Primary care research — what in the world is going on?

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ABSTRACT

- Primary care research has been described as a "lost cause", and, although this claim has been strongly refuted, general practitioners publish less research than their colleagues in surgery, medicine and public health. Despite a fivefold increase in Australian general practice research papers from the 1980s to the 1990s, fewer than half of these focused on clinical topics.
- Trying to establish a global figure for expenditure on general practice and primary care research is difficult, but data show that public expenditure for primary care research is minimal in Australia, New Zealand, the Netherlands and the United Kingdom — fewer than $1.50 per capita in 2002–2003.
- Compared with hospital- and laboratory-based research, primary care receives significantly fewer resources, ranging from 3.2% of total public expenditure on health and medical research in the Netherlands to 6.8% in New Zealand.
- Government-led investment in interventions such as strengthening primary care departments and colleges and supporting primary care academics, establishing practice-based networks, fostering international initiatives for cross-national efforts, and engaging individual primary care practitioners in research projects, are all required to build research capacity in primary care.

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Two years ago, an article in *The Lancet* asked "Is primary-care research a lost cause?",[1] referring to a "loss of direction — and confidence" in the primary care research community. This notion was strongly refuted as unhelpful by Mant and colleagues,[2] who stressed the value of primary care research, stating that "Investment in research in primary care must be recognised not only as an investment in the generation of clinical evidence, but also an investment in clinical leadership and service quality". However, Australian general practitioners, along with their international colleagues, protest that they are undervalued, overworked and no longer in control,[3] which suggests that they may have little time or resources to undertake research. Furthermore, the ascendancy of biomedical research has meant that, in most developed countries, a clinical academic career track is deeply unattractive in terms of salary, security and workload.

In 2003, Van Der Weyden exhorted general practice to move into the 21st century, pointing out that Australian general practice has some "catching up" to do in the area of research performance.[4] Certainly GPs publish less research than specialists;[1] in fact, markedly less considering how many more practising GPs there are compared with specialists. In Australia throughout the 1990s, there was only one research publication per 1000 GPs per year, whereas comparable figures for surgeons, physicians and public health physicians were 60, 100 and 150, respectively.[5] On a more positive note, there was a fivefold increase in the number of published Australian general practice research papers from the 1980s to the 1990s, with an associated increase in international publications.[6] However, a comprehensive review of Australian general practice research between 1980 and 1999 found that fewer than half of the publications focused on clinical topics, and only about a third related to the National Health Priority Areas (cardiovascular health, cancer control, injury prevention and control, mental health, diabetes and asthma).[6] Sixty-eight per cent of the research conducted in the 1990s was observational, 41% of these studies were purely descriptive with no analytical component, and only 5% were randomised controlled trials.[6] Sixty-two per cent of this research was published from the universities, most coming from departments of general practice, where staff spend an average of a quarter of their time on research.[7]

The case for more primary care research

There are several cogent reasons why research is needed in general practice/primary care:[8]

- Research improves patient care;
- Research is important for teachers of general practice, providing an evidence base for best practice; and
- Research stimulates intellectual rigour and critical thinking.

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A recent editorial in *Annals of Family Medicine* points out that "primary care research is the missing link in the development of high-quality, evidence-based health care for populations."[9] It makes the bold claim that "Failure to increase investment in *family medicine research* will be to lose a great opportunity to make the world a better place for all inhabitants". Although there has been an international trend in the developed world towards primary care oriented, evidence-based health care systems, this has not been accompanied by an equivalent investment in research efforts.[9] Despite work by Barbara Starfield (Professor, Johns Hopkins University Schools of Public Health and Medicine, Baltimore, USA) clearly demonstrating that health care systems with a higher primary care orientation tend to produce better levels of population health at lower costs,[10] health care funders, planners, publishers and others often have poor understanding of the current contribution of family medicine research and its potential to improve health.[11] Research in primary care has made a difference to clinical practice in many areas such as prevention (hypertension and cardiovascular disease[12]), management of illnesses that seldom reach hospitals (sore throat[13,14] and acute otitis media[15]), prehospital diagnosis of serious conditions (cancer[16]), and management of chronic diseases (diabetes[17] and heart failure[18]).

