



Melinda Soós

Meredith Temple-Smith

Jane Gunn

Kate Johnston-Ata'Ata

Marie Pirotta

# Establishing the Victorian Primary Care Practice Based Research Network

## Background

Practice based research networks comprise research academics and primary care practitioners who have the mutual goal of supporting the development and implementation of research that is necessary to build the evidence base that informs both primary healthcare practitioners and policy makers. This article describes the establishment of the Victorian Primary Care Practice Based Research Network (VicReN), which was established in 2007 and has grown to over 100 members.

## Method

The aim of this article is to discuss the key factors in the development of the organisational structure of VicReN, and to describe the outcome measures used to evaluate the network.

## Results

VicReN has a diverse primary care membership. Members' different research needs have been addressed through numerous capacity building activities. The absence of core funding beyond the development phase has led to an innovative funding model.

## Discussion

This article outlines a viable and sustainable background practice based research network model in the Australian environment that may assist other academic departments of general practice and rural health interested in establishing a practice based research network.

**Keywords:** research support as a topic; general practice



Practice based research networks (PBRNs) are associations of primary care practices that form 'laboratories' wherein research is performed and outcomes are implemented.<sup>1-3</sup> Practice based research networks are organisational structures that unite academic researchers and primary care practices to address questions relevant to the local health needs of primary care practitioners. These networks foster a research culture, build capacity and improve quality among member practices.<sup>2,4-7</sup> To be applicable and meaningful, research about primary care must be undertaken within primary care settings<sup>8</sup> by clinicians who have established good patient relationships.<sup>9</sup>

Practice based research networks grew out of early disease surveillance networks in the United Kingdom (UK) and the Netherlands over 40 years ago.<sup>10-12</sup> The PBRNs may undertake clinical, health systems, health services and education research,<sup>13</sup> collect morbidity data, undertake multicentre trials<sup>12</sup> and develop research methodology appropriate to primary care.<sup>14</sup>

Much has been written about the development and growth of PBRNs in the UK,<sup>12,15</sup> the United States<sup>9,16</sup> and The Netherlands.<sup>14</sup> Australian PBRN development is relatively recent and on a smaller scale.

Six main Australian PBRNs have been established within the past 10 years (*Table 1*), largely supported by the Commonwealth Strategy for Primary Health Care Research, Evaluation and Development (PHCRED), operational since 2000.<sup>17</sup> The strategy's Research Capacity Building Initiative has funded university departments

of general practice and rural health to enable training and support for early career researchers<sup>18</sup> and provide PBRNs with an organisational framework.<sup>1,19</sup>

The PHCRED strategy has also helped foster the development of several non-PBRN networks of primary healthcare professionals motivated to learn more about and participate in research events. These networks are managed by PHCRED coordinators based in academic departments of general practice and rural health across Australia. The PHCRED Tri-state Program is an example of such a network, coordinating five academic departments across the Northern Territory, South Australia and Victoria, and linking members into PHCRED-led research events, conferences and workforce development activities. The South Australian Research Network (SARNet)<sup>20</sup> is now incorporated into the PHCRED Tri-State Program as a member list and is no longer a PBRN. Significant funding and dedicated research administration would be required were SARNet and other non-PBRN networks to become PBRN.

This article describes the establishment of the Victorian Primary Care Practice Based Research Network (VicReN).

## Establishing VicReN

In mid-2006, the Department of General Practice of the University of Melbourne, hosted a dinner for 60 primary care professionals and through this, five general practitioners ultimately became VicReN's foundation members. Together with academic staff, these members formed VicReN's first committee. VicReN's vision for its activities was to:

- encourage GPs to ask questions about important clinical and health issues facing

