RURAL GENERAL PRACTICE IN 2015

EDUCATION, RECRUITMENT, RETENTION AND STANDARDS
Acknowledgements

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# Contents

**Executive summary** ........................................... 3  
- Key findings .................................................. 3  
- Recent developments .......................................... 6  
- Recommendations ............................................. 7  

**Background** .................................................. 10  

**Training** ...................................................... 13  
- New Zealand medical schools .................................. 13  
- The Voluntary Bonding Scheme ................................ 22  
- The Postgraduate Generalist Placement (PGGP) Education Programme ................................ 26  
- The General Practice Education Programme (GPEP) .................................................. 31  
- Discussion ...................................................... 38  
- Recommendations ............................................. 41  

**GP to population ratios, vacancies and hotspots** ........................................... 43  
- Background .................................................... 43  
- Data collection .................................................. 44  
- Findings ......................................................... 44  
- Discussion ...................................................... 48  
- Recommendations ............................................. 49  

**Rural continuing professional development** ........................................... 51  
- Peer groups ..................................................... 51  
- Continuing medical education .................................. 54  
- Discussion ...................................................... 55  
- Recommendations ............................................. 56  

**Rural practices and CORNERSTONE® accreditation** ........................................... 58  
- Background .................................................... 58  
- Data collection .................................................. 58  
- Findings ......................................................... 59  
- Discussion ...................................................... 61  

**Appendices** ................................................... 63  
1. The College’s Curriculum for General Practice (rural) ........................................... 63  
2. International recruitment and retention initiatives ........................................... 71  

**References** .................................................... 85
EXECUTIVE SUMMARY
Executive summary

The Royal New Zealand College of General Practitioners (the College) aims to ensure that New Zealanders in rural communities can access high-quality generalist medical care when needed. Accordingly, through its Rural Strategy, the College seeks to enhance rural medical training and workforce development. This report was prepared to help gain a better understanding of where the College should focus efforts to improve the training, recruitment, and retention of rural general practitioners (GPs) and rural hospital doctors.

The 2014 RNZCGP Workforce Survey found that 17.1% of respondents who were working were in rural practice (377 out of 2203).¹ Evidence-based factors² associated with the likelihood of doctors practising in rural areas – a rural background, positive rural undergraduate experience and rural postgraduate training – underpin current initiatives aimed at recruiting doctors to rural areas. This report provides a snapshot of the state of play of rural general practice in 2015. In particular, it presents data on

- New Zealand medical schools, the Voluntary Bonding Scheme (VBS), the Postgraduate Generalist Placement (PGGP) Education Programme, and the General Practice Education Programme (GPEP)
- rural vacancies and hotspots, and the retirement intentions of rural GPs
- rural continuing professional development (CPD)
- rural practice participation in CORNERSTONE®.

Key findings

1 Rural background and rural immersion undergraduate programmes are strongly associated with subsequent postgraduate training and practice in rural health. Over the past five years, between 9% and 19% of students each year in the Auckland and Otago medical programmes entered via the respective rural admission schemes.

In the years from 2010 to 2012, 10–30% of the Auckland regional/rural preferential entry medical students participated in Pūkawakawa (the rural immersion programme), and those who participated were more likely to be working in rural and regional areas in early postgraduate years (62% vs 38%). Similarly, a higher proportion of Otago graduates with rural background/training were subsequently training in rural hospital medicine and/or general practice than graduates with no rural background/training (20.2% vs 10.1%) (pages 13–22).

2 The VBS has attracted graduates into communities and specialties that need them the most. The scheme has two entry points for doctors: during their first postgraduate year (PGY1) or at the beginning of general practice training (GPEP1). In 2015, of the PGY1 doctors on the VBS, 44.4% (n=24) intended to enter training in general practice and 24.1% (n=13) in rural hospital medicine. Eight VBS registrants were in their first year of general practice training in 2015. Outcome data collected by Health Workforce New Zealand (HWNZ) is generally limited to an 18-month check and when registrants seek payment; thus, the numbers of VBS registrants who remain in rural practice is unknown (pages 22–25).
From 2002, the College’s PGGP Education Programme provided trainees with an opportunity to experience rural practice. Overall, more than half of PGGP trainees subsequently entered the College’s general practice training programme. The PGGP programme finished on 25 November 2015, after its funding was included with general practice training (pages 26–31).

For each six-month placement in 2014 and 2015, approximately 50 rural teaching positions were available for GPEP1 registrars. However, only about half of these teaching positions were filled. Furthermore, in 2015, across both six-month GPEP1 placements, only 14.7% (49 out of all 334 placements for 167 registrars) were in rural practices.

On the other hand, we consider that the proportion of rural practices available for GPEP1 is a good representation of the overall proportion of rural practices in New Zealand. In 2015, approximately 260 practices were approved for GPEP1 training and 46 (17.7%) of these were deemed rural (using the Rural Ranking Scale – RRS) under the employment agreement for GPEP1 registrars. In comparison, 18.8% of practices in New Zealand (193 out of 1028) have been classified as rural under the RRS (pages 31–35).

GPEP2/3 registrars are responsible for where they undertake their training. Of the practices accommodating GPEP2/3 registrars, we identified 17% (78 out of 456 practices) as rural practices (using a wider classification than the RRS). This proportion is much lower than the 28% of New Zealand practices we identified as rural (288 out of 1028). Of the GPEP2/3 registrars, 17% (109 out of 633) were working in a rural practice (pages 35–36).

The following reasons are commonly cited by GPEP registrars for not choosing a rural practice during training:

- The registrar’s spouse or partner is unable to relocate to a rural area (usually because they work in the city).
- The registrar has young children and/or their children attend day-care.
- The registrar owns a house in a non-rural area.
- The registrar does not have the required support in the rural setting, typically family support.
- The registrar needs to travel a considerable distance for day-release seminars and workshops in an urban centre.
- The registrar cannot commit to a rural placement for a full six months.

In comparison to the College’s Curriculum for General Practice, the Royal Australian College of General Practitioners’ (RACGP’s) rural curriculum for general practice has a greater focus on:

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i Current data on the 2014 and 2015 cohorts is likely to underestimate the final numbers of PGGP trainees who enter GPEP or rural hospital medicine training.

ii As a rough comparison, the 2014 RNZCGP Workforce Survey revealed that 17.1% of working respondents were working in rural practice. This included both general practice and rural hospital medicine.

iii At the time this analysis was undertaken, the Rural General Practice Network (RGPN) listed 193 practices with a minimum score of 35 on the Rural Ranking Scale (RRS). The classification of practices as ‘rural’ for GPEP1 (under the employment agreement) also relies on the RRS. However, for this report (other than for the analysis on GPEP1), practices were more broadly identified as ‘rural’ if they were a practice on the database of the RGPN, included in the GPEP list of practices with an RRS of 35 or more, or had self-identified as rural on the CORNERSTONE® database.

iv See footnote iii about the different classifications of ‘rural’ used in this report.
managing patients from a range of social, economic, occupational and cultural backgrounds in the rural community

- health promotion activities (eg community-based prevention and education strategies) to enable the community to look after their own health
- the ability to use x-ray, teleradiology facilities, and ultrasound equipment
- procedures for disaster, trauma, retrieval and disease control
- medicolegal issues concerning emergency and procedural medicine.

Furthermore, the RACGP Fellowship in Advanced Rural General Practice (FARGP) curriculum includes additional emergency medicine skills and advanced rural skills training*. (pages 37–38).

The College is currently considering ways to better integrate the rural hospital medicine and general practice vocational training pathways.

The district health boards (DHBs) with the lowest GP full-time equivalents (FTEs)/100,000 population ratios include West Coast, Taranaki and MidCentral (MCNZ 2013 Workforce Survey data). Moreover, the RNZCGP 2015 Workforce Survey highlights Taranaki DHB and MidCentral DHB as amongst the areas with the highest proportions of College members intending to retire over the next 10 years. All these DHBs have significant rural populations (pages 43–49).

Data from the New Zealand Rural General Practice Network (RGPN) show the DHBs most affected by rural GP vacancies and hotspots are (pages 43–49):

- Southern DHB
- South Canterbury DHB
- Tarawhiti DHB
- Taranaki DHB
- West Coast DHB
- Northland DHB
- Waikato DHB
- Canterbury DHB.

Peer groups are a required activity for CPD. Of the 912 peer groups registered with the College, we identified 9.1% of these as rural peer groups. Only four rural peer groups were recorded as using Skype or holding online meetings (pages 51–53).

Of the 1541 continuing medical education (CME) activities held by College registered providers, only 63 events (4%) had either ‘rural’ as their topic (n=37) or ‘rural’ in their course title (n=26). However, many of the College’s registered providers were PHOs, DHBs and bpac® who deliver CME activities to all members, including those in rural practice.

Of the College-endorsed CME events or conferences, 18.9% catered for rural doctors either by their location, subject matter, or delivery via e-learning (pages 54–56).

* This report has not made any comparison with the Australian College of Rural and Remote Medicine (ACRRM) training pathway. We consider the RACGP curriculum as more directly comparable to the New Zealand context.
The proportion of rural practices that were CORNERSTONE® accredited was less than the proportion of non-rural practices (29.9% vs 36.4%). Furthermore, the proportion of rural practices participating in the CORNERSTONE® accreditation programme (currently accredited or engaged and working toward accreditation) was less than the proportion of non-rural practices participating in the programme (48.6% vs 54.7%). However, the College is of the view that the differences are not significant at this point, but will continue to monitor participation (pages 58–61).

New Zealand has undertaken similar approaches to recruit and retain doctors in rural areas as have been used in Australia and Canada. They include targeted admission of students with a rural background, undergraduate and postgraduate rural training opportunities, indirect and direct financial compensation, and the provision of management, environment and social support. The Parallel Rural Community Curriculum at Flinders University School of Medicine in Australia and the Northern Ontario School of Medicine in Canada are particular successes. Notable positive outcomes of these programmes have included the provision of quality learning experiences, the high level of confidence and competence gained by students, and the subsequent retention of doctors in rural locations (pages 71–84).

Recent developments

The following recent developments aim to address the loss of rural opportunities through PGGP, and health inequities more widely:

- The College’s allocation process for GPEP1 registrars will have an increased focus on rural and regional placements. Offers of training/employment will no longer guarantee placement in an applicant’s preferred region.
- The College will recommend a placement during GPEP1 that is based in a rural location.
- The College will provide national oversight of placements for GPEP1 registrars to ensure a more equitable distribution.
- The Medical Council of New Zealand’s (MCNZ) prevocational community attachments may increase postgraduate rural experience.

Notably, the College has set a target to increase the number of Māori entrants to GPEP training from 7.7% to 22%.vi

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vi One in seven people living in New Zealand are of Māori ethnicity. (Statistics New Zealand. 2013 Census QuickStats about Māori; 2013). One in six people of Māori ethnicity live in rural areas. (Statistics New Zealand. Census snapshot: Māori; April 2002).
Recommendations

Set out below are recommendations drawn from the findings of this report and primarily aimed at the College.

■ **It is recommended** that the College set a target of filling at least 75% of the available GPEP1 rural training positions each year. This would contribute to meeting a target of having at least 25% of registrars becoming rural or provincial health care providers and thus better reflect the future needs of New Zealand’s rural population.

■ **It is recommended** that the College aim to ensure at least 25% of GPEP2/3 registrars are undertaking their clinical training in rural practice during their training.

■ In order to increase the number of registrars in rural practice, it is **recommended** that the College seek consideration by the College’s Education Advisory Group (EAG) on the feasibility of:
  – mandatory rural service during GPEP, and its duration (eg a three- or six-month placement)
  – better incentivising rural placements (eg on a points or weighting system for completion of a period of training in rural or high-needs practices)
  – the development of a specific rural pathway for applicants to enter GPEP training. These applicants could be given greater weighting during the selection process. The ultimate aim would be to integrate this rural pathway for GPEP training into a ‘rural pipeline’ for training that starts at the undergraduate level and includes prevocational training attachments.

■ **It is recommended** that the College better promote rural opportunities to medical students, house surgeons and registrars (eg using rural ambassadors, facilitating briefings by doctors who have completed rural placements).

■ **It is recommended** that steps be taken to ensure the College maintains an appropriate level of rural placements that provide meaningful training. This might be achieved by:
  – eliciting and acting on feedback from registrars on their rural placements to improve the quality of training provided
  – enhancing the relationships between the College and training practices via a dedicated relationship management role that oversees and coordinates all information on teaching practices (often held regionally)
  – developing a GPEP rural coordinator role to ensure all placements, feedback and quality controls are centralised alongside the regional model
  – encouraging the many rural CORNERSTONE®-accredited practices to accommodate registrars.

■ **It is recommended** that the College explore the content of its *Curriculum for General Practice* and required competencies relating to the provision of health care in rural areas. This might include:
  – a greater focus on managing patients from a range of backgrounds in the rural community
  – a greater focus on health promotion activities in rural communities
  – a greater focus on procedures for disaster, trauma, retrieval and disease control
  – a greater focus on medicolegal issues concerning emergency and procedural medicine
  – the additional ability to use x-ray, teleradiology facilities, and ultrasound equipment.
It is recommended that the College look into advanced rural skills training and additional emergency medicine skills training post-Fellowship.