Carol Herbert (Professor of Family Medicine and Dean of Medicine and Dentistry at the University of Western Ontario, Canada) believes that to advance family medicine research "we must ensure that trainees have a positive research attitude, develop academic clinician–researchers, lobby for primary care research funding, support

Public expenditure on research and development (R & D) for all health and medical, and for general practice and primary health care

	R & D ($ per capita)*		
	All health and medical (1995)[20] [A]	General practice/ primary health care (2002–03) [B]	[B] as a proportion of [A]
Australia	$28	$1.16[8]	4.1%
The Netherlands	$34	$1.08†	3.2%
New Zealand	$11	$0.75‡	6.8%
United Kingdom	$34	$1.48§	4.4%

* Population figures obtained from <http://www.world-gazetteer.com>.
† Netherlands School of Primary Care Research. <http://www.researchschoolcare.nl>.
‡ New Zealand Health Research Council. <http:\\www.hrc.govt.nz>.
§ Professor C Bailey, Head of Research and Development, Department of Health and Social Care North, Leeds, UK, personal communication, Feb 2003. ◆

practitioners who wish to do research in their own practice, sustain practice-based research networks, and study important questions".[19]

The real world

All these laudable initiatives require funding, but how seriously is the world responding to these entreaties? Two years ago, I attempted to calculate expenditure on general practice and primary care research and development in four countries, and to compare these amounts with overall public expenditure on health and medical research and development. I did this by accessing the websites of national health research funding agencies or contacting key individuals in these organisations. Trying to establish global figures for expenditure on general practice and primary care research is difficult, due to:[8]

- overlap between general practice and primary care;
- overlap between research and service development;
- multiple sources of funding;
- overlap between project funding, capacity building and information support; and
- some research in general practice/primary care being "hidden" within larger programs such as alcohol and drugs, HIV, and health technology assessment.

I have been unable to update the figures I obtained at this time because several of the websites no longer contain specific figures for general practice and primary care research funding — perhaps another reflection on how this area is viewed by funding bodies and governments. Allowing for these constraints, the Box shows public expenditure on health and medical research and development compared with that in general practice and primary care in Australia, the Netherlands, New Zealand and the United Kingdom. By definition, these figures exclude funding from industry, pharmaceutical companies, charities, private foundations and trusts.

Despite having very different health care systems, all four countries invest a minimal amount of public funding in general practice and primary care research (less than $1.50 per capita). Compared with hospital- and laboratory-based research, primary care receives significantly fewer resources. The relative proportion of total public expenditure on health and medical research and development ranges from 3.2% in the Netherlands to 6.8% in New Zealand. In the light of these figures, berating general practice and primary care for their poor performance could be seen as a form of victim blaming.

The disparity between the contribution of primary care to the health of nations and the investment in research in this sector that these rough figures reveal is scandalous. It is particularly ironic that this variant of the inverse care law[21] (ie, the availability of good medical care tends to vary inversely with the needs of the population served), which was first described in general practice over 30 years ago, appears to be alive and well in the field of primary care research.

A comparable disparity is highlighted in a recently published report from the Global Forum for Health Research, monitoring international financial flows for health research.[22] The report shows that although annual global spending on health research has more than tripled between 1990 and 2001, the "10/90 gap" persists — 10% of the global budget for health research and development is spent on 90% of the world's health problems. Put another way, 90% of the global budget focuses on 10% of the world's health problems, largely those relating to high-income countries. There is continuing underinvestment in health research and development for the needs of low- and middle-income countries where primary care is of paramount importance.

Real solutions

It has been suggested that national primary care research programs might need special funding to enable them to become established because of "bootstrapping" problems (becoming established from a low resource base), their track record and the bias towards basic research.[23] Increases in research activities in primary care research are always going to be hampered by the current lack of infrastructure and expertise.[23] The Australian Government's Primary Health Care Research Evaluation and Development Strategy, introduced in 2000, was established to address these needs and has provided a much-needed boost to university departments of general practice and rural health.[24] Proposals to increase primary care research include government-led investment in interventions such as strengthening primary care departments and colleges and supporting primary care academics; establishing practice-based networks; fostering international initiatives for cross-national efforts; and engaging individual primary care practitioners in research projects.[23] These proposals have been incorporated by the World Organisation of Family Doctors (WONCA) into nine recommendations to build research capacity,[11] but implementation will require dedicated funding. Until there is a significant increase in investment in this critical sector, primary care research may well remain a "lost cause".

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Competing interests

None identified.

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