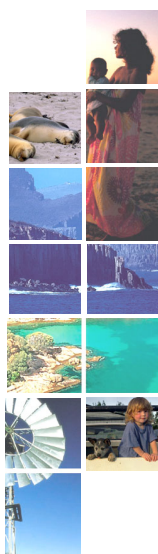


# Recruiting and retaining rural general practitioners: a mismatch between the research evidence and current initiatives?

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## ABSTRACT

This paper investigates the possible mismatch between current initiatives to attract and retain general practitioners (GPs) to rural areas, and Australian research evidence about the most significant factors affecting recruitment and retention. The results reported here are part of a broader project that aims to use evidence-based research to enhance rural GP workforce planning and management. This phase of the project analysed research reports evaluating the outcome of programs and services aimed at improving rural recruitment and retention. The search strategies for this review included: key word searches of electronic database publications over the last 15 years; hand searching of relevant journals; trawling websites of relevant organisations; and direct contact with relevant organisations to request copies of “grey” literature such as unpublished reports. A total of 22 Australian studies were identified that met these criteria. (It is acknowledged that many other initiatives have been tried, but evaluation reports for these do not exist or were not obtainable. Similarly, many other studies have examined recruitment or retention without evaluating workforce initiatives.) The 22 studies evaluated nine major recruitment and retention initiatives including: medical course admission criteria (2 studies); rural placements (7); student scholarships (1); financial incentives (2); continuing medical education (5); university-linked rural practices (1); case management (1); and overseas-trained doctors (2); an community capacity-building (1). Demonstrating “causation” requires strong internal and external validity. Overall, however, there is not yet strong empirical evidence for the efficacy of the any of these initiatives. The methodological problems consistently identified in our analysis were: no use of comparison or control groups; an over-reliance on surveys of GPs’ attitudes or intentions rather than actual behaviours; inconsistent definitions of key variables including “rural” and “retention”; inadequate sample sizes or unrepresentative samples and selection biases; inconsistent use of definitions of key variables including “rural” and “retention”; cross-sectional and retrospective designs; insufficient information on statistical analyses; and qualitative studies that did not formally and systematically apply techniques for strengthening credibility and transferability. Moreover, many of these initiatives do not appear to be closely aligned with the factors usually thought to influence recruitment or retention. The learnings from this project support the strategic and accessible use of evidence-based health care for rural workforce issues. Government departments and agencies should invest in rigorous evaluations that are then made publicly available. Policy and program development can benefit by drawing upon sound research knowledge. Rural



communities can also become more informed and discerning consumers of this information.

## INTRODUCTION

General practitioners are in short supply and high demand across many areas of rural and remote Australia. The impact of workforce shortages in these areas includes “poor access, unmet need, potentially poorer health outcomes for patients, overworked doctors, and expensive strategy responses to the shortages by government”<sup>1</sup>. There has been substantial national and international research into factors affecting recruitment and retention. Factors that have commonly been identified as barriers include: professional isolation and lack of organisational support, inadequate access to hospitals, unreasonable workloads, unsatisfactory levels of procedural work, and the lack of availability of good educational and social facilities. Factors likely to attract medical graduates to rural and remote areas include: having a rural background; and medical training in a rural setting. Numerous programs have been developed to attract general practitioners to rural areas – overall with mixed results.

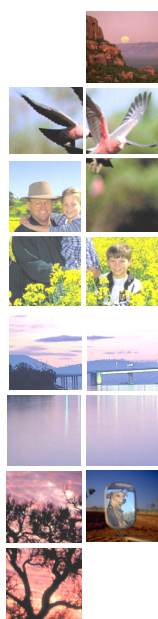
Commonwealth and state health departments, rural workforce agencies, divisions of general practice, universities, and rural communities themselves have all implemented numerous programs to address recruitment and retention issues. Despite these initiatives, many rural areas remain under-serviced.

Evidence-based health care can be used to develop a more effective and efficient approach to workforce management. It incorporates three levels of decision making: (1) public health interventions for the whole population or sub-populations designed to promote health and prevent ill-health; (2) the organisation and delivery of the health care system; and (3) evidence-based medicine using clinical guidelines to make decisions about the care of individual patients. The second level is relevant to the recruitment and retention of general practitioners.