It is recommended that the College develop a national minimum dataset on rural practitioners, including longitudinal tracking of GPEP registrars placed in rural practice, and collecting data on rural profiles of GPEP registrars.

It is recommended that HWNZ collect longitudinal data on VBS registrants and provide the results to the College.

It is recommended that the College build on the provision of CPD for rural practitioners by:
- liaising with registered CME providers to ensure rural members are provided with sufficient CPD opportunities
- promoting the use of new technologies to deliver CPD, eg online meetings and webinars
- improving data collection on the provision and access to CPD by rural members (eg by asking and recording if and how CME providers cater for rural doctors).

It is recommended that the College look at sharing success stories and providing case studies on innovative approaches to recruitment and retention of vocationally trained generalists to rural areas. Topics might include:
- collegial and professional support and after-hours arrangements
- opportunities for personal vacation and professional development
- what the community can offer doctors and their families, such as suitable housing, employment for partners, quality education and childcare facilities.

It is recommended that the College advocate for a nationally consistent approach to the recruitment and retention activities that aims to better serve rural communities in every DHB region. A specific national rural workforce strategy developed by the Ministry of Health and HWNZ would be an appropriate approach.

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viii The Australia and New Zealand Medical Deans Medical Schools Outcomes Database (MSOD) is progressing work on longitudinal tracking.
ix HWNZ anticipates that the VBS will be reviewed within the next 12 months, which will provide an opportunity to consider the future collection of outcome data.
BACKGROUND
Background

The College aims to improve the health outcomes of rural communities through the work of high-quality, well-trained medical generalists working within multidisciplinary teams. This is reflected in its Rural Strategy and, as part of the Strategy, the College is seeking to enhance rural medical training and workforce development.

This report was prepared to help the College gain a better understanding of where to focus efforts to improve the training, recruitment, and retention of rural GPs and rural hospital doctors. It analyses data gathered on rurality and New Zealand medical schools, the Voluntary Bonding Scheme (VBS), the Postgraduate Generalist Placement (PGGP) Education Programme, the General Practice Education Programme (GPEP), rural continuing professional development (CPD) and rural practice participation in the CORNERSTONE® accreditation programme. The report provides an overall snapshot of the current state of play in these areas, and adds to the body of knowledge on New Zealand’s rural medical training and workforce.¹

New Zealand’s medical workforce is poorly distributed by way of demography, geography, and discipline to meet need.³ The Medical Council of New Zealand’s (MCNZ’s) 2014 medical workforce survey⁴ revealed that rural areas (<20 people/km²) have fewer doctors per head of population (139.4/100,000) than urban areas (367.8/100,000) and secondary urban areas (215.1/100,000). In rural areas, the number of doctors working in general practice per head of population was also less (72.9/100,000) than in urban areas (95.0/100,000) and secondary urban areas (79.0/100,000).

Moreover, the MCNZ data showed that rural areas are more reliant on international medical graduates (IMGs) – 55.9% of doctors in rural areas are IMGs compared to 39.1% in main urban areas. Notably, the average hours worked per week by doctors in general practice was slightly higher in rural areas (37.4 hours) compared with urban areas (33.9 hours). In 2014, the New Zealand Rural General Practice Network (RGPN) estimated that there were 40 permanent GP vacancies affecting 20% of rural general practices around the country.⁵

We know from the 2014 RNZCGP Workforce Survey (which had a response rate of 55.9%) that 17.1% of working respondents considered they were in rural practice (377 out of 2203). Also, around 16% of all College members are members of the Rural General Practitioners’ Chapter or the Division of Rural Hospital Medicine.

It is a major challenge in every country to better distribute doctors to rural areas, but it is one we need to accept to ensure we have a sufficient number of generalists to meet the needs of New Zealand’s rural populations. Increasing the number of rural doctors is a move towards improving the quality of health care delivered to rural populations. The Ministry of Health’s Statement of ¹ This includes the ‘2014 RNZCGP Workforce Survey: The Rural Medical Workforce’, and two recent surveys of rural hospital doctors: ‘DRHM Workforce Planning and Curriculum Questionnaire’ (RNZCGP; 2014) and ‘Report to Health Workforce New Zealand on the Rural Hospital Doctors Workforce Survey’ (Lawrenson R, Reid J, Nixon G, et al. 2015).

¹ The definition of rural was based on population density, calculated by dividing the population of a geographical area by its land area (in km²). A rural area had 20 or fewer people per square kilometre; urban 100+ people per km², and secondary urban 21–99 people per km².
Intent acknowledges that an appropriately trained, motivated, supported and flexible workforce is essential to provide high quality and sustainable health care.\textsuperscript{6}

The ‘rural pipeline’ is an approach to rural health care workforce education and training, and aims to address the maldistribution challenge. It provides a framework for considering who to admit to medical education programmes, where best to deliver medical education and training that motivates towards rural practice, and why graduates then choose to work in rural locations.\textsuperscript{7}

Studies have shown the factors most strongly associated with entering rural practice are:\textsuperscript{3}

- a rural background
- positive clinical and educational experiences in rural settings as part of undergraduate medical education
- targeted training for rural practice at the postgraduate level.

There is also evidence that academic involvement (teaching and research) is both a retention and recruitment factor for doctors.\textsuperscript{2} These factors already underpin many of the measures, particularly at undergraduate level, aimed at recruiting doctors to rural areas in New Zealand.

The College plays a crucial role in rural medical education and training through the following education programmes:

- PGGP (the programme finished on 25 November 2015)
- rural placements during GPEP
- the training programme for rural hospital medicine to achieve Fellowship in the Division of Rural Hospital Medicine (DRHM).

The College’s Rural Strategy aims to address workforce sustainability, improve health care and reduce inequities in the rural sector by:

1. promoting greater understanding of rural practice and rural health practitioners and their value
2. further developing rural integrated services focusing on access, equity, quality and safety
3. increasing the capacity and sustainability of the rural health workforce to meet population and service needs
4. enhancing the skills and flexibility of the rural medical workforce
5. increasing research and academic activity.

The information in this report is particularly relevant to the strategic objectives of better understanding rural medical practice and increasing the capacity and capability of the rural medical workforce. The findings confirm some of our existing knowledge about rural medical education, training and practices. The findings also highlight areas where further work could be done. It is the College’s view that a stable rural medical workforce requires a collaborative approach by various individuals and organisations, including government, educators, rural communities, and health professionals.

A limitation of the analyses undertaken in this report arises from the absence of an agreed definition of ‘rural practice’. For example, data provided by the RGPN uses the Rural Ranking Scale (RRS), whereas the CORNERSTONE\textsuperscript{®} programme allows practices to self-identify as ‘rural’. The various approaches adopted in this report are discussed alongside the corresponding sets of data.
TRAINING
Training

New Zealand medical schools

The University of Auckland medical programme

How does the Faculty of Medical and Health Sciences at The University of Auckland contribute to the recruitment and retention of the rural medical workforce?

Background

The University of Auckland has a number of measures that aim to enhance interest in future medical practice in rural or regional areas. The Regional Rural Admission Scheme (RRAS) provides special entry to the Bachelor of Medicine and Bachelor of Surgery (MBChB) programme for applicants with a rural background. The RRAS was introduced in 2012 and incorporates the students previously admitted under the Rural Origin Medical Preferential Entry (ROMPE) criteria.

Since 2008, Pūkawakawa, The University of Auckland’s rural immersion programme, bases students at Northland DHB’s Whangarei Hospital for 18 weeks, and at a rural centre hospital (Kaitaia, Bay of Islands, Hokianga or Dargaville) for 9 weeks. The 27-week parallel experience incorporates three longer attachments: integrated care and general practice (7 weeks), women and children’s health (8 weeks), and secondary care (10 weeks).

In addition, since the early 1990s, trainee interns may undertake a year-long attachment in Hamilton or Rotorua, mirroring the standard programme.

Data collection

On 6 May 2015, the College sought information from the Dean of the Faculty of Medical and Health Sciences at The University of Auckland; specifically:

- Auckland medical school undergraduate rural recruitment data such as rural profiles of undergraduate medical students (e.g., rural residence, rural schooling)
- number of students accepted into Auckland medical school under the RRAS, and number of medical students with a rural profile who are not accepted via this pathway
- number of students with a rural profile (RRAS and other) who participate in Pūkawakawa
- outcomes (i.e., postgraduate training and practice location) of the initiatives aimed at influencing future rural practice (special entry and rural undergraduate education)
- outcomes (i.e., postgraduate training and practice location) of those with a rural profile.

The Medical Programme Directorate collated the data. Christina Matthews et al. previously published their study on the intentions of medical graduates who had participated in the Pūkawakawa programme. The Dean noted that their paper provides the most up-to-date information on outcomes of Pūkawakawa students.
Limitations

The Dean noted that current available data are limited because most initiatives are relatively recent, with many graduates still in their early postgraduate years. Further work is ongoing and will be published within the next two years.

The University of Auckland is part of the Australia and New Zealand Medical Deans Medical Students Outcomes Database (MSOD) project. The project includes New Zealand PGY1 outcome data (yet to be published) and over time the project will provide additional data on doctors’ workplaces.

Findings

Rural recruitment data

Students who qualify for the RRAS have either:

a. undertaken their whole pre-secondary education while living in a regional or rural area, or
b. spent at least three years at a secondary school located in a regional or rural area. (A regional or rural area is defined as part of New Zealand that does not fall within the local authority boundaries of the Auckland, Hamilton, Tauranga, Wellington, Porirua, Hutt, Upper Hutt, Christchurch or Dunedin city councils at the year of application).

To have qualified under the ROMPE scheme (pre-2012), students were required to have:

- undertaken pre-secondary education while living in a rural area, or
- spent at least three years at a secondary school in a rural area.

A rural area was defined as including towns with a population of 30,000 or less.

Table 1 sets out the number of students accepted under the RRAS/ROMPE.

Table 1. Students accepted under RRAS/ROMPE 2010–2015

<table>
<thead>
<tr>
<th>Admission year</th>
<th>Total students (Year 2)</th>
<th>Number of students who meet interview criteria of rural scheme</th>
<th>Number of students enrolled in MBChB programme under rural scheme</th>
<th>Percentage of applicants successfully enrolled under rural scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>286</td>
<td>54</td>
<td>44 (18.9%)</td>
<td>81.5%</td>
</tr>
<tr>
<td>2014</td>
<td>238</td>
<td>50</td>
<td>38 (16.0%)</td>
<td>76.0%</td>
</tr>
<tr>
<td>2013</td>
<td>245</td>
<td>57</td>
<td>31 (12.7%)</td>
<td>54.4%</td>
</tr>
<tr>
<td>2012</td>
<td>239</td>
<td>54</td>
<td>30 (12.6%)</td>
<td>55.6%</td>
</tr>
<tr>
<td>2011</td>
<td>210</td>
<td>29</td>
<td>20 (9.5%)</td>
<td>69.0%</td>
</tr>
<tr>
<td>2010</td>
<td>–</td>
<td>28</td>
<td>20</td>
<td>71.4%</td>
</tr>
</tbody>
</table>
The University does not collate data on rural profiles of medical students who are not accepted via the RRAS/ROMPE pathway.

Over the past five years, between 9% and 19% of all undergraduate medical students at The University of Auckland have had a rural background. However, this is likely to be an underestimation as it does not take into account the medical students with a rural profile who are accepted into the medical programme via alternative entry routes.

**Number of rural students participating in Pūkawakawa**

Table 2 sets out the number of participants in Pūkawakawa by year and entry route into the medical programme. The four entry pathways are:

- general admission
- ROMPE/RRAS
- Māori and Pacific Admission Scheme (MAPAS)
- international admission.

Some MAPAS students also have regional or rural backgrounds.

**Table 2. Number of MBChB Year 5 Pūkawakawa students by entry route per year (including data from Matthews et al.*)**

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>6</td>
<td>6</td>
<td>4</td>
<td>7</td>
<td>7</td>
<td>12</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>ROMPE</td>
<td>8</td>
<td>7</td>
<td>7</td>
<td>5</td>
<td>9</td>
<td>4</td>
<td>2</td>
<td>–</td>
</tr>
<tr>
<td>RRAS</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>9</td>
</tr>
<tr>
<td>MAPAS</td>
<td>5</td>
<td>7</td>
<td>8</td>
<td>7</td>
<td>8</td>
<td>7</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>International</td>
<td>1</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>20</td>
<td>19</td>
<td>19</td>
<td>24</td>
<td>23</td>
<td>24</td>
<td>24</td>
</tr>
</tbody>
</table>

As RRAS commenced in 2012, the first RRAS students were in Year 5 in 2015.

