Introduction

The improvement of patient outcomes within the primary health care sector relies, in part, on the development of an adequate and relevant body of evidence upon which clinical and policy decisions can be based. However, the uptake of research activities within the primary health care has been slow, primarily due to a range of barriers facing health professionals, including insufficient time, resources, support and experience.\(^1\)\(^-\)\(^4\) To address this problem the Commonwealth Department of Health and Ageing initiated the Primary Health Care Research Evaluation and Development (PHCRED) strategy.

The PHCRED strategy commenced in 2000 and is comprised of several distinct components.\(^5\) Of these, the Research Capacity Building Initiative (RCBI) provides funding for a range of strategies that aim to build research capacity within the primary health care sector by funding university disciplines of general practice and departments of rural health to support early to mid career researchers to engage in research activities. Similarly, sites receiving RCBI funding are eligible for Researcher Development Program (RDP) funding which provides resources to employ primary health care professionals at the start of their research career to undertake a research project with a small budget for operational expenses. Combined, this funding aims to expand the national pool of primary health care researchers and assist in the establishment of a research culture within the primary health care sector.

Within Queensland, the RCBI program was initially delivered by the ‘Tripartite’ which was comprised of:

- the Discipline of General Practice at The University of Queensland (UQ)
- the Rural Health Research Unit within the Discipline of General Practice at James Cook University (JCU)
- the Mount Isa Centre for Rural and Remote Health (MICRRH) which is a University Department of Rural Health (UDRH) also operating as part of James Cook University.

In 2006, Phase II of the PHCRED strategy commenced, and the Tripartite was expanded to include Bond University and Griffith University. Fortunately the close collaboration initiated during Phase I (2000–2005) of this program has continued, with the five organisations now forming the Queensland PHCRED Collaboration which is administered by a State-wide Co-ordinator who is currently placed within UQ.

As mentioned briefly above, the engagement of primary health care professionals in research faces several barriers including insufficient time to do research in addition to clinical commitments, lack of research experience and/or skills, and as a result, the need for a mentor or supervisor to guide the project.\(^1\)\(^,\)\(^3\)\(^,\)\(^6\) The provision of funding through the PHCRED program has enabled RCBI sites to develop strategies to assist novice primary health care researchers to overcome these barriers.\(^7\) However, even with this funding, supporting rural and remote health professionals and researchers is particularly difficult as many of the challenges associated with working within rural and remote Australia (eg workloads, limited locum relief and large distances to support) significantly contribute to the research barriers described previously.\(^5\)

While the majority of Queensland’s RCBI sites are situated within metropolitan centres, all five organisations recognise that the State’s size and decentralised health care services mean it is important that implementation of the RCBI and RDP programs is appropriate for rural and remote primary health care professionals and researchers. As such, several strategies have been implemented at the state level.
to provide outreach research capacity building activities such as funding for small research projects and
delivery of research training through workshops and mentoring. By working together to achieve this
the Queensland PHCRED collaboration has been able to significantly reduce the risk of any particular
site becoming solely responsible for delivering research training and support to rural and remote areas
thereby improving the sustainability of these programs and facilitating the development of support
networks.

This paper outlines the outreach capacity building strategies implemented by the Queensland
PHCRED Collaboration and presents initial evaluation data regarding their effectiveness.
Consideration is also given to the relevance of these strategies to the broader implementation of the
RCBI.

Methods and results

The Queensland PHCRED Collaboration adopted the following three strategies for providing outreach
research and evaluation capacity building:

- **PHC Research Fellowships** (including funding under the RDP) which provide short term funding for
either pilot research projects or, in some cases, writing grants to facilitate the completion of
publications from previous research activities

- **Research Roadshows** where a team of RCBI staff from various sites travel to several rural and/or
remote communities to deliver research training and provide information regarding the PHCRED
program

- **Online Modules and Resources** to provide support material for the abovementioned initiatives as well
as providing training opportunities to practitioners unable to access the other capacity building
initiatives. These modules and resources will be available via links on the Queensland PHCRED
Collaboration site.