**Table 1. Aims, demographics and geographical features of current Australian Practice Based Research Networks**

| Network   | Geographical boundaries   | Date established | Aim  | Number of participants and/or practices  |
|---|---|------------------|--|--|
| The Greater Green Triangle Research Network – GGTRN                 | Apollo Bay (south) to Horsham (north) in Victoria and across to Bordertown and Keith in South Australia | 2001–2002        | <ul style="list-style-type: none"> <li>• Improve research performance</li> <li>• Provide sites in which to conduct research in both general practice and hospitals</li> <li>• Build a culture of measurement among local health services</li> <li>• International reputation for collaborative care in depression, heart disease and diabetes and diabetes prevention</li> </ul> | 10 practices<br>All general practice registrars in Greater Green Triangle GP Education and Training Program                    |
| The North Queensland Practice Based Research Network – NQPBRN       | North Queensland from Sarina (south) to the Atherton Tablelands (west)                                  | 2007             | <ul style="list-style-type: none"> <li>• Undertake relevant and important grassroots research within the network</li> </ul>  | 30 from 10 practices   |
| Network of Research General Practices – NRGp                        | Hunter, Central Coast and New England regions of NSW  | 2007             | <ul style="list-style-type: none"> <li>• Build capacity</li> <li>• Conduct clinical research</li> </ul>  | Over 220 practice staff including 94 GPs from 15 practices   |
| Primary Healthcare Research Network-General Practice – PHReNet-GP   | Southwest, south and eastern Sydney, Greater Murray, Illawarra and Shoalhaven regions                   | 2007             | <ul style="list-style-type: none"> <li>• Support the coordination of general practices and divisions of general practice in high quality, priority driven primary healthcare research that makes a difference to clinical practice and health policy</li> </ul>  | 67 GPs and general practice registrars from 51 practices   |
| Practice Network – PracNet  | Canberra and its environs in NSW – Bungendore, Young, Cooma, Bega and Braidwood                         | 2006             | <ul style="list-style-type: none"> <li>• Involve GPs in research important to their practice</li> <li>• Improve GP research knowledge and skills</li> </ul>  | Currently 13 GPs (including two registrars) from 13 practices (nine city and four rural) – more to be recruited in 2010        |
| The Victorian Primary Care Practice Based Research Network (VicReN) | Victoria (with additional subscriber members interstate)  | 2007             | <ul style="list-style-type: none"> <li>• Spur the development of important and high quality primary care research that is relevant to clinical practice</li> <li>• To influence primary care policy making through its research</li> </ul>   | 84 general practices, 13 practice nurses, four chiropractors, three practice managers and nine primary healthcare stakeholders |

\* Multidisciplinary whole system networks – multidisciplinary approach to create cultural change

† Top down networks – led by professional researchers with an emphasis on high quality research

‡ Bottom up networks – led by GPs in the field with an emphasis on generating research relevant to clinical practice