Figure 1 shows the proportion of Pūkawakawa students who have entered the medical programme by the ROMPE/RRAS pathways versus the other entry pathways.
Between 2008 and 2015, 8–40% of the Pūkawakawa students were admitted via the rural scheme. However, MAPAS students may also have regional or rural backgrounds. When considering the ROMPE/RRAS and MAPAS groups together, the majority of Pūkawakawa students have entered the medical programme by the ROMPE/RRAS or MAPAS routes.

From the data gathered, we calculate that between 2010 and 2012, 10–30% of ROMPE/RRAS students participated in Pūkawakawa at Year 5. This is an estimate only as it assumes that the students have continuously moved through the medical programme (Table 3).

Table 3. Estimated proportion of ROMPE/RRAS students participating in Pūkawakawa

<table>
<thead>
<tr>
<th>Year</th>
<th>Number enrolled under rural scheme</th>
<th>Number of Year 5 Pūkawakawa students</th>
<th>Percentage of ROMPE/RRAS students in Pūkawakawa</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>30</td>
<td>9</td>
<td>30%</td>
</tr>
<tr>
<td>2011</td>
<td>20</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>2010</td>
<td>20</td>
<td>4</td>
<td>20%</td>
</tr>
</tbody>
</table>

Outcomes of initiatives aimed at influencing future rural practice

In 2013, Matthews et al. evaluated the early outcomes of the regional-rural placement on location of practice and future career intentions of participants. They surveyed Auckland medical graduates who were in the 2008–2011 Pūkawakawa cohorts. Of the 72 Pūkawakawa participants, 45 completed the survey (response rate of 63%).

Table 4 sets out the current place of work and intention to work by entry pathway of the 45 respondents.
Table 4. Place of work in 2013 and intention to work by entry pathway of 45 of the 72 medical graduates in the 2008–2011 Pūkawakawa cohorts

<table>
<thead>
<tr>
<th>Entry pathway</th>
<th>Current place of work</th>
<th>Intention to work</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban</td>
<td>Regional/rural</td>
</tr>
<tr>
<td>General</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>MAPAS</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>ROMPE</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>17 (38%)</td>
<td>28 (62%)</td>
</tr>
</tbody>
</table>

At the time of the study, of the 45 respondents:

- 31% were working in Northland DHB
- 16% were working in Counties Manukau DHB
- 18% were working in Lakes DHB.

When asked to identify the DHB for which they would most like to work:

- 36% of respondents identified Northland DHB
- 20% of respondents identified Lakes DHB.

Furthermore, of the Pūkawakawa graduates, the highest proportion had been working in the Northland DHB in the first three postgraduate years: PGY1 (13 out of 45 responses), PGY2 (9 out of 33 responses) or PGY3 (5 out of 22 responses).

Respondents working in Northland DHB cited various factors affecting their choice of current place of work:

- 93% reported their experience at Northland DHB as a Pūkawakawa student
- 79% cited the opportunity to do more hands-on work
- 71% identified hobbies in the area and the atmosphere/work culture.

Overall, 80% of the respondents intended to work in a rural or regional hospital. Those who intended to work at a rural or regional hospital identified the hours of work and the types of patients as important influencing factors.

Survey participants were also asked about their intentions for future work and career choice. Surgery was the most popular intended future medical discipline of all respondents (18%). General practice was the most popular overall, with 68% of respondents listing general practice in their top three future career intentions – 15% listed it as their first choice and 33% and 20% listed it as their second and third choices respectively. Rural and remote medicine was the second choice of 7% of respondents and the third choice of 11% of respondents.

Reasons cited as important for those planning to work in rural and remote medicine or general practice were:

- hours of work
- ability for flexible hours
- location
- hobbies in the area.
Overall, for many respondents (20 out of 45), their Pūkawakawa experience confirmed their desire to work in a regional or rural setting. For some (17 out of 45), the experience demonstrated the positive aspects of work-life balance, and for one-third (15 out of 45), the experience improved their opinion on the possibility of future regional or rural work.

**Outcomes of students with a rural profile**

Although there is no other data on the outcomes (ie postgraduate training and practice location) of students with a rural profile, the Dean noted the work in progress on longitudinal tracking through the MSOD.

**Dunedin School of Medicine**

How does the Dunedin School of Medicine contribute to the recruitment and retention of the rural medical workforce?

**Background**

Otago medical programme’s Rural Origins subcategory admissions pathway (since 2003) offers preferential entry to medical school for students with a rural background who also meet academic admission standards. Rural background is determined by a student’s residence and/or the location of their primary/secondary school.

Otago medical programme’s Rural Medical Immersion Programme (RMIP) for fifth-year medical students (since 2007) operates across the Advanced Learning in Medicine schools in Dunedin, Christchurch and Wellington. Twenty students complete RMIP each year. Students train through real-life experiential learning over one year in a rural community such as Greymouth, Dannevirke, Masterton, Blenheim, Balclutha and Queenstown. The programme is generalist in nature and includes primary and secondary care. The main weaknesses cited are the cost and capacity constraints in rural communities.9

In 2009, the University of Otago Wellington introduced a year-long regional immersion programme at Palmerston North for students in their final year.

There is also the opportunity for rural experience on rural rotations. In 2001, the Dunedin School of Medicine established a seven-week rural rotation programme. All Dunedin fifth-year medical students (not in RMIP) are attached to rural doctors. Students at University of Otago Wellington may rotate to Palmerston North for discipline attachments.10

**Data collection**

On 6 May 2015, we sought information from the Dean, Dunedin School of Medicine; specifically:

- Dunedin School of Medicine undergraduate rural recruitment data such as rural profiles of undergraduate medical students (eg rural residence, rural schooling)
- number of students accepted via the Rural Origins subcategory admissions pathway, and number of medical students with a rural profile who are not accepted via this pathway
number of students with a rural profile (under Regional Rural Admission Scheme and otherwise) who participate in the RMIP

outcomes (ie postgraduate training and practice location) of students with a rural profile.

William Shelker et al. have published their work on the influence of rural background and rural medical training on postgraduate medical training and location in New Zealand.11

Findings

Rural recruitment data

In order to apply in the New Zealand Rural Origins subcategory, candidates for admission must have either:

a. undertaken a minimum of four years of their pre-tertiary education at a school in a rural area of New Zealand, or
b. resided in a rural area of New Zealand for a minimum of four consecutive years following the completion of their secondary education, or
c. undertaken a combination of pre-tertiary education at a school in a rural area of New Zealand and residence in a rural area of New Zealand for a minimum of four consecutive years.

Applicants can apply for admission via the rural pathway across all three of the entry pathways (Health Sciences First Year, Graduate, and the Alternative category). The Admissions office aims to align the allocation of rural places in each of the three categories in the same way as all places are allocated under these categories. The Statistics New Zealand model for rurality is used.

The numbers of students accepted under the Rural Origins subcategory for 2012 to 2015 are shown in Table 5.

<table>
<thead>
<tr>
<th>Admission year</th>
<th>Total intake of students (Year 2)</th>
<th>Number of students under rural scheme</th>
<th>Percentage of students under rural scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>282</td>
<td>55</td>
<td>19.5%</td>
</tr>
<tr>
<td>2014</td>
<td>276</td>
<td>50</td>
<td>18.1%</td>
</tr>
<tr>
<td>2013</td>
<td>266</td>
<td>50</td>
<td>18.8%</td>
</tr>
<tr>
<td>2012</td>
<td>266</td>
<td>50</td>
<td>18.8%</td>
</tr>
</tbody>
</table>

Over recent years, 50 students have been admitted to the Dunedin School of Medicine via the New Zealand Rural Origins subcategory. In 2014, the quota and cap increased to 55, starting with the 2015 second-year class.

Notably, there may be other rural students who either have not applied under the rural scheme or did not meet the specific criteria of the scheme, but were still admitted into the medical programme.
The University of Otago only systematically collects the rurality status data for those students who apply via the Rural Origins subcategory; there is no data on the rural background (or otherwise) of other applicants.

**Number of rural students participating in the Rural Medical Immersion Programme**

Figures 2–4 sets out the available data on the 20 RMIP students in 2015.

**Figure 2. Percentage of 2015 RMIP students from rural and urban communities**

- Rural: 49.3%
- Urban: 46.4%
- Unsure: 4.3%

**Figure 3. Percentage of 2015 RMIP students who applied for admission via the rural scheme**

- Applied via rural scheme: 42.8%
- Did not apply via rural scheme: 55.4%
- Unsure: 1.8%

**Figure 4. Percentage of 2015 RMIP students accepted under the rural scheme**

- Under rural scheme: 69%
- Not under rural scheme: 31%
Outcomes of the initiatives aimed at influencing future rural practice

a. Rural background/experience of the 2008–2011 graduates

Shelker et al. undertook a retrospective cohort study of 2008–2011 medical school graduates to examine the influence of rural background and rural medical training on postgraduate medical training and location in New Zealand.

Of the 733 medical graduates between 2008 and 2011, 112 graduates (15.3%) had a rural background/training. This included students who gained preferential entry to medical training based on rural residence or schooling and/or those who had spent one year training in a rural setting. There were 14 graduates (1.9%) who entered through the Rural Origins subcategory pathway and participated in RMIP.

Table 6 shows the postgraduate training choices of graduates with and without rural background/training. To determine postgraduate training choices, the authors accessed the New Zealand medical register in December 2013.

Table 6. Effect of rural initiatives on postgraduate training choices

<table>
<thead>
<tr>
<th></th>
<th>General practice</th>
<th>Rural hospital medicine</th>
<th>Other</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>Number</td>
<td>%</td>
</tr>
<tr>
<td>Rural background/</td>
<td>13</td>
<td>6.4%</td>
<td>6</td>
<td>13.8%</td>
</tr>
<tr>
<td>experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No rural background/</td>
<td>48</td>
<td>0.4%</td>
<td>2</td>
<td>9.7%</td>
</tr>
<tr>
<td>experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A higher proportion of graduates with a rural background/training were training in rural hospital medicine and/or general practice than graduates with no rural background/training (20.2% vs 10.1%; \( p < 0.001 \)). The authors also assessed the individual variables and found that both rural background (odds ratio 2.5; \( p = 0.002 \)) and entry pathway (odds ratio 2.1; \( p = 0.01 \)) were independently statistically significant in influencing postgraduate involvement with rural hospital medicine and general practice.

The graduate’s geographical location recorded on the medical register was used as their location of practice, and categorised as either a major urban centre or non-major urban centre (using descriptions by Statistics New Zealand). Table 7 sets out the geographic location of practice against graduates’ rural background/experience.

Table 7. Effect of rural initiatives on geographical location of practice

<table>
<thead>
<tr>
<th></th>
<th>Non-major urban centre</th>
<th>Major urban centre</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Numbers</td>
<td>%</td>
</tr>
<tr>
<td>Rural background/</td>
<td>11</td>
<td>11.7%</td>
</tr>
<tr>
<td>experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No rural background/</td>
<td>33</td>
<td>6.6%</td>
</tr>
<tr>
<td>experience</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The proportion of students with rural background/training who were working in non-major urban centres was nearly twice that of students who had no rural background/training (11.7% vs 6.6%). However, this finding was not statistically significant ($p=0.13$). The authors noted that this could be due to the relatively small number of graduates in the study and the brief postgraduate period studied (up to five years).

The authors conclude that medical school graduates with a rural background, or who are exposed to rural medicine as undergraduates, are more likely to be training in rural hospital medicine or general practice after graduation compared to students with no rural background/training.

b. 2007–2012 RMIP students

Preliminary findings of recent research on the outcomes of the RMIP has shown that the RMIP has had a positive effect on future rural practice. The researchers intend to publish findings in the near future.

### The Voluntary Bonding Scheme

**Background**

Launched in 2009, the VBS is a practical initiative run by Health Workforce New Zealand (HWNZ) to incentivise graduates to move into the communities and specialties that need them most, and to retain essential allied health professionals in New Zealand. Those on the VBS can receive payments for up to five years of bonded service to help repay their student loan or as top-up income for those without a student loan.\[xii\]

The scheme included doctors, nurses and midwives from 2009, radiation therapists and medical physicists from 2012 to 2015, GPEP registrars from 2013, sonographers from 2015, and dentists are included from the 2016 intake.

DHBs are categorised as hard-to-staff for the purpose of the VBS and have included Northland, Lakes, Tairawhiti, West Coast and Southland DHBs, and Wairau and Whakatane Hospitals.\[xiii\] The hard-to-staff specialties for doctors include general practice and rural hospital medicine.

There are two opportunity points for doctors intending to train as GPs to enter the Scheme:


\[xiii\] The number of hard-to-staff areas for vocational training in general practice (second entry point to VBS) has been more extensive than that for PGY1 entry.
1. **PGY1 (New Graduate Entry) – at the beginning of their first postgraduate year.**

To be eligible for entry under this category, new graduate doctors must:

- work as a doctor for at least two years (PGY1 and PGY2) in one of the hard-to-staff communities specified in the VBS Terms and Conditions, and
- then commence vocational training as a GP (in any part of New Zealand) for the remainder of the three- to five-year bonding period.