The evaluation of these strategies is still in the early stages. However, some preliminary data is
presented here, along with the observations of the Queensland PHCRED Collaboration regarding the
suitability of these complementary approaches to providing capacity building in rural and remote
areas.

**Primary Health Care Research Fellowships**

These Fellowships have been provided by all sites since the commencement of their RCBI programs
and are designed to address key barriers to research (such as time, support, and experience) through
providing early career researchers with an opportunity to undertake short term research projects under
the guidance of more experienced research staff. Funding for the Fellowships is provided on a
competitive basis with each site allocating funding for this purpose from within the RCBI and RDP
budgets. In general the Fellowships have the following characteristics:

- fractional salary for the Fellow to support time away from practice to undertake a research project
either through payment for clinical sessions or to support backfill of their position

- allocated funds for expenses associated with the project including administrative support or
research assistants, the purchase of specialised study materials and/or computer software,
professional development (including conference attendance) or travel associated with the project

- designation of research support through a nominated project supervisor and/or mentor to provide
one-on-one training and positive feedback regarding the implementation of the project.

Funding is generally limited to 12 months with participants having to reapply should they require
additional financial support to complete the project. Usually no more than 2 years of Fellowship
funding is provided to any individual.
While none of this funding is specifically linked to rural or remote research activity, Fellowships funded through MICRRH, and to a lesser extent JCU, UQ and Griffith, are frequently used to support projects either undertaken by rural or remote health professionals or aimed at rural and/or remote populations (Table 1).

<table>
<thead>
<tr>
<th>Year</th>
<th>Supporting organisations</th>
<th>Number of projects</th>
<th>Total funding provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>MICRRH</td>
<td>2</td>
<td>$13,300</td>
</tr>
<tr>
<td>2002</td>
<td>MICRRH</td>
<td>2</td>
<td>$33,400</td>
</tr>
<tr>
<td>2003</td>
<td>MICRRH, UQ</td>
<td>3</td>
<td>$28,400</td>
</tr>
<tr>
<td>2004</td>
<td>MICRRH, UQ</td>
<td>4</td>
<td>$51,100</td>
</tr>
<tr>
<td>2005</td>
<td>MICRRH, UQ, JCU</td>
<td>5</td>
<td>$115,200</td>
</tr>
<tr>
<td>2006</td>
<td>MICRRH, UQ, JCU, Griffith</td>
<td>8</td>
<td>$157,100</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>24</td>
<td>398,500</td>
</tr>
</tbody>
</table>

1 Rounded to nearest $100.

Once the Fellowship is complete participants in the program are encouraged to disseminate the findings of their project either through publications or presentations at conferences (Table 2). Ongoing support is also provided by the RCBI program to assist past Fellows to obtain additional external research funding or enrol in postgraduate courses such as a Master of Doctor of Philosophy program.

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Number produced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journal articles</td>
<td></td>
</tr>
<tr>
<td>Peer reviewed</td>
<td>4</td>
</tr>
<tr>
<td>Under review or in press</td>
<td>4</td>
</tr>
<tr>
<td>Non-peer reviewed</td>
<td>8</td>
</tr>
<tr>
<td>Conferences</td>
<td></td>
</tr>
<tr>
<td>Paper presentations</td>
<td>7</td>
</tr>
<tr>
<td>Posters</td>
<td>4</td>
</tr>
</tbody>
</table>

To optimise the delivery of these Fellowship programs an internal evaluation was undertaken during 2005. This evaluation found most participants were motivated to apply for funding because of their personal interest in research, although the majority had very little research experience prior to undertaking their Fellowship. Despite the relative inexperience of the Fellows, involvement in this program was found to be a positive experience primarily because of the support provided by the project supervisor/mentor organised by the funding RCBI site.

While many of these Fellows have gone on to undertake further study or research activity, the Queensland PHCRED Collaboration has recognised a growing need for ongoing support for past Fellowship holders as they develop their research career. In response to this the Queensland PHCRED Collaboration is planning to undertake an assessment of the ongoing support needs of past Fellows, the outcomes of which will inform the future delivery of this program.