This paper reports on one part of a larger project that is developing a community capacity-building program to promote the practical application of research knowledge in rural communities. The objectives of this project are to:

- complete an evidence-based assessment of the research literature to identify the (1) predictive factors, (2) barriers, (3) attractors to rural practice, and (4) the most effective interventions in recruitment and retention
- develop a community resource manual to guide rural communities in the process of recruitment and retention
- pilot the evidence-based, community capacity-building approach in 3 rural communities.

This paper presents a condensed review of the research evidence about the most effective interventions – the programs and services – that have been developed to recruit and retain general practitioners. Critical comments are offered about the quality of this evidence base, and about the alignment between current interventions and our research knowledge of the predictive factors and barriers.





## RESULTS

This section assesses the 22 Australian reports on the effectiveness of interventions that aim to recruit and retain rural GPs. In Australia, most interventions are relatively new and have been modelled on programs and services that have been operating in the United States of America and Canada. For this reason, this section also draws upon the international literature.

Categorisation of the research literature indicated that there have been nine major types of interventions. On the basis of our assessment of the available research evidence, the interventions are:

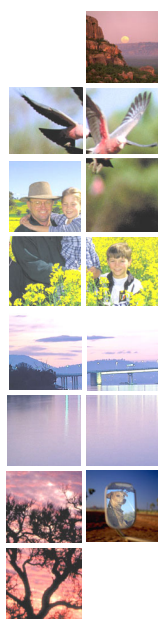
- funded student scholarships (with obligations)
- preferred student admission (rural backgrounds)
- rural placements
- overseas-trained doctors
- continuing medical education
- financial incentives
- case management
- university-linked rural practice
- community capacity-building.

(Two other interventions – locum relief and rurally-located medical schools – are being used in here and overseas, but Australian evaluations of their effectiveness regarding recruitment and retention have not been published. Therefore, these two interventions have not been included here.) The research evidence relating to the other 9 interventions will now be considered in turn.

### Funded student scholarships (with obligations)

Funded student scholarships (with obligations) provide financial support to medical students; in return these students are required to practice in rural or remote areas, for a specified period of time, upon graduation. Overall, our assessment revealed that there are several large scale, longitudinal, well-designed, international research studies demonstrating the positive impact of this type of intervention on recruitment. For example, in the United States of America, the National Health Service Corps (NHSC) has placed more than 15,000 physicians in rural and underserved areas at a cost of more than \$2 billion.<sup>6,7,8</sup> However, physicians under obligation report lower morale and lower work satisfaction.<sup>7</sup>

The positive effect of obligated service on recruitment does not hold true for retention. When physicians complete their obligated service they are able to move into urban areas.<sup>9,10</sup> By comparison with other non-obligated physicians, fewer express an intention to practise longer term in rural areas, rural retention is actually lower, and obligated physicians are less likely than non-obligated physicians to remain in their



initial practice.<sup>6,7,8,11,12</sup> Physician–community matching has been shown to be crucial to retention. One Australian study has reported good retention figures, however the findings are based on small, non-comparable samples.<sup>12</sup>

## Preferred student admission (rural background)

Student admission programs involve the preferential selection of students with a rural background into medical courses. The rationale is that students with a rural background are more likely than urban students to practise medicine in rural areas. In Australia, rural student admissions are slowly on the increase with the introduction of university policies that favour those applicants from a rural background. These policies are frequently complemented by programs exposing rural secondary school students to the attractions of careers in rural health.

Australian data demonstrate mixed and inconclusive results about the impact of preferred student admission schemes. Some well-designed studies have found good increases in intake rates, and statistically significant differences in intentions of this group to practise in rural areas.<sup>13</sup> However, due to the short period of time the program had been in operation, the studies generally measure intentions rather than outcomes. Other studies have reported little or no effect on rural student admissions.<sup>14</sup>

A series of well-designed, longitudinal studies from the United States of America have revealed that physicians from a rural background are significantly more likely to practice in rural or under-served areas.<sup>15,16</sup> Long-term retention also remains high. However, it is important to note that successful programs typically include a range of support strategies for rural medical students, in addition to preferential admission.<sup>16,17</sup>

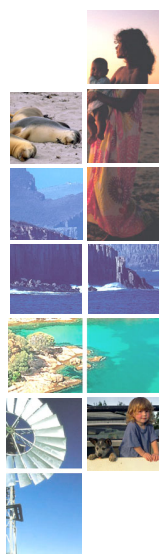
## Rural placements

Exposing medical students to rural practice, provides them with the opportunity to experience a broader range of disciplines in wider community settings and identify with the positive aspects of rural practice.<sup>18,19</sup> Several Australian studies have found that rural placements can enhance positive attitudes towards rural practice and increase the intention to take up practice in rural areas following graduation.<sup>19,20,21,22,23,24,25</sup> However, the overall evidence-based rating for these studies is not high. An additional limiting factor is that the research relies upon attitudes and intentions, rather than actual outcomes for recruitment and retention.