New graduate doctors are potentially eligible for payments of $10,000 per annum (after tax) for three to five years of bonded service ($30–$50,000 net). Doctors must complete at least three years of bonded service to be eligible for the first payment.

2. **PGY3–PGY6 – at the beginning of their vocational training in general practice.**

To be eligible for entry under this category, medical graduates from PGY3 to PGY6 must choose to undertake general practice vocational training for three years in a hard-to-staff training community.

PGY3–PGY6 doctors training as GPs are potentially eligible for one payment of $30,000 (after tax) for three years of bonded service.

The Minister of Health approves the training regions for general practice on advice from HWNZ, the College and the RGPN. This advice is based on various data that includes hard-to-staff training positions, the GP FTE/population ratio, and the hard-to-staff vacancies in each region.

### Data collection

The College requested the following information from HWNZ:

- the number of PGY1 doctors registered on the VBS who initially registered their intention to enter general practice
- the number of GP registrars registered on the VBS at the beginning of GP vocational training (ie GPEP1 registrars)
- the number of these VBS registrants who remain in rural practice.

### Findings

**PGY1 doctors registered on the VBS**

Table 8 sets out the numbers of PGY1 doctors who initially registered their intention to enter general practice on the VBS between 2009 and 2014, the numbers of these registrants who remained on the VBS as at 5 October 2015 (after some opted out), and the total number of VBS registrants.
Table 8. Numbers of PGY1 doctors per intake year (HWNZ; 5 October 2015)

<table>
<thead>
<tr>
<th>Intake year</th>
<th>Initial number of PGY1 GP registrants</th>
<th>Number of PGY1 GP registrants after opt-out</th>
<th>Total number of VBS registrants</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009*</td>
<td>15</td>
<td>15</td>
<td>116</td>
</tr>
<tr>
<td>2010</td>
<td>28</td>
<td>26</td>
<td>63</td>
</tr>
<tr>
<td>2011</td>
<td>14</td>
<td>9</td>
<td>36</td>
</tr>
<tr>
<td>2012</td>
<td>12</td>
<td>9</td>
<td>41</td>
</tr>
<tr>
<td>2013</td>
<td>12</td>
<td>9</td>
<td>42</td>
</tr>
<tr>
<td>2014</td>
<td>9</td>
<td>8</td>
<td>59</td>
</tr>
</tbody>
</table>

* The VBS was introduced in 2009 and the scheme allowed graduates from 2005 to 2008 to register. Therefore, the numbers in 2009 represent more than those PGY1 doctors who graduated in 2008.

HWNZ was not able to provide information about the specific number of VBS registrants who initially registered their intention to enter general practice and who have remained in rural practice, as HWNZ does not collect this information.

GPEP1 registrars registered on the VBS

Table 9 sets out the numbers of doctors registered on the VBS at the beginning of their vocational training in general practice.

Table 9. Numbers of GPEP1 doctors per intake year (HWNZ; 5 October 2015)

<table>
<thead>
<tr>
<th>Intake year</th>
<th>Initial number of GPEP1 registrants</th>
<th>Current number of GPEP1 registrants after opt out</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>5</td>
<td>5</td>
<td>These registrars began GP vocational training in December 2012 upon completing PGY2 or PGY3.</td>
</tr>
<tr>
<td>2014</td>
<td>20</td>
<td>18</td>
<td>These registrars began GP vocational training in December 2013 upon completing early postgraduate years (up to PGY6).</td>
</tr>
<tr>
<td>2015</td>
<td>8</td>
<td>8</td>
<td>GP vocational training began in December 2014.</td>
</tr>
</tbody>
</table>

The VBS is designed to a minimal level of compliance for the graduates and to involve minimal administration for the Ministry of Health. Data about the hard-to-staff communities and/or specialties that a participant works in, or intends to work in, is collected upon registration. Other than an 18-month check via email or query by the participant, HWNZ does not collect any further data until the participant eventually seeks payment. Thus the number of participants who remain in rural practice cannot be confirmed. Some of the participants from the 2009 to 2011 intakes may
still be eligible to seek payment under the VBS. Participants from the 2013 to 2015 intakes are not yet eligible to claim payments.

**Doctors registered on the VBS in 2015**

In 2015, of the 62 doctors registered on the VBS, 54 entered in PGY1 and 8 in GPEP1 (PGY3–6).

Table 10 sets out the specialty intentions of the PGY1 doctors registered on the VBS. The number of those intending to apply for vocational training in general practice and rural hospital medicine are highlighted.

**Table 10. Hard-to-staff specialty intentions of PGY1 registrants in 2015**

<table>
<thead>
<tr>
<th>Hard-to-staff specialty</th>
<th>Number of PGY1 intending to enter vocational training</th>
<th>Percentage of PGY1</th>
</tr>
</thead>
<tbody>
<tr>
<td>General practice</td>
<td>24</td>
<td>44.4%</td>
</tr>
<tr>
<td>Rural hospital medicine</td>
<td>13</td>
<td>24.1%</td>
</tr>
<tr>
<td>General surgery</td>
<td>4</td>
<td>7.4%</td>
</tr>
<tr>
<td>Internal medicine</td>
<td>10</td>
<td>18.5%</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>3</td>
<td>5.6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>54</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

The eight GPEP1 registrars who entered the VBS in 2015 completed PGY 2, 3, 4 or 5 in 2014. Table 11 sets out the hard-to-staff communities where the registrars were placed in 2015.

**Table 11. Hard-to-staff training communities for GPEP1 registrars in 2015**

<table>
<thead>
<tr>
<th>Training community</th>
<th>Number of GPEP1 registrars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bay of Plenty (excluding Tauranga and Whakatane urban)</td>
<td>1</td>
</tr>
<tr>
<td>Tairawhiti DHB</td>
<td>1</td>
</tr>
<tr>
<td>Hawke’s Bay DHB</td>
<td>4</td>
</tr>
<tr>
<td>MidCentral DHB</td>
<td>1</td>
</tr>
<tr>
<td>West Coast DHB</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>8</strong></td>
</tr>
</tbody>
</table>
The Postgraduate Generalist Placement (PGGP) Education Programme

- How many PGGP placements were made in 2015 and what regions were most popular amongst trainees?
- How many PGGP trainees subsequently train in general practice and then work in rural practice?
- What is the total number of eligible PGY1–2 doctors in the country?

Background

In 2002, the College started PGGP, a three-month rural general practice attachment for PGY2 and PGY3 house surgeons. This programme finished in November 2015 due to changes in funding for general practice training.

Under PGGP, most trainees were placed in rural general practices, while others were placed in provincial general practices and rural hospitals. Trainees worked full-time within the practice and attended a fortnightly teleconference. The College usually placed trainees in a practice in their preferred region with the assistance of the College’s clinical leads. Teachers spent at least two hours per week on dedicated teaching and a medical educator undertook a practice visit during the placement.

HWNZ funded a number of PGGP placements each year. For the 2014/2015 year, the College was funded for 35 PGGP placements. Trainees were paid a tax-free bursary of $12,500 for the three months. A travel and accommodation allowance was also available. Often the number of applications exceeded places available, and the programme was well evaluated by both trainees and teachers. A short study has suggested that house surgeons can have exposure to a wide range of clinical experience in a rural practice, and involvement in teaching at postgraduate level can be rewarding for practice staff.12

Data collection

Data was extracted from the College database on the number of PGGP placements for the four quarters of 2015, the trainees’ regional preferences, and their confirmed practice. Data was also collected on numbers of PGGP trainees from 2009 to 2014. The names of participants in PGGP between 2009 and 2014 were matched to the College database at 24 June 2015 to determine:

- whether the participants had subsequently entered the training programmes for GPEP or rural hospital medicine
- where they currently practise
- whether they were members of the Rural Chapter or DRHM.

For this analysis, the practice was deemed ‘rural’ if it was on the database of the RGPN, self-identified as rural for the CORNERSTONE® programme, or was on the list of GPEP practices with a rural ranking score of 35 or more.
The data were combined with the College’s earlier work of April 2014 on the PGGP education programme from 2002.

Findings

PGGP placements for 2015

Table 12 shows the numbers of PGGP trainees for the training year from 24 November 2014 to 22 November 2015 (four quarters) and the previous training year (25 November 2013 to 23 November 2014).

Table 12. Number of PGGP trainees for the 2014 and 2015 training years

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>24 Nov 2014 – 22 Nov 2015</td>
<td>14</td>
<td>34</td>
<td>9</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>25 Nov 2013 – 23 Nov 2014</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
</tr>
</tbody>
</table>

Table 13 sets out the 2015 trainees’ preferred and confirmed locations for their PGGP placement.

Table 13. Placements for 2015 PGGP trainees

<table>
<thead>
<tr>
<th>2015 quarter</th>
<th>Number of PGGP trainees</th>
<th>Preferred and confirmed locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarter 1</td>
<td>3</td>
<td>Nelson</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Blenheim</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Gisborne/East Coast</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Northland</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>North of Auckland</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Otago</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Rotorua</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Waikato/Bay of Plenty</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Wellsford or Warkworth</td>
</tr>
<tr>
<td>Quarter 2</td>
<td>4</td>
<td>Nelson</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Blenheim</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>North Island</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Rotorua</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Tokoroa</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Waikato</td>
</tr>
</tbody>
</table>
Nelson was the most popular region amongst the 2015 PGGP trainees.

**Outcomes of PGGP trainees 2002–2014**

Table 14 and Figure 5 set out the number of PGGP trainees who subsequently entered GPEP and the DRHM training programmes.

**Table 14. Number of PGGP trainees who entered GPEP and DRHM training**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of PGGP</th>
<th>GPEP</th>
<th>% of PGGP in GPEP</th>
<th>DRHM</th>
<th>% of PGGP in DRHM</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>40</td>
<td>13</td>
<td>32.5%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2013</td>
<td>27</td>
<td>12</td>
<td>44.4%</td>
<td>1</td>
<td>3.7%</td>
</tr>
<tr>
<td>2012</td>
<td>39</td>
<td>27</td>
<td>66.7%</td>
<td>2</td>
<td>2.6%</td>
</tr>
<tr>
<td>2011</td>
<td>34</td>
<td>20</td>
<td>58.8%</td>
<td>3</td>
<td>8.8%</td>
</tr>
<tr>
<td>2010</td>
<td>16</td>
<td>10</td>
<td>62.5%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2009</td>
<td>34</td>
<td>17</td>
<td>50.0%</td>
<td>4</td>
<td>11.8%</td>
</tr>
<tr>
<td>2008</td>
<td>26</td>
<td>12</td>
<td>46.2%</td>
<td>1</td>
<td>3.8%</td>
</tr>
<tr>
<td>2007</td>
<td>33</td>
<td>23</td>
<td>69.7%</td>
<td>1</td>
<td>3.0%</td>
</tr>
<tr>
<td>2006</td>
<td>25</td>
<td>19</td>
<td>76.0%</td>
<td>1</td>
<td>4.0%</td>
</tr>
<tr>
<td>2005</td>
<td>23</td>
<td>13</td>
<td>56.5%</td>
<td>1</td>
<td>4.3%</td>
</tr>
<tr>
<td>2004</td>
<td>20</td>
<td>12</td>
<td>60.0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2003</td>
<td>16</td>
<td>13</td>
<td>81.3%</td>
<td>1</td>
<td>6.3%</td>
</tr>
<tr>
<td>2002</td>
<td>2</td>
<td>2</td>
<td>100%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>335</td>
<td>194</td>
<td>15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 5. PGGP trainees entering GPEP and DRHM training

Between 2002 and 2015, there were 369 PGGP trainees. Overall, more than half of PGGPs subsequently entered the College’s general practice training programme. Between 2009 and 2014, the proportion was highest in 2012 with 66.7% of the PGGP trainees subsequently undertaking vocational training in general practice. At this stage, it is too early in the careers of the 2013 and 2014 PGGP trainees to determine whether they will subsequently enter general practice or rural hospital medicine training.

Table 15 shows further information on the 2009 to 2014 cohorts of PGGP trainees as at 24 June 2015.

Table 15. Status of doctors following PGGP training from 2009 to 2014 as at 24 June 2015

<table>
<thead>
<tr>
<th>Year of PGGP</th>
<th>Number of PGGP</th>
<th>GPEP</th>
<th>Finished GPEP and in rural general practice</th>
<th>Member of Rural Chapter</th>
<th>Finished GPEP and in non-rural general practice</th>
<th>In GPEP and in a rural practice</th>
<th>In GPEP and in a non-rural practice</th>
<th>In DRHM training</th>
<th>DRHM Fellow</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>40</td>
<td>13</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2013</td>
<td>27</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>11</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2012</td>
<td>39</td>
<td>27</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>25</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>2011</td>
<td>34</td>
<td>20</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>5</td>
<td>10</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>2010</td>
<td>16</td>
<td>10</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2009</td>
<td>34</td>
<td>17</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Since 2009, five of the PGGP trainees have finished GPEP and are working in rural general practice. Two are Fellows of the DRHM. However, many PGGP trainees will not yet have completed their training. Furthermore, it is difficult to tell from the data available whether PGGP
had an influence on their choice of future career, because many of them may have already chosen to enter GPEP or rural hospital medicine training. The College has not collected the information on their intentions before and after PGGP.

