

## General practice research networks: gateway to primary care evidence

*Research networks can change the culture of biomedical science*

WHEN MY PREDECESSOR Frans Huygen, the Founding Chair of General Practice of the University Medical Centre, Nijmegen, the Netherlands, stood to give his first lecture (on measles) in 1968, the head of paediatrics had tabled an official complaint before he reached the rostrum. Measles was part of the paediatric domain, and intrusion by a general practitioner was not acceptable. It would have been easy, even in the 1960s, to state that most cases of measles were treated in general practice and GPs were the best qualified to teach students about it. But such anecdotal information could not officially be acted upon. The experience triggered a project at the Nijmegen Department of General Practice for collecting morbidity data.<sup>1</sup> This has since developed into a unique database for research,<sup>2</sup> with an influence on general practice and undergraduate teaching that continues today. What was founded in Nijmegen in 1971 would now be called a “practice-based research network”.

In fact, the systematic exploration of the content of daily practice is the vital first step in the process of developing general practice.<sup>3</sup> Founding practice-based research networks can enhance this process. But the role of research networks stretches beyond this initial development phase. General practice research networks in the United States, the United Kingdom and the Netherlands have, by tapping into patient care, made it possible to recruit large numbers of unselected patients from different practices for epidemiological and clinical research, to conduct effectiveness studies, and to study the process of care in general practice.<sup>2</sup> To meet the local or regional needs of general practice, research networks have had to adapt. For instance, whereas networks in north-western Europe have focused on non-communicable chronic diseases,<sup>4</sup> the South African practice-based research network, not surprisingly, concentrates on care of patients with HIV/AIDS.<sup>5</sup> These different targets can lead to different organisational requirements, and should make us wary of standardised models. In this issue of the Journal, Gunn (*page 63*) reviews general practice research networks for Australian primary care, building from the UK and Dutch experience.<sup>6</sup>

Given the strong historic links, it is attractive to base Australian developments on the vast experience in the UK, but Gunn rightly emphasises that the important thing to consider is what networks produce, rather than how they are constructed. This is in line with European experience, where research networks have had to be flexible — not just in their clinical orientation but, more importantly, in how they fit the way biomedical research is organised, because research networks are part of the broader academic develop-

ment of general practice. In the UK,<sup>7</sup> the National Health Service is an important financial supporter of research and development, including research networks. More recently, the US has seen similar developments.<sup>8</sup> In the Netherlands, where universities have traditionally played a key role in general practice research, research networks are linked to university departments of general practice.<sup>9</sup> These organisational differences have implications: a university-based structure places practice networks in direct contact with academic research programs, suggesting a “top-down”

approach, whereas stimulating practitioners to initiate research would enhance a more “bottom-up” generation of questions from actual patient care.

Research networks need both links. A strong grassroots general practice link is vital to generate research questions to improve

patient care. However, a connection to the overall organisation of biomedical research is essential to ensure scientific rigour. In the UK, Australia, the US and the Netherlands, practice networks are closely connected to centres for advanced education for research in primary care,<sup>10</sup> and these centres of excellence, with their comprehensive research programs, can play a pivotal role in ensuring quality research. Research networks are a tool, not a means in themselves, so their organisational structure should be secondary to scientific and healthcare considerations.

The complexity of general practice lies in the context of disease: the interaction between the disease and the patient’s family and socioeconomic circumstances, the setting of the doctor–patient encounter, and values attached to illness and treatment.<sup>11</sup> A major challenge for research networks is to include this context in their data. A successful example is the International Study of Errors in Family Practice, in which practice-based research networks in six countries — including Australia<sup>12</sup> (*page 68*) — were able to collect data on errors in a way that allowed the contribution of medical and patient-related factors to be analysed. From this it will be possible to draw realistic recommendations to prevent errors in the general practice setting.

The World Organization of Family Doctors (WONCA)<sup>13</sup> has formed a group that brings together the research leaders and participating GPs from practice-based research networks in different countries.<sup>5</sup> This group is open to any general practice research network in the world, and is particularly trying to include networks in developing countries. Meetings are organised to share experience and develop methods for data collection. In addition, an Internet mailing list provides an ongoing forum. This group is testimony to the coming of age of general practice, and its

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mission is likely to reach beyond general practice — scientists are increasingly aware of the need for community-based longitudinal data to evaluate innovative developments such as advances in genetics.

Research networks can change the culture of biomedical science by shifting the focus of research from technology in the hospital to patients and their diseases in the community. Furthermore, networks can build general practice research capacity. The Dutch university-based research networks are a case in point, having made a substantial contribution to academic primary care research capacity and output, and the development of evidence-based general practice guidelines.<sup>9</sup>

General practice research networks can have substantial impacts on research, and their structure and financing require the attention of the scientific community. Ultimately, though, their future depends on the quality of their contribution to biomedical research.

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## VIEWPOINT

# Should Australia develop primary care research networks?

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### ABSTRACT

- Primary care research networks have emerged in other countries over the past decade. Rigorous data to determine the level of their achievement are lacking.
- Research networks are a part of the current Australian primary healthcare research capacity building program, yet we have no systematic approach to their introduction.
- Australian networks should build upon international experience and should not duplicate the role of Divisions of General Practice.
- Each network should have clearly defined aims, strategies and key indicators against which to evaluate performance.

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For editorial comment, see page 62.

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THERE IS GENERAL AGREEMENT that primary care needs a strong research culture and evidence base if it is to deliver cost-effective healthcare.<sup>1-6</sup> Between 2001 and 2004, the Commonwealth Government will spend \$50 million on a program of Primary Healthcare Research Evaluation and Development (PHCRED). One component of PHCRED funds university departments of general practice and rural health to “‘build capacity’ in the area of primary health care research”<sup>7</sup> through research skill development, the development of research networks and actual research.

Research networks developed as a tool to increase the research capacity of primary care practitioners and to promote evidence-based practice.<sup>1,6</sup> But have these objectives been met? In this article, I review the major achievements and challenges of research networks overseas and discuss the role of research networks in Australia.

### What are we building upon?

Australian academic general practice is only 25 years old.<sup>8</sup> There are 11 departments of general practice, yet the ratio of GPs in academic positions compared with specialist physicians<sup>8</sup> and the research output of general practice<sup>9</sup> remain low. The General Practice Evaluation Program