**Research Roadshows**

The Research Roadshow program started in 2005 and has since allowed the delivery of outreach research training in ten towns in rural and remote Queensland (Table 3). While these events allow the delivery of formal training sessions (as summarised in Table 3), they also provide the opportunity to...
give one-on-one advice and support for professionals currently involved in the planning or implementation of a specific research project. This opportunity is often utilised by general practitioners who are unable to attend the formal workshops but are often interested in undertaking research within their practice.

### Table 3: Research Roadshow locations, 2005–2006 and uptake of training opportunities

<table>
<thead>
<tr>
<th>Town</th>
<th>Year</th>
<th>Number of workshops</th>
<th>Total participant hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biloela</td>
<td>2005</td>
<td>2</td>
<td>54</td>
</tr>
<tr>
<td>Bundaberg</td>
<td>2006</td>
<td>3</td>
<td>108</td>
</tr>
<tr>
<td>Charleville</td>
<td>2005 and 2006</td>
<td>3</td>
<td>78</td>
</tr>
<tr>
<td>Emerald</td>
<td>2005</td>
<td>3</td>
<td>81</td>
</tr>
<tr>
<td>Gladstone</td>
<td>2006</td>
<td>3</td>
<td>159</td>
</tr>
<tr>
<td>Longreach</td>
<td>2006</td>
<td>2</td>
<td>72</td>
</tr>
<tr>
<td>Maryborough</td>
<td>2006</td>
<td>2</td>
<td>81</td>
</tr>
<tr>
<td>Rockhampton</td>
<td>2005</td>
<td>3</td>
<td>72</td>
</tr>
<tr>
<td>Roma</td>
<td>2005 and 2006</td>
<td>4</td>
<td>108</td>
</tr>
<tr>
<td>Toowoomba</td>
<td>2005</td>
<td>1</td>
<td>39</td>
</tr>
</tbody>
</table>

*Total participant hours is calculated by multiplying the total number of participants by the duration of the workshop they attended (in hours).*

The organisation of each Roadshow is undertaken by the State-wide Co-ordinator who provides stakeholders in each town with potential dates and a list of workshop topics available. Core themes covered in these workshops include:

- getting started in research including developing a research question and grant writing and an understanding the ethics approval process
- literature searching and writing literature reviews
- program planning and evaluation
- qualitative research methods and questionnaire design
- dissemination including writing for publication and tips for presentations
- research IT training including introductions to SPSS and Endnote.

As indicated in Table 3 there has been significant uptake of the training opportunities offered through the Research Roadshow program with representatives from a range of organisations participating, including Queensland Health, Division of General Practice staff, private practitioners, and relevant community development organisations. A recent evaluation of these Roadshows indicated that the majority of participants valued the opportunity to attend this type of training but that many (54%) would only attend if the workshop was held within a half hours drive of their home town.

Delivery of the Research Roadshow program is quite intensive, requiring significant investment of both time and funds. Through undertaking this as a state activity, the time commitment required to develop training materials and participate in the Roadshows is spread across the five RCBI sites while administrative support is provided by the State-wide Co-ordinator. Similarly, through collaboration with Queensland Health the financial burden of delivering these programs is spread with funding being provided in recognition of the support these activities provide rural and remote Queensland Health primary health care professionals.

**Online modules and resources**

To support the delivery of the other initiatives outlined above the State PHCREDD Collaboration is in the process of developing online research modules aimed at training early and mid career primary health
care researchers in various research methods and processes. It is intended that these modules will be
developed to suit a range of disciplines and research backgrounds.

The first of these modules was developed by JCU to provide training in qualitative research methods. This module is already available through the JCU website (http://discors.jcu.edu.au/) and is currently undergoing preliminary evaluation. It is anticipated that several other modules will also be available through this site in the near future.