In 2014, the College looked at regional distribution of placements from 2012 to 2014 and the findings are shown in the Figure 6.

**Figure 6. PGGP placements by region 2012–2014**

- Auckland
- Canterbury
- Hawke’s Bay
- Nelson
- Northland
- Otago
- Palmerston North
- Waikato/Bay of Plenty
- Gisborne
- Wellington
- Southland

<table>
<thead>
<tr>
<th>Region</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auckland</td>
<td>6</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Canterbury</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Hawke’s Bay</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Nelson</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Northland</td>
<td>6</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Otago</td>
<td>8</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Palmerston North</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Waikato/Bay of Plenty</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Gisborne</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Wellington</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Southland</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total number of house surgeons in New Zealand**

We looked at the total number of house surgeons in New Zealand to determine the proportion of house surgeons who participated in PGGP. The Medical Workforce Taskforce’s *Report on the Resident Medical Officer (RMO) Workforce Profile Data Collection 2015* sets out information collected by the Ministry of Health. A ‘contracted FTE’ uses the number of hours an employee is
contracted to work (usually a 2086-hour annual contract), and full-time RMOs are reported as 1.0 contracted FTE. Table 16 shows the number of contracted FTEs and the agreed number of FTEs required to deliver the service.

Table 16. National RMO designation by contracted FTE and establishment at 31 March 2015

<table>
<thead>
<tr>
<th>Occupational title</th>
<th>Contracted FTE</th>
<th>Establishment FTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>House surgeon PGY1</td>
<td>447.3</td>
<td>694.0</td>
</tr>
<tr>
<td>House surgeon PGY2</td>
<td>427.5</td>
<td>444.1</td>
</tr>
<tr>
<td>House surgeon PGY3+</td>
<td>253.7</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1128.5</td>
<td>1138.1</td>
</tr>
</tbody>
</table>

There were 34 PGGP trainees in 2015. Thus, only a small proportion (3.0%) of all house surgeons participated in PGGP in 2015.

The General Practice Education Programme (GPEP)

The College’s General Practice Education Programme (GPEP) is based on registrars working in general practice. The standard full-time GPEP is 36 months and completed in two stages – GPEP1 and GPEP2/3.

GPEP1

- How many rural training placements are there in New Zealand and how easily are they filled?
- How does the situation for rural general practice training compare with rural practice across New Zealand?
- What are the preferred and less popular areas for GPEP1 placements?

Background

Time during GPEP1 is undertaken in approved teaching practices that meet the standard and criteria set for teaching practices. Some of the approved training placements are in rural practices. Although the number of rural practices has been relatively constant over recent years, there is no set number or proportion of teaching practices that are rural.

xiv The RMO Contracted FTE represents current actual FTE, and Establishment FTE indicates capacity. The Establishment FTE is the number of FTEs required to deliver the service and is agreed as part of the funded staffing establishment.
In December 2013, the College began employing GPEP1 registrars. Schedule 3 of the ‘Collective Employment Agreement between the RNZCGP and the New Zealand Residents Doctors Association: 30 June 2014 to 5 December 2014’ (‘the Agreement’) sets out rural practices approved for teaching. Under clause 10.6 of the Agreement, an incentive allowance ($1,500 per six-month attachment) and a relocation or travel allowance is available to registrars placed in an approved rural practice. For the purposes of GPEP1 training, the RRS\textsuperscript{xv} has been used to help classify a practice as ‘rural’ and registrars placed in these rural practices are entitled to the payments.

Previously, GPEP applicants indicated whether they were interested in undertaking their training in a rural placement. Applicants are interviewed by the College’s medical educators, who in turn place the registrars. The College did not require registrars to spend any specific time in rural general practice. However, in 2015 (for the 2016 intake), applicants were required to indicate a preference for rural training, and to nominate whether they would be interested in completing a rural attachment during their first placement, second placement, or both placements. Applicants may put forward any personal circumstances requiring them to be located centrally. The medical educators discuss allocation with the applicants during the employment interview.

Data collection
Data was extracted from the College database.

Findings

Rural training placements
For the GPEP1 training year from 8 December 2014 to 4 December 2015, the Agreement lists 34 practices approved for teaching. An additional 12 practices that have a rural ranking score of 35 or more, but that are not listed under the Agreement, are also approved rural practices for teaching purposes.

Therefore, there were 46 teaching practices throughout New Zealand deemed rural for GPEP1 in 2015. While the vast majority are only able to accommodate one registrar at a time, some can accommodate up to two.

The College allocates placements for GPEP1 in two rounds; the first attachment and then the second. Rural placements are allocated at the same time as all other placements.

For 2015 there were 48 rural teaching positions available for the first six-month attachment and 47 for the second. In 2014, there were 51 rural teaching positions.

The number and percentage of available positions that were filled are shown in the Table 17.

\textsuperscript{xv} The RRS is used for the purposes of classifying teaching practices as rural for GPEP1 in lieu of any other classification system.
Table 17. Placements in rural practice 2014–2015

<table>
<thead>
<tr>
<th></th>
<th>Number of registrars placed in rural practices</th>
<th>Total rural teaching positions</th>
<th>Percentage of positions filled</th>
<th>Percentage of registrars in rural practice</th>
<th>Total registrars</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2015 Placement 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(8 December 2014 – 5 June 2015)</td>
<td>28</td>
<td>48</td>
<td>58.3 %</td>
<td>16.8%</td>
<td>167*</td>
</tr>
<tr>
<td><strong>2015 Placement 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(8 June 2015 – 4 December 2015)</td>
<td>21</td>
<td>47</td>
<td>44.7%</td>
<td>12.6%</td>
<td>167*</td>
</tr>
<tr>
<td><strong>2014 Placement 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(9 December 2013 – 6 June 2014)</td>
<td>27</td>
<td>51</td>
<td>52.9%</td>
<td>21.1%</td>
<td>128</td>
</tr>
<tr>
<td><strong>2014 Placement 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(9 June 2014 – 5 December 2014)</td>
<td>24</td>
<td>51</td>
<td>47.1%</td>
<td>18.8%</td>
<td>128</td>
</tr>
</tbody>
</table>

* The total number of GPEP1 registrars for 2015 is 167 (four registrars deferred placement).

For a total of 334 placements in 2015 across both six-month attachments, 14.7% (n=49) were in rural practices. This compares to 19.9% (51 out of 256) of placements over 2014. Thus, despite their availability over the past two years, only about half of the rural teaching positions for GPEP1 have been filled.

Comparisons between GPEP1 and practices across New Zealand

It is difficult to make any accurate comparisons between the rural practices and rural placements available for GPEP1 training on the one hand and the overall situation of rurality of practices and practitioners in New Zealand on the other. The difficulties arise mainly as a result of how a practice or practitioner is defined as ‘rural’. The following is an attempt to provide an approximation.

The RGPN lists 193 practices with a minimum score of 35 on the RRS that are thus classified as rural. The Ministry of Health cites a total of 1028 general practices in New Zealand. Therefore, 19% of New Zealand practices can be classified as rural practices.

In comparison, there are approximately 260 approved teaching practices that are able to accommodate GPEP1 registrars. Of these, 46 (17.7%) are deemed rural under the Agreement. Therefore, it appears that the proportion of practices available for GPEP1 training that can be identified as rural is a good representation of the overall proportion of practices in New Zealand that are rural.

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xvi As teaching resources change, the number of approved teaching practices can only be given as an approximate.
Furthermore, across both six-month placements in 2015, 14.7% of all the placements for GPEP1 registrars (49 out of 334) were in a rural practice. As a rough comparison, the 2014 RNZCGP Workforce Survey found that 17.1% of working respondents (377 out of 2203) were in rural practice (ie general practice or rural hospital medicine). This data is shown in Table 18.

Table 18. Rural proportion of GPEP1 versus national rural proportions

<table>
<thead>
<tr>
<th>Approved training practices 2015 GPEP 1</th>
<th>General practices in New Zealand</th>
<th>GPEP1 placements</th>
<th>2014 RNZCGP Workforce Survey respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural (RRS score ≥35)</td>
<td>46 (17.7% of total)</td>
<td>193 (18.8%)</td>
<td>49 (14.7%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>377 (17.1% of total)</td>
</tr>
<tr>
<td>Not rural</td>
<td>214 (82.3%)</td>
<td>835 (81.2%)</td>
<td>285 (85.3%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1826 (82.9%)</td>
</tr>
<tr>
<td>Total</td>
<td>260</td>
<td>1028</td>
<td>334</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2203</td>
</tr>
</tbody>
</table>

Assignment of rural placements and their popularity

The GPEP team and medical educators have noted some indicators of whether registrars will be placed in a rural training practice:

■ Positive indicators:
  – The registrar has a rural background.
  – The registrar’s partner has a rural background.
  – The registrar has participated in an undergraduate rural immersion programme.
  – The registrar has participated in PGGP.
  – Medical educators have determined a regional need.

■ Negative indicators:
  – The registrar does not express an interest in being placed in a rural practice on their GPEP application.
  – The registrar’s spouse/partner is unable to relocate to a rural area (usually because they work in the city).
  – The registrar has young children and/or children attend day-care.
  – The registrar owns a house in a non-rural area.
  – The registrar does not have the required support in the rural setting – usually family support.
  – The registrar needs to travel a considerable distance for day-release seminars and workshops in an urban centre.
  – The registrar cannot commit to a rural placement for a full six months.
  – The medical educator does not have confidence in the registrar’s ability to work in a rural placement.

About five registrars for each placement challenge their allocation to a rural practice. Only a few have been successful in changing their allocation by the College.

The popularity of rural placements depends on the region and the individual registrar. One of the main drawcards is the popularity of teachers. Notably, the West Coast has become popular with the introduction of video-conferencing.
Less popular placements have been in the following regions:
- South Island, including Otago, Canterbury and Nelson
- Northland
- Gisborne
- Hawke’s Bay
- Taranaki
- Palmerston North.

GPEP 2/3

- What proportion of GPEP2/3 registrars are completing their GPEP clinical time in rural practices?
- What proportion of teaching practices accommodating GPEP2/3 registrars are rural practices?

Background

During GPEP2/3 registrars are required to complete their clinical time in a training location approved by the College. These are general practices that are accredited or are actively working towards accreditation through the College’s CORNERSTONE® programme (or a comparable programme such as the Midlands Health Network Core Standard). If the criteria are not met, the registrar may make a formal request to the College to approve the practice as a training location.

GPEP2/3 registrars are responsible for where they undertake their clinical time and for advising the College of their workplace. They are not required to spend any specific time in rural general practice.

Data collection

On 19 May 2015, a list of registrars in GPEP2/3 and their workplaces was extracted from the College database. The practices were then categorised as rural or non-rural. The practice was considered to be a rural practice if it was:
- a practice on the database of the RGPN, or
- included in the list of rural practices (self-identified as rural) on the CORNERSTONE® database, or
- included on the list of practices (used by the GPEP team) that had a rural ranking score of 35 or more.

The College determined the number of registrars at each practice.

Limitations

As the College relies heavily on timely information supplied by the registrars themselves, the data for GPEP2/3 placements may not be as robust as for GPEP1. A further limitation of the analysis is the determination of a practice as a ‘rural’ practice. A broader approach was taken for the analysis of data for GPEP2/3 than for GPEP1.
Findings
As at 19 May 2015, the College database included a total of 633 GPEP2/3 registrars; 109 (17%) were working in rural practices and 524 (83%) in non-rural practices.

A total of 456 practices were accommodating GPEP2/3 registrars, and of these 17% were rural. In comparison, we identified 28% of all New Zealand practices as rural (288 out of 1028) using the broader approach.

The number of practices accommodating GPEP2/3 registrars, and the number of registrars in each practice is shown in Tables 19 and 20.

Table 19. Practices accommodating GPEP2/3 registrars

<table>
<thead>
<tr>
<th>Practice</th>
<th>Number of practices</th>
<th>Percentage of practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>78</td>
<td>17%</td>
</tr>
<tr>
<td>Non-rural</td>
<td>378</td>
<td>83%</td>
</tr>
<tr>
<td>Total practices</td>
<td>456</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 20. Number of registrars per rural practice

<table>
<thead>
<tr>
<th>Number of registrars per rural practice</th>
<th>Number of rural practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>57</td>
</tr>
<tr>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>78</td>
</tr>
</tbody>
</table>

Curriculum for general practice

What are the rural-specific parts of the current New Zealand general practice curriculum, and how does it compare to international general practice curricula (eg Australia)?

Background
The College’s Curriculum for General Practice defines the knowledge, skills and attitudes required to work in general practice in New Zealand.