The research evidence from the United States of America offers more definitive results that rural rotations are associated with longer retention of physicians in rural areas.<sup>26</sup> Findings also indicate that recruiting graduates from a rural background *and* providing a rural placement during their medical schooling has a cumulative effect on recruitment and retention in rural areas.<sup>17</sup>

## Overseas-trained doctors

The use of overseas-trained doctors (OTDs) has been a controversial measure to address the problem of rural GP shortages. In Australia, it is estimated that OTDs comprise of around 20% of the rural GP workforce,<sup>27</sup> and that higher proportions of male GPs who initially trained in the United Kingdom, Ireland or New Zealand make up the bulk of OTDs practising in rural areas.<sup>27,28</sup> Data suggest that more than 80% of



OTDs have a desire to practice in capital cities,<sup>28</sup> which is reflected in low retention for all OTD groups in rural areas with the exception of those originally from the United Kingdom.<sup>27</sup> In a cohort study between 1985 and 1988, it was found that from a total of 429 OTDs who entered general practice, 91 practised in rural areas. After 5 years, 71 (78%) of these OTDs were in rural practice, which would also include those who moved from an initial location in urban areas.<sup>29</sup>

## Continuing medical education

One of the key strategies to retain GPs in rural areas is to increase on-going medical training accessible to rural GPs.<sup>30</sup> Continuing medical education (CME) addresses the professional needs of GPs by providing postgraduate studies to develop clinical skills. In the first two audited periods of 1989–92 and 1993–95, 96% of Australian recognised GPs satisfied the minimum requirements for CME.<sup>18</sup> However, access to CME can be problematic for rural GPs due to professional isolation, a lack of locum relief and heavy workload.<sup>31,32</sup> Generally, the effects of CME programs on recruitment and retention have been difficult to evaluate.<sup>18</sup> A number of Australian studies evaluate participation, awareness, and attitudes to CME, but not the actual effectiveness of the programs on recruitment and retention.<sup>30,33</sup>

## Financial incentives

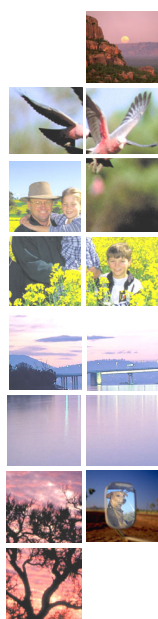
Financial incentives packages are widely used, and it has been reported that they do attract GPs to rural practice. The General Practice Rural Incentives Program (GPRIP) was intended to reward the contribution of GPs that had practised in rural areas and encourage them to remain. The package included relocation incentive grants, training grants, remote area grants, undergraduate rural support grants, and rural CME and locum support grants. In 1999/2000, over 1,640 GPs had benefited from the scheme at a cost of \$19.6 million.<sup>34</sup> Ongoing monitoring of the GPRIP has revealed that the number of GPs practicing in rural areas is increasing,<sup>35</sup> and that almost half of the recipients report favourably on the program.<sup>30</sup> Although these results are impressive, studies show no evidence to demonstrate that any impact on recruitment and retention has been due to financial incentives and not other influencing factors.<sup>36</sup> There is a lack of solid evidence to demonstrate direct attribution.

## Case management

A range of case management and recruitment officer programs exists in Australia and overseas. They report some success in recruiting GPs including OTDs. For example, a pilot program in one GP Division placed 17 doctors in temporary and permanent positions over 18 months.<sup>37</sup> However, the evidence base for this strategy is not strong (for example, there is generally a lack of pre- and post-measures, or comparison groups). Our search did not turn up any evidence about the impact of case management on retention.

## University-linked rural practice

One Australian study shows a positive impact of university-linked rural practice on recruitment and retention. Features of the program include: assistance with relocation and accommodation; an academic appointment; a percentage of gross receipts;



university support to reduce personal and professional isolation; supporting leave and locum needs, and; support to attend conferences.<sup>38</sup> Between August 1995 and October 1999, 17 GPs were recruited (35% part time) and four GPs left the practices after an average of 20 months service (annual leave turnover 6%). More rigorous research is required to conclusively demonstrate effectiveness.

