paediatrics. There is certainly a lot going on with HRT at the moment. Also, I have heard a lot of stuff going on with osteoporosis and that sounds quite interesting. I haven't had any specific thoughts, but they are the two areas that I deal with. Most of my patients would fall into those two groups'.

C 'What I'd like is the statistical analysis, I have some, but I'll be honest I wasn't that interested then, but now I am interested, and I want to know more about it, in fact with this project I need help with my statistics'.

Systems issues

D '…there's this business administration but now there's more paper work involved in showing your level of care for patients in terms of getting the enhanced primary care items and other items…it feels like there's lots of demands for GPs and so thinking about research, I can understand why it would come pretty low on a lot of GPs' priorities'.

E 'Just imagine who would get the grants? They're the people who get the grants all the time, and the people who least deserve it…probably the type of research projects that won't yield a lot of useful information anyway'.

F 'I've got a study that I could publish but I know that it wouldn't matter how well I wrote it up, it won't get published because they'll be critiques of methodology, they'll say retrospective analysis isn't good enough…'

Solutions

G 'I think you probably need almost a traineeship, you need someone to hold your hand a little bit to get started…because the leap from just general practice to being confident in research…it's quite a leap to start with'.

conduct research. Although there was little comment, one GP noted the value of the provision of journal articles. Some GPs expressed frustration at the lack of funding for primary care research and their own lack of skills in grant application writing (*Table 1E*). Limited access to journal articles was also raised as a potential barrier as was limited opportunities for publication of primary health care research were noted (*Table 1F*).

Solutions

Proposed solutions included overcoming the isolation of doing research by links with a mentor, being part of a network with colleagues or other interested researchers and extensive training in research skills (*Table 1G*).

There was no clear consensus on delivery of training, with suggestions ranging from supplying reading materials to computer based learning, evening seminars, and weekend or day time sessions. Face–to–face learning rather than distance methods were preferred. For some rural practitioners this would require attendance at regional centres, such as a technical and further education college with facilities for searching electronic databases.

Some GPs who had already drawn on the resources of the PHCRED program referred to benefits such as funding for time out from practice and library searches. However, there were few other comments on the role of PHCRED.

Discussion

These interviews provide an exploratory model that may assist in developing suitable strategies for research capacity building programs. One of the limitations is that until GPs embark on their own research, they may not be fully aware of gaps in their knowledge and skills. Another limitation is the small sample. However, we identified specific issues for some GPs, and these can be compared to previously identified systems related barriers. They could be addressed through multilevel strategies, including multidisciplinary research collaboration and setting research priorities.

Experiences and needs varied, not only from professional to professional, but also at different career points. There is therefore no panacea for building research capacity. However, there are some clear messages for the PHCRED program. Resources such as statistical support, seeding grants and assistance with library searches have matched the type of support identified as relevant in this study.

To prevent isolation, there may be a role for PHCRED to place more emphasis on mentoring and to link with common research topics as well as to provide a network through which to explore research issues. Few data exist to demonstrate whether networks can realise this potential.[15] There may be a need for further exploration of the role of the RACGP and potential links with organisations such as GP training consortia. While supporting individuals is important, there is also a place for programs such as PHCRED to lobby for systems changes to promote research activity at primary care level, including grant funding.

Our findings corroborate those of a recent Queensland study.[18] Our model has suggestions for developing the PHCRED

program. Building research capacity is a lengthy process. The adoption of strategies to address both individual and systems issues may be important to the success of the PHCRED program.

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Implications of this study for general practice

- Barriers to conducting research have been identified at an individual and systems level.
- GPs wanting to conduct research may need to identify local supportive networks.
- GPs may become aware of specific skills they need to further their research only after beginning that research.
- Any strategy aimed at building research capacity should address the individual needs as well as influence systems change.

Conflict of interest: none declared.

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