The College expects the curriculum to:

- guide the CPD of vocationally registered GPs
- guide and support registrars to demonstrate and achieve the required competencies
The curriculum statements apply the three key concepts of general practice – person-centredness, generalism and evidence.

Data collection

References to rural health were extracted from the College’s Curriculum for General Practice. We have compared the Curriculum for General Practice to the curriculum of the Royal Australian College of General Practitioners (RACGP) and with the curriculum for Fellowship in Advanced Rural General Practice (FARGP). The FARGP is a qualification awarded by the RACGP in addition to the vocational Fellowship (FRACGP).

We have not compared the College’s curriculum with the Australian College of Rural and Remote Medicine (ACRRM) training pathway. The ACRRM training comprises hospital posts, rural or remote posts, and an advanced skills post, and we consider that the RACGP curriculum is more comparable to the New Zealand context.

The curriculum of the UK Royal College of General Practitioners (RCGP) and the Canadian CANMEDS Family Medicine framework do not have a specific curriculum statement on rural health.

Findings

The College’s Curriculum for General Practice: rural health

Doctors working in rural areas are expected to be competent in all areas of the Curriculum for General Practice. The curriculum includes a statement on rural health and corresponding competencies. Rural health is also specifically mentioned in a number of areas. Appendix 1 sets out the curriculum statement on rural health and all references to rural health in the curriculum.

The Royal Australian College of General Practitioners’ (RACGP’s) curriculum

The basic RACGP rural curriculum has the following additional areas that are not highlighted in the College’s curriculum statement:

- A greater focus on the need to competently manage patients from a range of social, economic, occupational and cultural backgrounds in the rural community.
- A greater focus on health promotion activities to enable the community to look after their own health and on participation in regional and national community-based prevention and education strategies.
- A greater focus on the ability to manage a range of illnesses and diseases (including common conditions), other than emergency presentations.
- A requirement that doctors are able to use x-ray and teleradiology facilities and ultrasound equipment.
- A focus on procedures for disaster evaluation, management, trauma management, retrieval, as well as disease control arrangements.
- A greater focus on medicolegal issues concerning emergency and procedural medicine, including notification of disease, birth, death, autopsy, non-accidental injury, substance abuse, as well as familiarity with issues such as involuntary admission to a psychiatric unit, power of attorney, child protection and abuse, and guardianship.

**Advanced Rural General Practice curriculum**

The Fellowship in Advanced Rural General Practice (FARGP) curriculum additionally includes:

- additional emergency medicine skills (requirements for completion of emergency management courses)
- specific experiential requirement of 12 months in rural general practice and 12 months in an accredited placement associated with an Advanced Rural Skills Training (ARST) position
- the ARST list that includes procedural areas such as anaesthetics, obstetrics, surgery, emergency medicine, and non-procedural areas such as adult internal medicine, paediatrics, mental health, Aboriginal and Torres Strait Islander health, and small town rural general practice. The curricula for these areas are developed in consultation with the relevant medical colleges and include curriculum outcomes as well as specific skills lists.

Specific prerequisites and assessment requirements are set in different areas. Candidates do not need to complete the full requirements for one area if they are choosing to undertake more than one area as part of the FARGP programme.

**Discussion**

**Undergraduate training and the VBS**

Initiatives at the undergraduate level have been successful in recruiting doctors to rural areas. Similar measures focusing on postgraduate training would help to maximise the overall effect on recruitment and retention of doctors in rural practice.

Doctors may enter the VBS either during their first postgraduate year or at the beginning of general practice training, and the scheme has attracted doctors into communities and specialties that need them the most; however, outcome data is limited.

**PGGP and GPEP1**

PGGP was successful in allowing house surgeons to experience rural practice. In relation to GPEP1 registrars, only about half of the available rural training positions have been filled over the last two years. Furthermore, in 2015 only 14.7% of all placements for GPEP1 registrars were in rural placements. Registrars have commonly cited family and social support as reasons for not choosing placement in a rural practice. However, we note that the proportion of practices available
for GPEP1 training that are deemed rural is a good representation of the overall proportion of practices in New Zealand that are rural (17.7% vs 19%).

We consider that setting a target of filling at least 75% of the available GPEP1 rural training positions would contribute to an aim of 25% of all registrars becoming rural or provincial health care providers, and better reflect the future needs of the rural population in New Zealand.

The College anticipates that national oversight and coordination of the allocation of placements for GPEP1 registrars will help to ensure a more equitable distribution of registrars by placing them in regions identified as having a high need for GPs. The MCNZ’s new prevocational community attachments may also be used to facilitate exposure to rural practice.

In addition to ensuring sufficient rural placements are available and taken up, it is important that the registrars are exposed to positive and meaningful rural experiences. Eliciting specific feedback from registrars and acting on this feedback would facilitate this. It may also be beneficial to place them in rural settings where practices and practitioners are closely linked to academic programme activities.

GPEP2/3

GPEP2/3 registrars are responsible for choosing where they undertake their clinical time. Of the GPEP2/3 registrars, 17% (109 out of 633) were working in a rural practice, and 17% of all practices accommodating GPEP2/3 registrars (78 out of 456) were identified as rural. Having closer oversight and encouraging more registrars to spend their clinical time in a rural practice (eg through rural ambassadors and marketing) are potential avenues that the College could explore.

Rural general practice curriculum

International literature suggests that training programmes should be better structured to attract candidates who are more likely to enter rural practice (eg those with a rural background). There is potential to enhance the College’s Curriculum for General Practice by highlighting the health needs of underserved communities, emphasising provision of health care in rural areas, and including additional rural-focused competencies.

Vocational training in rural hospital medicine

In 2008, the MCNZ recognised rural hospital medicine as a distinct scope of practice. As a result, the DRHM was set up and sits as a semi-autonomous body within the College. As at 16 November

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xvii The RGPN lists 193 practices with a minimum score of 35 on the RRS; the classification of practices as rural for GPEP1 also relies on the RRS.

xviii Approximately 14% of the population live in rural New Zealand (Statistics New Zealand. New Zealand: An urban/rural profile update. Wellington; 30 June 2014).

xix This proportion is much lower than the 28% of New Zealand practices we identified as rural (288 out of 1028). For this analysis, practices were identified as rural if they were: a practice on the database of the RGPN, included in the GPEP list of practices with a rural ranking score of 35 or more, or had self-identified as rural on the CORNERSTONE® database.
2015, the MCNZ had 118 doctors registered in the vocational scope of rural hospital medicine (113 practising) while the College had 165 members in its Rural Hospital Generalist Chapter, 119 current Fellows of the DRHM, and 49 doctors enrolled in the DRHM training programme.

Recently both the College and Ross Lawrenson et al.\textsuperscript{xx} undertook surveys that aimed to assess the rural hospital workforce and the curriculum of the DRHM programme. This report does not intend to repeat the findings of the surveys, but notes that the College’s 2014 DRHM survey (response rate of 83%) showed that 31.3% of current DRHM Fellows (21 out of 67 respondents) and 45.2% registrars (19 out of 42 respondents) had a rural background (defined as living rurally and attending school in a community with a population of less than 30,000 on entry to medical school).

The College is currently considering ways to better integrate the rural hospital medicine and general practice vocational training pathways.

Data collection

Workforce planning relies on high quality, complete and accessible workforce data. The development of a national minimum dataset on rural practitioners would help facilitate this. Data that could be collected include:

- rural profiles of GPEP registrars and Division of Rural Hospital Medicine registrars
- longitudinal data on VBS registrants
- longitudinal tracking of postgraduate participants in College programmes.

Notably, the MSOD is currently progressing work on the longitudinal tracking of medical students, and it is anticipated that the VBS will be reviewed over the next year and provide an opportunity to consider the future collection of outcome data.

Information on the number of rural training positions available each year and the number of GPEP\textsuperscript{1} registrars placed in rural practices is relatively easy to extract from the College’s database, and could be regularly reported on. For 2015, the College started to create a list of all approved rural training practices, which will be updated as new practices are added.

\textsuperscript{xx} ‘DRHM Workforce Planning and Curriculum Questionnaire’ (RNZCGP; 2014) and ‘Report to Health Workforce New Zealand on the Rural Hospital Doctors Workforce Survey’ (Lawrenson R, Reid J, Nixon G, et al. 2015).
Recommendations

- It is recommended that the College set a target of filling at least 75% of the available GPEP1 rural training positions each year. This would contribute to meeting a target of having at least 25% of registrars becoming rural or provincial health care providers and thus better reflect the future needs of New Zealand’s rural population.

- It is recommended that the College aim to ensure at least 25% of GPEP2/3 registrars are undertaking their clinical training in rural practice during their training.

- In order to increase the number of registrars in rural practice, it is recommended that the College seek consideration by the College’s Education Advisory Group (EAG) on the feasibility of:
  - mandatory rural service during GPEP, and its duration (eg a three- or six-month placement)
  - better incentivising rural placements (eg on a points or weighting system for completion of a period of training in rural or high-needs practices)
  - the development of a specific rural pathway for applicants to enter GPEP training. These applicants could be given greater weighting during the selection process. The ultimate aim would be to integrate this rural pathway for GPEP training into a ‘rural pipeline’ for training that starts at the undergraduate level and includes prevocational training attachments.

- It is recommended that the College better promote rural opportunities to medical students, house surgeons and registrars (eg using rural ambassadors, facilitating briefings by doctors who completed rural placements).

- It is recommended that steps be taken to ensure the College maintains an appropriate level of rural placements that provide meaningful training. This might be achieved by:
  - eliciting and acting on feedback from registrars on their rural placements to improve the quality of training provided
  - enhancing the relationships between the College and training practices via a dedicated relationship management role that oversees and coordinates all information on teaching practices (often held regionally)
  - developing a GPEP rural coordinator role to ensure all placements, feedback and quality controls are centralised alongside the regional model
  - encouraging the many rural CORNERSTONE®-accredited practices to accommodate registrars.

- It is recommended that the College explore the content of its Curriculum for General Practice and required competencies relating to the provision of health care in rural areas. This might include:
  - a greater focus on managing patients from a range of backgrounds in the rural community
  - a greater focus on health promotion activities in rural communities
  - a greater focus on procedures for disaster, trauma, retrieval and disease control
  - a greater focus on medicolegal issues concerning emergency and procedural medicine
  - the additional ability to use x-ray, teleradiology facilities, and ultrasound equipment.

- It is recommended that the College look into advanced rural skills training and additional emergency medicine skills training post-Fellowship.

- It is recommended that the College develop a national minimum dataset on rural practitioners, including longitudinal tracking of GPEP registrars placed in rural practice, and collecting data on rural profiles of GPEP registrars.

- It is recommended that HWNZ collect longitudinal data on VBS registrants and provide the results to the College.
GP TO POPULATION RATIOS, VACANCIES AND HOTSPOTS
GP to population ratios, vacancies and hotspots

What is the geographic distribution of GPs across New Zealand and are there any regional differences in the proportion of GPs who intend to retire in the near future?

What does the RGPN data on current rural GP vacancies and hotspots show?

Background

GP to population ratios are often used as part of workforce planning. Such figures may highlight inequities in the geographic distribution of GPs across the country, and is a key issue for health services because the distance to a GP is an important consideration for rural residents deciding to access health services. For GPs, the numbers of doctors and their distribution among the population affect the nature of their work life.

The College has noted that a potential future shortage of GPs will be driven by the gap created when the current cohort of older GPs moves towards retirement. As a corollary, the regions containing higher proportions of older GPs and more GPs who intended to retire in the near future will be the regions most affected.

The RGPN helps to maintain the rural workforce by recruiting replacement GPs, supporting existing GPs with breaks and back-up, and ensuring experienced, senior GPs are available as GP trainers, mentors and supervisors. The RGPN does this through its government-funded NZLocums Rural Recruitment and Rural Locums Support Service (NZLocums). The RGPN collects data on areas of need arising from the growing number of GP vacancies in rural general practice.

NZLocums uses the term ‘hotspots’ to describe unplanned and unresolved recruitment problems. The hotspots are not yet under control but are consistently being worked on. A critical vacancy is categorised as a hotspot when it is causing a threat to either the wellbeing of the remaining health professionals at the practice (eg through stress) or there is a risk of reduced or no access to health care for the local patient community.

In determining a high level of vacancy, the RGPN considers the proportion of rural practices that currently have a vacancy. This has been around 20–25% over the past three years. In November 2014, the RGPN estimated 40 permanent GP vacancies affecting 20% of rural general practices around the country.
Data collection

We sought data on GP to population ratios across the country from the MCNZ. This information was gathered as part of the MCNZ Workforce Survey 2013.xx\textsuperscript{i} The College’s 2015 Workforce Survey analyses the retirement intentions of respondent members, with responses grouped according to the DHB in which the respondent worked.

We also sought information from the RGPN on current rural GP vacancies and hotspot data.