| Typological model   | Member professions  | Main activities  |
|---|---|--|
| Multidisciplinary whole systems approach*                                   | <ul style="list-style-type: none"> <li>• Medical and nursing directors</li> <li>• Allied health managers</li> <li>• GPs</li> <li>• Division of general practice heads</li> </ul>    | <ul style="list-style-type: none"> <li>• General meetings with a 2 week annual writing retreat</li> <li>• Fortnightly writing group meetings</li> <li>• Project based meetings with the collaborating research practices</li> </ul>  |
| Multidisciplinary whole systems approach*                                   | <ul style="list-style-type: none"> <li>• GPs</li> <li>• Practice nurses</li> </ul>  | <ul style="list-style-type: none"> <li>• Practice nurse training and support</li> <li>• Practice visits to teach research methods</li> <li>• Dinner meetings for GPs to disseminate results and discuss new ideas</li> </ul>   |
| Elements of 'top down' <sup>†</sup> and 'bottom up' approaches <sup>‡</sup> | <ul style="list-style-type: none"> <li>• GPs</li> <li>• Practice nurses</li> <li>• Allied health</li> <li>• Practice managers</li> <li>• Administrative staff</li> </ul>            | <ul style="list-style-type: none"> <li>• Meetings</li> <li>• Annual research forum</li> <li>• Participation in research projects</li> <li>• Individual mentoring to develop research projects</li> </ul>   |
| Top down approach <sup>†</sup>  | <ul style="list-style-type: none"> <li>• GPs</li> <li>• Registrars and training providers</li> <li>• Divisions of general practice</li> <li>• Practice nurses</li> </ul>            | <ul style="list-style-type: none"> <li>• Piloting and development work of the University of New South Wales (UNSW) Centre for Primary Health Care and Equity (CPHCE) research projects</li> <li>• Participation in larger UNSW CPHCE led projects</li> <li>• PHReNet-GP is also supported by broader research capacity building activities such as developing individual GP-led research, mentoring, evidence based medical journal clubs, introductory level research skills workshops, quarterly research seminars, a writing group, workshops, drop-in advice sessions, and the PHReNetic e-newsletter</li> </ul> |
| Elements of top down <sup>†</sup> and bottom up approaches <sup>‡</sup>     | GPs   | <ul style="list-style-type: none"> <li>• Evening meetings every 6–8 weeks</li> <li>• Support from the unit research officer at each practice to assist with data collection, access to training sessions, research methods and computer software.</li> <li>• Assistance with statistical analysis and writing project findings for publication</li> <li>• Access to the ANU library, bulletin board/group email for sharing ideas</li> </ul>   |
| Elements of top down <sup>†</sup> and bottom up approaches <sup>‡</sup>     | <ul style="list-style-type: none"> <li>• GPs</li> <li>• Practice nurses</li> <li>• Practice managers</li> <li>• Chiropractors</li> <li>• Primary healthcare stakeholders</li> </ul> | <ul style="list-style-type: none"> <li>• Development of research relevant to primary care needs</li> <li>• Research capacity building activities including materials development and workshops</li> <li>• Frequent research project and quarterly committee meetings</li> <li>• Writing week</li> <li>• Regular and opportunistic member wide events</li> </ul>  |

their communities and assist in determining how best to answer these questions

- assist GPs to undertake research, and implement the findings into routine clinical practice
- facilitate research undertaken by the parent academic department
- offer members research training opportunities, including both direct education sessions as well as opportunities to become GP advisors on general practice based research projects.

A seeding grant from the University of Melbourne's Faculty of Medicine, Dentistry and Health Sciences established VicReN. Subsequently the PHCRED strategy supported its staffing. The Victorian Primary Care Practice Based Research Network was launched in May 2007.

Key university based VicReN personnel have specific responsibilities: the Director (overall operations),<sup>7</sup> Chair (day-to-day matters), and Research Training Coordinator (research and research training opportunities). Duties of the VicReN Coordinator include promotion of the network, managing membership and events, communications, provision of infrastructure to studies and identification of funding opportunities (Table 2). The Director, Chair, Research Training Coordinator and Coordinator attend weekly operational meetings to review VicReN activities.

The VicReN Committee provides overarching governance. It meets quarterly to discuss the network's direction and research agenda, and to plan activities. In addition to the academic staff, the committee includes nine volunteer clinicians – seven GPs and two practice nurses. Academic members facilitate the network and provide the necessary research expertise. Clinical members bring clinical experience, intuition, and questions for exploration.<sup>6</sup>

The Victorian Primary Care Practice Based Research Network offers three categories of free membership to suit members' interest and commitment: committee member, active researcher member, or subscriber member. On enrolment, VicReN briefly assesses the research interests and experience of new members with results to date showing nonacademic members to have significantly more research

interest than experience.<sup>20</sup> The Victorian Primary Care Practice Based Research Network has thus begun operations in a 'top down' manner, by academic staff upskilling novice members who are interested in research. Evaluation using the traditional outcomes of successful grant applications and publications is therefore inappropriate;<sup>6,9,21</sup> of more relevance is developing a research culture and then assessing its impact on members' skills, confidence and careers.<sup>22</sup>

Outcomes monitored by VicReN include change in membership, number of research projects developed, research materials and programs developed and presented, organisational partnerships formed, and number of members engaged in research, attending meetings and contributing to forums. Awareness of different capabilities and interests of members allows VicReN to tailor capacity building activities.<sup>6,20</sup> Members are invited to consider a research higher degree or a PHCRED Fellowship which supports primary care practitioners to undertake a research project.

