Primary health care research — essential but disadvantaged

Julie J Yallop, Brian R McAvoy, Joanne L Croucher, Andrew Tonkin and Leon Piterman on behalf of the CHAT Study Group

ABSTRACT

- Primary health care is the foundation of effective, sustainable population health and is associated with higher patient satisfaction and reduced aggregate health spending.
- Although improving patient care requires a sound evidence base, rigorously designed studies remain under-represented in primary care research.
- The pace of research activity in general practice and the rate and quality of publications do not match the pace of structural change or the level of funding provided.
- Recruitment difficulties are a major impediment, fuelled by general practitioners' time constraints, lack of remuneration, non-recognition, and workforce shortages.
- Radical reform is required to redress imbalances in funding allocation, including: funding of GP Research Network infrastructure costs; formalising relationships between primary care researchers and academic departments of general practice and rural health; and mandating that research funding bodies consider only proposals that include in the budget nominal payments for GP participation and salaries for dedicated research nurses.

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Our aim in this article is to review the status of primary health care research in Australia, focusing on issues of recruitment of general practitioners and patients, funding, and research capacity.

Essential . . .

International studies show that the strength of a country's primary health care system is associated with improved population health outcomes for all-cause mortality, all-cause premature mortality, premature mortality from major respiratory and cardiovascular diseases (including stroke), cancer mortality, infant mortality, low birth weight, and self-rated health.[1,2] Furthermore, increased availability of primary health care is associated with higher patient satisfaction and reduced aggregate health spending.[2]

Higher quality patient care requires a sound evidence base derived from high quality research and development, and the motivation for pursuing research in primary care should be to inform clinical practice.[3,4] However, it is now widely acknowledged that many of the decisions made in routine general practice do not have a supporting evidence base.[3-5]

. . . but disadvantaged

Health resource allocation in most countries still favours hospitals and specialist care.[6] This applies to clinical services as well as research. Sadly, but not surprisingly, there are shortcomings in primary health care research nationally and internationally, in terms of both quality and quantity.[7,8] A survey of public expenditure on primary care research in Australia, New Zealand, the United Kingdom and the Netherlands found that the average was less than $1.50 per capita per annum, in contrast to the international average expenditure on health and medical research of $28 per capita per annum.[9] GPs publish less research than specialists.[10] In Australia throughout the 1990s, there was one publication per 1000 GPs per year, much lower than the output for surgeons (60), physicians (100), and public health physicians (150).[11] Although there was a fivefold increase in the number of published Australian general practice research papers from the 1980s to the 1990s, including publications in international journals, their focus was limited.[12] Only around half of the general practice publications related to clinical topics, and about a third involved National Health Priority Areas.[12] Sixty-eight per cent of the research conducted in the 1990s was observational, 41% being purely descriptive with no analytical component, and only 5.1% involved randomised controlled trials (RCTs).[12]

Recent improvements

From a previous relatively low base, funding for general practice or primary heath care (PHC) research is increasing. This is a positive development necessary to ensure that clinical research conducted in the usual care environment will help clinicians make informed decisions about the best treatment for their patients.[13] Between 1990 and 1999, the government-funded General Practice Evaluation Program allocated close to $13 million to support competitive funding for evaluation research in general practice.[14] Further funding was provided in 1999–2000 by the Department of Health and Ageing to support the ongoing development of general practice and the Divisions of General Practice — about $8.1 million for 82 projects across 50 Divisions through the general practice National Innovations Funding Pool.[15] More recently, in the 2004–05 budget, the Australian Government committed $302.4 million over 4 years to the Divisions to assist general practices provide services to the community and achieve improved health outcomes.

In 2000, the Australian Government introduced the Primary Health Care Research, Evaluation and Development (PHCRED) strategy, a $50 million, 5-year program incorporating four key components:

- a PHC research priority setting process; and
- funding for PHC research, evaluation and development capacity-building for university departments of general practice and of rural health;
- establishment of a national PHC research institute;
- a general practice and PHC research program, encompassing investigator and priority-driven research, as well as scholarships and fellowships.

It is very encouraging that the Australian Government is continuing to assure sustainability by extending and increasing funding through the PHCRED strategy, but research capacity-building is time-consuming. In the United States, such measures are generally thought to take 10–15 years to have an appreciable effect.[16] Furthermore, UK experts recommend that expansion should not occur rapidly, that the rate must be sustainable, and

Recruitment in the Chronic Heart-failure Assistance by Telephone study

The Chronic Heart-failure Assistance by Telephone (CHAT) study is a national randomised controlled cluster-design trial. It tests a "system of care" designed to support general practitioners and their patients with chronic heart failure.[22] This study is particularly relevant to general practice because of its discipline-specific focus, a feature identified as a key enabler needed to increase research capacity in rural primary health care.[23]

Experienced researchers set out to recruit around 200 GPs Australia-wide to enrol more than 600 patients with chronic heart failure (mean of about three patients per GP). As there are more than 22 000 registered GPs in Australia and chronic heart failure is a common chronic disease, researchers estimated recruitment would take no longer than 12 months.