Limitations

We used the 2013 MCNZ survey data, which was the most current information available at the time; however, it was based on information the MCNZ collected between late-2012 and mid-2013. In addition, data on FTEs typically represents an individual and all the hours they work. This means that a doctor who works more hours than is considered full-time is counted as more than one individual. When DHBs are compared this way, areas of shortages might not stand out.

The College’s 2015 Workforce Survey had an overall response rate of 54.4%, but the data on members’ intention to retire might not reflect actual retirement rates.

Findings

GP to population ratios and retirement intentions

The MCNZ data on GP to population ratios reflect the existing geographic distribution of GPs. Data on retirement intentions provide an indication on where the existing situation might worsen over the next 10 years.

Figure 7 sets out the MCNZ 2013 data on GP FTE per 100,000 population ratio for each DHB and the College’s 2015 Workforce Survey data on the proportion of respondents intending to retire in the next 10 years.

\textsuperscript{xxi} Although this data had not been published at the time, the College was able to use it in its submission to HWNZ on the VBS 2016.
The DHBs with the lowest GP FTE/100,000 population ratios are West Coast, Counties Manukau, Taranaki, MidCentral and Waitemata DHBs. The DHBs with the highest proportion of survey respondents who intend to retire in the next 10 years are Whanganui, South Canterbury, Taranaki, MidCentral, Northland, Auckland and Wairarapa DHBs.

Looking at these figures together, both Taranaki DHB and MidCentral DHB are at the lower end of the GP to population ratios, as well as being amongst the regions most likely to worsen over the next 10 years as a result of members’ intention to retire. The combined data suggest that these regions should be looked at more closely. Moreover, West Coast, Tarankai and MidCentral DHBs are of particular concern because they have significant rural populations. It is important to note that most DHB regions include rural areas that vary in size, population and number of practices, although the needs of the rural populations in each region might be very similar.
Vacancies and hotspots

For 2014 and 2015, HWNZ categorised general practice and rural hospital medicine as hard-to-staff specialties.

Table 21 shows the number of rural GP vacancies and hotspots per DHB. Rural GP vacancies per 100,000 DHB population and rural GP vacancies per 100,000 enrolled service users (ESUs) for the second quarter of 2015 are also shown.

Table 21. Rural GP vacancy and hotspot rates per DHB (RGPN, June 2015)

<table>
<thead>
<tr>
<th>DHB</th>
<th>Rural GP vacancies (at 31 March 2015)</th>
<th>Hotspots for last 3 years (2012–2015)</th>
<th>DHB population – PHO ESU 2015 Q2</th>
<th>Rural GP vacancies per 100,000 DHB population</th>
<th>PHO ESUs rural 2015 Q2</th>
<th>Rural GP vacancies per 100,000 ESUs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northland</td>
<td>5</td>
<td>2</td>
<td>156,531</td>
<td>3.19</td>
<td>54,156</td>
<td>0.92</td>
</tr>
<tr>
<td>Waitemata</td>
<td>2</td>
<td>1</td>
<td>240,592</td>
<td>0.83</td>
<td>18,947</td>
<td>1.06</td>
</tr>
<tr>
<td>Auckland</td>
<td>1</td>
<td>1</td>
<td>896,813</td>
<td>0.11</td>
<td>15,384</td>
<td>0.65</td>
</tr>
<tr>
<td>Counties Manukau</td>
<td>1</td>
<td>0</td>
<td>383,040</td>
<td>0.26</td>
<td>10,043</td>
<td>1.00</td>
</tr>
<tr>
<td>Bay of Plenty</td>
<td>2</td>
<td>2</td>
<td>206,634</td>
<td>0.97</td>
<td>27,642</td>
<td>0.72</td>
</tr>
<tr>
<td>Waikato</td>
<td>5</td>
<td>4</td>
<td>358,718</td>
<td>1.39</td>
<td>128,827</td>
<td>0.39</td>
</tr>
<tr>
<td>Tairawhiti</td>
<td>1</td>
<td>0</td>
<td>35,176</td>
<td>2.84</td>
<td>8021</td>
<td>1.87</td>
</tr>
<tr>
<td>Lakes</td>
<td>1</td>
<td>0</td>
<td>105,131</td>
<td>0.95</td>
<td>12,412</td>
<td>0.81</td>
</tr>
<tr>
<td>Taranaki</td>
<td>3</td>
<td>1</td>
<td>107,203</td>
<td>2.80</td>
<td>17,488</td>
<td>1.72</td>
</tr>
<tr>
<td>Hawke’s Bay</td>
<td>2</td>
<td>1</td>
<td>153,641</td>
<td>1.30</td>
<td>13,528</td>
<td>1.48</td>
</tr>
<tr>
<td>Whanganui</td>
<td>0</td>
<td>0</td>
<td>62,573</td>
<td>0.00</td>
<td>8460</td>
<td>0</td>
</tr>
<tr>
<td>MidCentral</td>
<td>2</td>
<td>0</td>
<td>153,732</td>
<td>1.30</td>
<td>17,343</td>
<td>1.15</td>
</tr>
<tr>
<td>Wairarapa</td>
<td>1</td>
<td>0</td>
<td>42,231</td>
<td>2.37</td>
<td>9521</td>
<td>1.05</td>
</tr>
<tr>
<td>Nelson Marlborough</td>
<td>1</td>
<td>0</td>
<td>139,574</td>
<td>0.72</td>
<td>23,743</td>
<td>0.42</td>
</tr>
<tr>
<td>West Coast</td>
<td>1</td>
<td>3</td>
<td>30,467</td>
<td>3.28</td>
<td>11,680</td>
<td>0.86</td>
</tr>
<tr>
<td>Canterbury</td>
<td>4</td>
<td>5</td>
<td>493,655</td>
<td>0.81</td>
<td>47,109</td>
<td>0.85</td>
</tr>
<tr>
<td>South Canterbury</td>
<td>2</td>
<td>1</td>
<td>57,142</td>
<td>3.50</td>
<td>15,677</td>
<td>1.28</td>
</tr>
<tr>
<td>Southern</td>
<td>11</td>
<td>8</td>
<td>288,466</td>
<td>3.81</td>
<td>58,938</td>
<td>1.87</td>
</tr>
</tbody>
</table>

Data for the DHBs with the highest ratings are shown in Figures 8 and 9.

xxii Enrolled service users (ESUs) are the people enrolled with a PHO. Capitation is based on the number and characteristics (eg age, sex, and ethnicity) of ESUs.
Figure 8. Rural GP vacancies per 100,000 DHB population and ESUs (RGPN; June 2015)

Figure 9. Rural GP vacancies (as at 31 March 2015) and hotspots (2012–2015) (RGPN; June 2015)
Taken together, the RGPN data shows the most affected DHBs by rural GP vacancies and hotspots are:

- Southern DHB
- South Canterbury DHB
- Tarawhiti DHB
- Taranaki DHB
- West Coast DHB
- Northland DHB
- Waikato DHB
- Canterbury DHB.

We also note that HWNZ lists the following hard-to-staff areas for GPs per DHB as at 9 June 2015:

- Northland (excluding Whangarei urban)
- Bay of Plenty DHB (excluding Tauranga and Whakatane urban)
- Waikato DHB (excluding Hamilton and Cambridge)
- Tairawhiti DHB
- Lakes DHB
- Taranaki DHB
- Hawke's Bay DHB
- Whanganui DHB
- MidCentral DHB
- Wairarapa DHB
- West Coast DHB
- Canterbury DHB (excluding Christchurch other than Banks Peninsula)
- South Canterbury DHB
- Southern DHB (excluding Dunedin, Mosgiel and Invercargill)

Discussion

Information on GP to population ratios, GPs’ retirement intentions, and rural GP vacancies per DHB provide an indication on the geographical areas that should be looked at more closely. The findings suggest that amongst the most affected areas are West Coast DHB, South Canterbury DHB, Southern DHB, and Northland DHB. Further, Taranaki DHB and MidCentral DHB are of particular concern because they comprise relatively low GP to population ratios and a higher proportion of GPs who intend to retire in the next 10 years.

Notably, most DHB regions include rural areas that vary in size, population and number of practices. Consequently, undertaking recruitment and retention activities based on DHB regions may result in some rural areas receiving a higher priority than others, despite the needs of the rural populations in each region being very similar.

It is also acknowledged that rural doctors are vulnerable to burnout as a result of high workload and low level of collegial support. It is the College’s view that:

- all rural doctors should have relevant and accessible ongoing professional development
- all rural doctors should have adequate access to locums to allow for holidays and professional development
- community-led measures should be promoted to attract and retain rural doctors
Exploring what communities offer, and the provision of financial incentives, suitable housing, employment for partners, and access to childcare facilities and quality education have been identified as potential countermeasures to attract and retain doctors to rural communities (see Appendix 2). Appropriate collegial support and after-hours arrangements with opportunities for personal holiday and professional development are vital.

**Recommendations**

- It is recommended that the College advocate for a nationally consistent approach to the recruitment and retention activities that aim to better serve rural communities in every DHB region. A specific national rural workforce strategy developed by the Ministry of Health and HWNZ would be an appropriate approach.

- It is recommended that the College look at sharing success stories and providing case studies on innovative approaches to recruitment and retention of vocationally trained generalists to rural areas. Topics might include:
  - collegial and professional support and after-hours arrangements
  - opportunities for personal vacation and professional development
  - what the community can offer doctors and their families, such as suitable housing, employment for partners, quality education and childcare facilities.
RURAL CONTINUING PROFESSIONAL DEVELOPMENT
Rural continuing professional development

All College members, including Fellows and registrars in training for Fellowship, must fulfil CPD requirements. The College’s two main programmes for CPD are a triennium programme, Maintenance of Professional Standards (MOPS), and an annual programme, CPD Online. MOPS applies to all vocationally registered Fellows who have continued to meet their CPD requirements. The components of the triennium programme include peer review activity and continuing medical education (CME) activities. The annual programme applies to all doctors who are not yet registered in a vocational scope.

Peer groups

- What is the status of peer groups in rural areas?
- Do rural peer groups use Skype and online support?

Background

Participation in a peer group is a required activity for CPD. Peer review provides a forum for constructive discussion and collegial support, with the aim of improving clinical care and patient outcomes. The MCNZ defines peer review as:

…evaluation of the performance of individuals or groups of doctors by members of the same profession or team. It may be formal or informal and can include any time when doctors are learning about their practice with colleagues.

Research has found that general practice peer groups in New Zealand are well-regarded educational initiatives and their autonomous nature is valued. However, some peer groups may depart from what is educationally or pastorally useful.

Peer groups are registered with the College. The College recognises attendance at (or e-participation in) College-registered peer group meetings, individually designed peer review sessions, and locum hand-over meetings as peer review. The College recommends that doctors who practise in remote regions or primarily as a locum and battle to attend peer group meetings consider joining a virtual, online or teleconference group.
Data collection

Data on peer groups comprising College members is kept on the College database. The database included:

- the name of the peer group
- the location of the peer group
- the use of Skype or online meetings
- the date the peer group was registered
- whether the peer group is current or defunct
- the group’s contact person.

All the current peer groups on the College’s database were analysed and classified as either ‘rural’ or ‘non-rural’. Particular attention was paid to the location and the name of the peer group. The following factors were used to help determine whether the peer group was ‘rural’:

- Whether the peer group’s contact person was a member of the Rural Chapter or the DRHM.
- Whether the contact person’s practice was a ‘rural practice’. In order to be classified as a rural practice, the practice was either:
  a. a practice on the database of the RGPN
  b. included in the list of rural practices on the CORNERSTONE® database, or
  c. included on the GPEP list of practices that had a rural ranking score of 35 or more.

Data on the use of Skype or online peer group meetings was also collected.

Limitations

The results below are likely to underestimate the number of peer groups in rural New Zealand because only the details of the contact person of the peer group was analysed. We recognise that there may be other members of the peer groups who are also members of the College’s Rural Chapter or DRHM, or who work in a ‘rural practice’.