Lack of reliable funding for PBRN activities, infrastructure, and research projects is the principal obstacle to realising the potential of PBRNs as research resources.<sup>3,10,16</sup> The PHCRED strategy was again evaluated in 2008 with funding extended until the end of 2010. This insecurity necessitates the consideration of alternate methods of funding to become self sustaining. Thus VicReN has developed an operational model of contributing intellectual capital and infrastructure, funded on a cost recovery basis, to ethical primary care research projects supported by major granting bodies. This process is managed by the VicReN Coordinator (*Table 2*). An example of a project serviced by the coordinator is the 'Aging care in general practice' study. The coordinators carried out the following procedures:

- sourced lists of geographically bound practices
- developed information packs
- registered ethics applications
- delivered GP recruitment meetings and audits
- ensured GP training
- administered the project and budget
- hired and trained seven casual data collectors

**Table 2. Components of the VicReN model of research services and project examples**

| <b>Aim</b>  |   |
|---|---|
| To facilitate collaborative general practice research by: <ul style="list-style-type: none"> <li>• ensuring that research projects are relevant to primary care, are ethical and of high quality</li> <li>• including GPs, practice nurses and other practice staff as partners on the project</li> <li>• gathering GP contributions about the way research could be conducted</li> </ul> |   |
| <b>Component</b>  | <b>Role</b>   |
| Academic GP   | Each research project associated with VicReN must have a chief investigator and/or associate investigator who is an academic GP. Projects should enable clinicians and their staff to learn more about research and reflect on their own practice, and be compensated for their participation   |
| GP advisor or practice nurse advisor  | A GP advisor (and/or practice nurse advisor) is crucial in providing input to the development and management of research projects and in particular, interventions. This is a paid position   |
| Forums  | When research projects involve multidisciplinary teams that cross professional and organisational boundaries, competing interests may arise. Forums between VicReN members and research project teams have been successful in refining interventions  |
| Network coordinator   | The VicReN coordinator provides research teams with advice on how to promote, implement and manage projects. The coordinator uses a pool of trained and experienced casual research staff to facilitate these projects and present them to interested parties and practices, undertaking audits and training of practice data and staff as well as costing services into research project budgets |
| Outcomes: These components help to ensure that the research projects are designed to meet the needs of general practice and respect the way in which it operates, thereby producing sustainable and successful research   |   |
| <b>Selected projects serviced by the coordinator</b>  |   |
| <b>Project</b>  | <b>Role of coordinator</b>  |
| Aging care in general practice study  | Coordinator sourced lists of geographically bound practices, developed information packs, registered ethics applications, delivered GP recruitment meetings and audits, GP training, administered the project and budget, and hired and trained seven casual data collectors. Oversaw all data entry and changes in protocol requirements   |
| WEAVE   | Coordinator recruited, trained and oversaw four staff required to recruit selected practices via telephone, and sourced one extra staff member to undertake practice audits   |
| HopSCOTCH   | Coordinator provided an outline of recruitment costs, organised two HopSCOTCH project team and GP forums, hired one staff member to undertake telephone recruitment of GPs with coordinator, advised project team staff re-recruitment methods, and attended project meetings   |
| Primary care collaborative cancer clinical trials group (PC4)   | Coordinator established Victorian arm of the Barratt's Oesophageal Screening Trial (BEST), one staff member recruited to determine geographically bound practices to target for recruitment, undertook GP recruitment visits and GP audits. Assisted in the PC4-BEST dinner event with project staff and GPs  |
| 28 other ethical primary care research projects   | Coordinator provided PhD and Masters students as well as other research project teams with detailed recruitment strategies, prospective recruitment costs, and advertised on their behalf   |

- oversaw all data entry and changes in protocol requirements.