A comprehensive suite of proven recruitment methods was implemented. This included obtaining reliable data to estimate patient availability, publicising the study via the Divisions of General Practice and journals of general practice, engaging cardiologists to act as "local champions", and sending one-page "fax back" expression-of-interest letters directly inviting GPs to take part. Regular newsletters were sent to participating GPs and patients to provide encouragement and feedback. Face-to-face visits were excluded because of cost, distance and timelines.

Slow recruitment necessitated the development and implementation of several additional, innovative strategies. For example, we sought extra funding to broadcast a satellite TV program over the Rural Health Education Network, focusing on improving outcomes for rural and remote patients with chronic heart failure, as well as recruiting GPs into the study.

Two years later, although more than 250 GPs have enrolled, only 320 patients have been recruited. This is despite compelling evidence from a recent Australian study that high rates of chronic heart failure continue.[24] While recruitment is ongoing, the results so far reflect the general malaise of general practice research. Poor response rates have been previously shown as common in research projects[20] and GP surveys.[25]

Of the GPs contacted regarding the CHAT study, less than 3% eventually enrolled. Moreover, of those GPs who have been enrolled for 3 months and more, 51.6% have yet to commence recruiting patients. ◆

that dashes for growth should be avoided.[3] Although international indications are that the network approach is proving to be successful in developing and building research capacity,[17] there is still a long way to go.[18]

Ongoing difficulties

Although RCTs are the best study design for assessing an intervention because they reduce confounding and bias,[19] rigorously designed studies remain under-represented in primary care research. Moreover, recruitment difficulties impede many studies in primary care.[20] The costs of failed trials are significant, and include wasted resources and the discouragement of primary care professionals from cooperating in further research. As a consequence, unsuccessful trials can have a critical effect on an already inadequate primary care research base.[21]

In the Box, we describe the recruitment experience from a current large Australian trial supported by the National Health and Medical Research Council (NHMRC). This helps illustrate the difficulties continuing to face general practice research and researchers. Significant proportions of non-recruiters have also been observed in other studies.[26] This suggests that, although GPs are interested in research, they face practical barriers to full participation. Oft-cited impediments include time pressures and the lack of adequate compensation to offset costs.[20,27,28] GPs should have ownership of research in which they are involved. It is critical to ensure their full engagement in the design and implementation stages, and paramount to recognise their contribution fully.

The pace of research activity in general practice and the rate and quality of publications do not match the pace of structural change or the funding provided by government to support such change. For example, $75 million are allocated annually to Divisions of General Practice, whereas $15.8 million, $9.4 million, $12.9 million, $33.9 million, and $76 million, respectively, are allocated for specific initiatives such as diabetes management plans, asthma management plans, the cervical screening program, the Better Outcomes in Mental Health program and the Medicare Plus package. This compares with $12.5 million of research funding annually over 4 years to support the PHCRED program.

The $1.5 million Primary Health Care Researcher Development Program aims to increase the number and range of people with knowledge and skills in PHC evaluation and research by targeting PHC workers, graduates of other disciplines working within PHC, and consumers. To date, it has not significantly increased GP participation in research, but has increased the number of non-GP researchers working on GP research projects. At the time of reporting, of the original allocation of 60 placements, 54 were filled, of which 16 were GPs and 38 were non-GP researchers.[18] This is fine, but it does not overcome the problem that GPs are still required to recruit their patients into clinical research trials and provide data to measure the efficacy of these interventions. Significant success has occurred when practices have been funded for participation in research, for example, in the National Primary Care Collaborative and in the Second Australian National Blood Pressure Study, where dedicated "research" nurses have reduced the burden of active participation for the GPs.[29,30] Recruitment success has also been achieved when GPs are provided with a nominal payment for each patient recruited, as compensation for costs associated with participation.[30,31]

Unless there is a significant injection of government funds to build and support dedicated clinical GP research networks (annual infrastructure costs in the US are estimated to range from US$69 700 for a basic network to US$287 600 for a moderately complex network),[32] we may find that the corporate health sector, supported by the pharmaceutical industry, will be driving the future clinical research agenda in general practice.[33]

Conclusion

It is time to review funding and capacity-building and to acknowledge that the potential to financially support non-GPs (eg, nurses, psychologists and epidemiologists) to work as researchers in general practice may yield better outcomes than hoping that GPs in the current system will metamorphose into researchers. Coupled with practice incentive payments for participation in accredited research projects, this may improve recruitment, participation and outcomes.

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Competing interests

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Author details

Julie J Yallop, NZRN, Senior Research Fellow[1]
Brian R McAvoy, MD, FRACGP, FRCP, Deputy Director[2]
Joanne L Croucher, BA, BSc(Hons), Research Assistant[1]
Andrew Tonkin, MB BS, MD, FRACP, Head, Cardiovascular Research Unit[1]
Leon Piterman, MMed, MRCP(UK), FRACGP, Head[3]

1 Department of Epidemiology and Preventive Medicine, Faculty of Medicine, Nursing and Health Sciences, Monash University, Melbourne, VIC.
2 National Cancer Control Initiative, Melbourne, VIC.
3 School of Primary Health Care, Faculty of Medicine, Nursing and Health Sciences, Monash University, Melbourne, VIC.

Correspondence: julie.yallop@med.monash.edu.au

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