## Community capacity-building

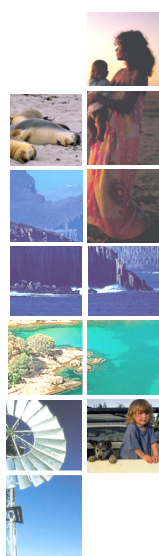
Community capacity refers to the attributes of communities that determine their capacity to identify, mobilise, and address social and public health problems.<sup>39</sup> Capacity-building aims to foster the conditions that strengthen the attributes of communities that enable them to plan, develop, implement, and maintain effective community programs.<sup>40</sup> Community capacity-building programs to recruit rural GPs have recently been trialed in Australia,<sup>41,42</sup> following similar initiatives in the United States of America. There are various approaches to community capacity-building, so it is difficult to conclude exactly how effective it is generally. Moreover, because capacity-building is lengthy and time-consuming, it is usually carried out with only a small number of communities that are receptive to the idea. Therefore, the evidence base for it is weak, and there is yet no definitive answer to the question about whether it works.

However, the few case studies from Australia and the United States of America on capacity-building reveal a number of consistent factors associated with improved outcomes in GP recruitment and retention:

- the involvement of outside organisations in fostering community change<sup>43,44</sup>
- a high degree of community commitment and investment in all stages of the process<sup>41,43,44</sup>
- comprehensive identification of problems in the health care system by outside consultants<sup>43</sup>
- the use of periodic meetings of communities confronting similar issues<sup>43</sup>
- identification and development of local leadership<sup>43</sup>
- concurrent experiential learning opportunities<sup>41,43</sup>
- enhancing teamwork among local health care providers<sup>43</sup>
- use of a flexible methodology<sup>44</sup>
- a “multi-system” response.<sup>41</sup>

## DISCUSSION AND CONCLUSION

At this stage, it is not possible to conclude that there is an alignment between the research evidence and current initiatives. Overall, there is not yet strong empirical evidence for the efficacy of any initiatives in Australia. There is dearth of available research on the effectiveness of various recruitment and retention strategies: fewer than a handful of generally small-scale studies have been published in relation to each



initiative. This may be partly explained by the insufficient time elapsed to complete outcome evaluations. However, the paucity of published research also suggests an apparent lack of funding for long-term, well-designed, rigorous evaluations.

A number of methodological problems were consistently identified in our analysis of the Australian research literature:

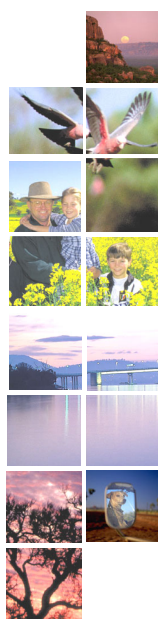
- no use of comparison or control groups (thus limiting the possibility of demonstrating attribution)
- an over-reliance on surveys of GPs' attitudes or intentions (rather than actual behaviours in relation to recruitment and retention)
- inadequate sample sizes or unrepresentative samples and selection biases
- inconsistent use of definitions of key variables including "rural" and "retention"
- the simultaneous use of a "package of initiatives" means that it is difficult to separate out the effect of any one service or program;
- cross-sectional and retrospective designs
- insufficient information on statistical analyses (thus hampering our assessment about whether interventions produced any improvements in recruitment and retention at a statistically significant level)
- qualitative studies that did not formally and systematically apply techniques for strengthening credibility and transferability.

Many of these criticisms were made almost ten years ago in relation to the international research literature on GP recruitment and retention.<sup>45</sup> The challenge now is to ensure that a coherent body of research evidence is accumulated to inform Australian rural workforce recruitment and retention strategies.

**Key Recommendation:** Governments and other funding agencies commit to a nationally co-ordinated, adequately funded, long-term research and evaluation program to determine the effectiveness of rural workforce recruitment and retention strategies.

## ACKNOWLEDGMENTS

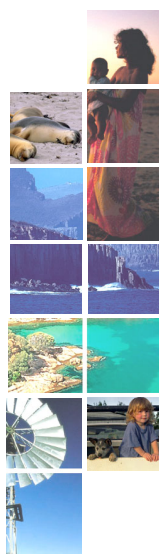
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