In addition to specific modules many of the Queensland RCBI sites are also compiling annotated bibliographies of existing web resources. These directories will complement modules developed by the State PHCRED Collaboration by identifying valuable research related material already available online, thereby providing support for novice researchers without duplicating the enormous amount of existing information available both nationally and internationally.

As with all online resources, providing these modules and directories via the internet will mean novice researchers will be able to utilise them when required rather than having to accommodate a predetermined training schedule.

Discussion

The outreach research capacity building strategies outlined in this paper were specifically developed to allow the delivery of flexible programs that enable rural and remote primary health care practitioners with a range of research backgrounds to engage in research activities. Anecdotal evidence gathered during the delivery of the RCBI combined with the preliminary evaluation data summarised here, suggests that these programs are successful both in terms of addressing the barriers associated with undertaking research in rural or remote areas (such as time and access to research support and training) and allowing for the flexible delivery and uptake of the initiatives.

It is worth noting, however, that of these activities, the implementation of the research Fellowship program has revealed that, in some cases, simply providing financial support was not enough to address the fundamental workforce issues facing rural practitioners. In several communities problems recruiting and retaining health professionals has meant Fellows were providing services within a system that was only barely able to meet the needs of the community. As a result, the decision to take time away from practice to undertake research was not financial but was driven by the ability get suitably trained individuals to backfill positions. As a result, several rural and remote professionals have had to either withdraw from the Fellowship program or undertake the project entirely in their own time.

The focus of these strategies on overcoming barriers through providing training and support and focusing on flexibility both in delivery and accessibility addresses four of the six key principles of the research capacity building model proposed by Farmer and Weston. This model is intended as a broad framework for the delivery of capacity building activities and while the strategies outlined above were not initially developed with this model in mind, the similarities in these approaches invites discussion regarding the remaining two principles, namely enabling collaboration and facilitating a network process.

The Queensland PHCRED Collaboration has previously undertaken stakeholder consultations to identify an appropriate model for a state-wide research network. A Federation style model was favoured with the five RCBI sites forming an initial support framework for the state-wide network. To compliment this individual RCBI sites also facilitate the development of smaller networks at the local level that would access support (both financial and intellectual) through the state Collaboration. To date several formal local networks have been initiated through engagement with JCU, UQ, Bond and Griffith.

Unfortunately similar success has not been possible in more remote parts of the state. Despite ongoing effort, MICRRH has been unable to initiate a formal research network in western Queensland, despite the ongoing facilitation of an informal network of individuals with an interest in research. This
informal group has been provided with research and evaluation related support on an ad hoc basis through the delivery of workshops, seminars and one-on-one mentoring over a three year period. However, during that time the group has undergone significant change as a result of the high turnover of health professionals. This experience suggests that maintaining a more formal network may not be sustainable within this environment. This suggests that the engagement of rural and remote professionals in stable urban networks and other formal collaborative arrangements will be an important part of initiating and maintaining research activity in these areas.

Preliminary evaluation has found that the strategies that form the Queensland PHCRED Collaboration outreach research capacity building program are an effective way to support the expansion of the pool of rural and remote primary health care researchers. However, in saying this, acknowledgement must be made of the need for ongoing work on the facilitation of research networks and optimisation of the existing strategies to accommodate the outcomes of future evaluation activities.

Policy implications

The provision of outreach primary health care research support will always be problematic given that few rural and remote practitioners have significant time to commit to these activities and, due to ongoing workforce shortages, there is insufficient staff available to backfill positions even when time is quarantined for research. However, the implementation and evaluation of the research capacity building activities described in this paper has shown that, with appropriate support and investment, many practitioners are committed to developing their research skills. Supporting these motivated individuals will require similar commitment from stakeholder organisations in order to facilitate overcoming various organisational barriers such as providing dedicated research time. Only by working together to support grass roots research activity will a sustainable research culture develop within rural and remote primary health care.

References

2 Yallop JJ, McAvoy BR, Croucher JL, Tonkin A, Piterman L, on behalf of the CHAT Study Group. Primary care research—essential but disadvantaged. MJA 2006; 185(2): 118–120.

Presenter

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