## Outcomes

Two years after its conception, VicReN has 117 members with a broad representation of primary healthcare professions and research experience. It has provided services to 32 external research projects in which 26 VicReN members have participated, including in roles such as paid advisors to researchers and by providing recruitment services on a chargeback basis (*Table 2*). Meetings, research events and frequent communication have fostered a learning environment and links within the teaching and research aspects of the academic department of general practice, and stakeholder organisations. The Victorian Primary Care Practice Based Research Network is earning respect within the local primary healthcare community for its capacity to build projects and ensure primary care research projects value the way general practice operates. With VicReN's foundations firm, the network is now focused on undertaking its first member directed research project.

## Discussion

Primary care provides first contact and continuing coordinated medical care both to individuals and communities.<sup>23</sup> The PBRNs can both lead and contribute to a flourishing research culture and evidence base to underpin Australia's primary care system.<sup>24</sup> The PHCRED strategy has encouraged growth of Australian PBRNs, yet the absence of systematic support has retarded their establishment and maturation. Core funding, which Dutch networks enjoy, is necessary to address the disincentive of lost revenue carried by Australian general practices when participating in research, as they operate in a fee-for-service environment.<sup>25</sup> Granting bodies need to appreciate the need for payment to PBRNs for services in the budgets of grant applications to compensate all practice staff.<sup>4</sup>

Evidence shows that Australian GPs who engage in research are influenced by altruism, opportunities for reflection and review of clinical skills and knowledge,<sup>24</sup> interest in the topic examined, and the belief that

general practice research is important.<sup>26</sup> They find participation rewarding,<sup>24</sup> but without backfill arrangements and protected time,<sup>26</sup> research will remain a low priority. Supporting GPs to undertake research activities would facilitate the engagement of practice nurses, chiropractors, physiotherapists and other primary care professionals, who typically have less research experience than GPs.<sup>27</sup>

The PBRNs have proven feasibility and function in researching many common and important health issues experienced in the community.<sup>3</sup> As is the case internationally, recognition has been slow to develop in Australia of the need for robust research in primary healthcare<sup>10</sup> and for support to help primary care develop the sustainable and strong research workforce it needs to provide cost effective evidence based care.<sup>24,25</sup> As primary care is the health service that most people use most often,<sup>3,8</sup> research about it and within it has the potential to have great impact. The PBRNs have a valid, viable and invaluable role in contributing to the knowledge base that guides clinicians<sup>10</sup> in spurring reform of primary healthcare worldwide,<sup>28</sup> closing the '10/90' gap, whereby only 10% of the global population benefits from the 90% of research resources targeted at tertiary care, and in promoting equality in patient care.<sup>29</sup>

## Authors

Melinda Soós MPH, BSc, Dip(ModLang), AdvDip(Arts), CDT, is VicReN Coordinator, Department of General Practice, University of Melbourne, Victoria. m.soos@unimelb.edu.au

Meredith Temple-Smith DHSc, MPH, BSc, DipApplChildPsych, DipMovementDance, is Associate Professor and Director, Research Training, Department of General Practice, University of Melbourne, Victoria

Jane Gunn PhD, MBBS, FRACGP, DRANZCOG, Head, Department of General Practice, and Chair, Primary Care Research Unit, Department of General Practice, University of Melbourne, and a general practitioner, Victoria

Kate Johnston-Ata'Ata MIMH, MPubPol, BA(Hons), BComm, is Senior Research Assistant, Department of General Practice, University of Melbourne, Victoria

Marie Pirotta MBBS, FRACGP, PhD, is Primary Health Care Research Evaluation and Development Senior Research Fellow,

Department of General Practice, University of Melbourne, and a general practitioner, Victoria.

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correspondence [afp@racgp.org.au](mailto:afp@racgp.org.au)