Findings

As at 15 June 2015, the College database contained a total of 912 current peer groups in New Zealand, of which 83 (9.1%) were rural and 829 (90.9%) non-rural. The geographical location of the peer groups are shown in Table 22.
Table 22. Geographical location of peer groups

<table>
<thead>
<tr>
<th>Region</th>
<th>Rural (including online/Skype)</th>
<th>Percentage of rural in region</th>
<th>Non-rural</th>
<th>Percentage of non-rural in region</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taranaki</td>
<td>7</td>
<td>36.8%</td>
<td>12</td>
<td>63.2%</td>
<td>19</td>
</tr>
<tr>
<td>Otago</td>
<td>13</td>
<td>27.1%</td>
<td>35</td>
<td>72.9%</td>
<td>48</td>
</tr>
<tr>
<td>Southland</td>
<td>7</td>
<td>25.0%</td>
<td>21</td>
<td>75.0%</td>
<td>28</td>
</tr>
<tr>
<td>Nelson/Marlborough</td>
<td>5</td>
<td>20.8%</td>
<td>24</td>
<td>82.8%</td>
<td>29</td>
</tr>
<tr>
<td>Northland</td>
<td>7</td>
<td>18.4%</td>
<td>31</td>
<td>81.6%</td>
<td>38</td>
</tr>
<tr>
<td>Manawatu</td>
<td>4</td>
<td>16.0%</td>
<td>21</td>
<td>84.0%</td>
<td>25</td>
</tr>
<tr>
<td>Tairawhiti</td>
<td>1</td>
<td>14.3%</td>
<td>6</td>
<td>85.7%</td>
<td>7</td>
</tr>
<tr>
<td>Waikato</td>
<td>18</td>
<td>13.0%</td>
<td>121</td>
<td>87.0%</td>
<td>138</td>
</tr>
<tr>
<td>Canterbury</td>
<td>11</td>
<td>9.6%</td>
<td>103</td>
<td>90.4%</td>
<td>114</td>
</tr>
<tr>
<td>Auckland</td>
<td>8</td>
<td>2.5%</td>
<td>315</td>
<td>97.5%</td>
<td>323</td>
</tr>
<tr>
<td>Wellington</td>
<td>2</td>
<td>1.9%</td>
<td>106</td>
<td>98.1%</td>
<td>108</td>
</tr>
<tr>
<td>Hawke’s Bay</td>
<td>0</td>
<td>0%</td>
<td>25</td>
<td>100%</td>
<td>25</td>
</tr>
<tr>
<td>Whanganui</td>
<td>0</td>
<td>0%</td>
<td>7</td>
<td>100%</td>
<td>7</td>
</tr>
<tr>
<td>Wairoa</td>
<td>0</td>
<td>0%</td>
<td>1</td>
<td>100%</td>
<td>1</td>
</tr>
<tr>
<td>Unknown</td>
<td>0</td>
<td>0%</td>
<td>1</td>
<td>100%</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>83</td>
<td></td>
<td>829</td>
<td></td>
<td>912</td>
</tr>
</tbody>
</table>

Table 23 shows the number of peer groups using Skype or holding online meetings.

Table 23. Skype and online peer groups

<table>
<thead>
<tr>
<th>Region</th>
<th>Skype/online</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canterbury</td>
<td>1</td>
</tr>
<tr>
<td>Otago</td>
<td>1</td>
</tr>
<tr>
<td>Nelson/Marlborough</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
</tr>
</tbody>
</table>

The available data does not give any indication as to whether rural doctors had difficulties in accessing peer groups.
Continuing medical education

What is the rural provision of CME?

Background

CME comprises the medical education activities designed to enhance a doctor’s knowledge, skills, attitudes and professional judgment. Activities include attendance at relevant educational conferences, courses and workshops, and self-directed learning programmes.

Endorsed CME refers to those events, programmes or providers that have been reviewed by the College, or have had input by the College during development to ensure that the College’s quality criteria are met. The College encourages and promotes participation in endorsed CME. The endorsement routes available for CME providers include:

- registered provider status (providers supply an annual report)
- regular event provider status
- specific event endorsement.

Data collection

Information on CME endorsed activities was extracted from the College database. Specifically, data on registered provider activities from 7 May 2014 to 6 May 2015, and data on College-endorsed events or conferences from 15 May 2014 to 14 May 2015.

To determine the extent to which CME activities cater for rural doctors, the collected data was analysed in terms of:

- the geographical location of the activity, ie whether it was held in a rural location, and
- the content of the activity (eg whether the term ‘rural’ was included in the description of the activity).

Limitations

As the College database did not contain a high level of detail, data are likely to underestimate the rural provision of CME. The College has recognised the limitations of collecting data relating to registered provider activity and College-endorsed events or conferences, and is taking steps to update the database so that information on CME for rural doctors can be collected.

Findings

Registered provider activities

Between 7 May 2014 and 6 May 2015, the College database had 42 registered CME providers who provided 1541 events. Many of the registered providers were PHOs or DHBs. In addition, bpac provided 239 events over this period. These providers deliver CME activities to all
members, including rural doctors. Of the 1541 events held by registered providers, 63 events (4%) had either ‘rural’ as their topic (n=37) or ‘rural’ in the course title (n=26). It was difficult to elicit the geographic location of CME activities from the database, although at least three had a rural nature.

**College-endorsed events or conferences**

For the year ending 14 May 2015, the College database had a total of 90 College-endorsed events or conferences, of which seven were held in a rural location, seven had a rural-specific topic (determined by having ‘rural’ in its title) and three involved e-learning. Consequently, of the CME endorsed events or conferences, 18.9% can be described as catering for rural doctors, either by the location of the event, the subject matter, or delivery via e-learning (Figure 10).

*Figure 10. College-endorsed events or conferences for the year ending 14 May 2015*

The available data does not tell us whether rural doctors had difficulty accessing CME.

**Discussion**

Participation in a peer group and CME are required for CPD. Of the peer groups registered with the College, 9.1% were identified as rural (83 out of 912) and only four of these were recorded as using Skype or holding online meetings. These numbers are small and it is unclear whether rural doctors had difficulties accessing CPD.

Only a very small proportion of registered CME providers are dedicated to providing CME to rural doctors, although many of the larger registered providers (such as PHOs, DHBs and bpac™) also cater for rural members. Of the total 1541 events supplied by registered CME providers, only 4% had either ‘rural’ as their topic or in their course title. However, 18.9% of the College-endorsed events or conferences catered for rural practitioners by their location, subject matter, or delivery via e-learning.
Although these figures are likely to underestimate the provision of rural CPD, it is an area that would benefit from further development by the College. Further action may include:

- liaising with registered CME providers to ensure rural members are provided with sufficient CPD opportunities
- promoting the use of new technologies to deliver CPD, eg online meetings and webinars
- improving data collection (such as by asking and recording if and how CME providers cater for rural doctors).

Recommendations

- It is **recommended** that the College build on the provision of CPD for rural practitioners by:
  - liaising with registered CME providers to ensure rural members are provided with sufficient CPD opportunities
  - promoting the use of new technologies to deliver CPD, eg online meetings and webinars
  - improving data collection on the provision and access to CPD by rural members (eg by asking and recording if and how CME providers cater for rural doctors).
RURAL PRACTICES AND CORNERSTONE® ACCREDITATION
Rural practices and CORNERSTONE® accreditation

Do fewer of the rural general practices participate in the College's CORNERSTONE® accreditation programme than non-rural practices?

Background

CORNERSTONE® is a combined quality improvement and quality assurance process in which practices assess their performance against standards set out in Aiming for Excellence and are then externally assessed. They must meet all the mandatory criteria in Aiming for Excellence before accreditation is considered.

The Rural General Practitioners' Chapter raised concerns that a smaller proportion of rural general practices participate in the College's CORNERSTONE® programme compared to their non-rural counterparts. Accordingly, a corresponding action point under the Rural Strategy is: “Encouraging rural general practices to participate in RNZCGP CORNERSTONE® accreditation”.

Data collection

A list of rural practices was collated for this study. It comprised:

- practices on the database of the RGPN
- practices that self-identified as rural on the CORNERSTONE® database and that were still open; this database lists all practices that have made contact with the programme, regardless of their participation in it
- the GPEP list of practices with a rural ranking score of 35 or more.

These rural practices were grouped according to their CORNERSTONE® accreditation status as at 1 May 2015. The four groups are:

- currently accredited
- engaged in the CORNERSTONE® programme
- expired accreditation
- never accredited.

The remaining practices (deemed not rural) were also categorised according to their status on the CORNERSTONE® programme as at 1 May 2015. The number of general practices as stated by the Ministry of Health was used to determine the number of practices that were not rural.

**Limitations**

We were limited by the determination of practices as rural. Ideally, a full list of rural practices and a full list of non-rural practices are required to accurately determine the proportion of rural practices that are participating in the CORNERSTONE® programme. This is dependent on an agreed definition of ‘rural practice’. Our list might not have captured all rural practices in New Zealand, resulting in skewed findings toward participation in the CORNERSTONE® programme – practices that are more likely to participate in the programme would be included on the CORNERSTONE® database.

**Findings**

The Ministry of Health cites a total of 1028 general practices (including after-hours providers) in New Zealand as at September 2014. We calculated a total of 288 rural practices and, by subtraction, 740 practices can thus be considered not rural. Consequently, 28% of New Zealand practices are rural and 72% are not rural.

Table 24 and Figure 11 show the number of rural and non-rural practices in New Zealand and their status with respect to the CORNERSTONE® programme.

<table>
<thead>
<tr>
<th></th>
<th>Rural practices</th>
<th>Non-rural practices</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Numbers</td>
<td>Percentage</td>
<td>Numbers</td>
</tr>
<tr>
<td>Current</td>
<td>86</td>
<td>29.9%</td>
<td>269</td>
</tr>
<tr>
<td>Engaged</td>
<td>54</td>
<td>18.8%</td>
<td>136</td>
</tr>
<tr>
<td>Expired</td>
<td>58</td>
<td>20.1%</td>
<td>121</td>
</tr>
<tr>
<td>Never</td>
<td>90</td>
<td>31.3%</td>
<td>214</td>
</tr>
<tr>
<td>Total</td>
<td>288</td>
<td>100%</td>
<td>740</td>
</tr>
</tbody>
</table>

For practices on the RGPN database, 58 current (30.1%), 29 engaged (15.0%), 34 expired (17.6%) and 72 never (37.3%).
The proportion of rural practices that were CORNERSTONE® accredited on 1 May 2015 was less than the proportion of non-rural practices (29.9% vs 36.4%). About the same proportion of rural and non-rural practices were engaged in the programme (18.8% vs 18.4%), and there is a higher proportion of rural practices compared to non-rural practices where accreditation had expired (20.1% vs 16.4%) or the practice had never been accredited (31.3% vs 28.9%).

The practices that are currently accredited or engaged in the CORNERSTONE® programme can be said to be participating in the programme. Table 25 sets out the numbers of rural and non-rural practices that are participating or not participating in the programme as at 1 May 2015.

Table 25. Participation in the CORNERSTONE® programme of rural and non-rural practices

<table>
<thead>
<tr>
<th></th>
<th>Rural practices</th>
<th>Non-rural practices</th>
<th>All practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participating in CORNERSTONE®</td>
<td>140 (48.6%)</td>
<td>405 (54.7%)</td>
<td>545 (53.0%)</td>
</tr>
<tr>
<td>Not participating in CORNERSTONE®</td>
<td>148 (51.4%)</td>
<td>335 (45.3%)</td>
<td>483 (47.0%)</td>
</tr>
<tr>
<td>Total</td>
<td>288</td>
<td>740</td>
<td>1028</td>
</tr>
</tbody>
</table>
Discussion

The results of this study reveal a slightly lower proportion of rural practices that are participating (ie either currently accredited or engaged) in the CORNERSTONE® programme compared to non-rural practices (48.6% vs 54.7%) and the proportion of rural practices that are CORNERSTONE® accredited was less than the proportion of non-rural practices (29.9% vs 36.4%). However, the College is of the view that the differences are not significant at this point, but will continue to monitor participation.

We also note the potential for fewer practices overall to participate in the CORNERSTONE® programme with the recent implementation of the College’s Foundation Standard. The Foundation Standard is the minimum national standard for general practice, whereas the CORNERSTONE® programme applies the advanced standard for general practice, Aiming for Excellence. The College will continue to monitor uptake and participation in these programmes.
Appendix 1

The College’s Curriculum for General Practice (rural)

Rural health is one of the themes of the College’s *Curriculum for General Practice* and is reflected throughout the curriculum. Under the domain of ‘Context of General Practice’, the rural community is one of the specific communities that needs to be taken into account in the provision of care. Also, under the domain of ‘Management’, rurality is included in the core competence ‘reconcile differences in access to health services according to rurality, socioeconomic and cultural determinants, as relevant’.

The rural health statement and required competencies are set out below, followed by the areas of the curriculum where rural health is specifically mentioned.

Rural health statement

Rural general practice is defined by the distance between the rural practice environment and the resources of the nearest urban centre, whether that is the base hospital, hospice, community mental health service, advanced ambulance services, alcohol and drug service, home support agencies and so forth. However, the distance is not just geographic; it is also cultural, economic and perceptual.

Rural New Zealand has characteristics and challenges that influence what health services are needed and how they are delivered. These include large distances and geographical features that affect the ease of access to health services. Small, isolated populations and higher levels of deprivation, which are closely associated with poor health status, are a feature of some rural regions and also in otherwise more affluent rural communities.

In rural New Zealand, a larger proportion of Māori are in high deprivation areas than are Māori in urban areas. There is a direct correlation between rural areas with high levels of deprivation and the proportion of Māori in the community.\(^{18}\)

The extra travel costs that rural people incur make access to primary health care services particularly difficult for the people of rural communities. Service delivery in rural areas must focus on providing comprehensive primary health care for rural communities.\(^{18}\)

New Zealand is not a large country, and few rural communities will be more than two or three hours from a secondary hospital, but mountainous geography and extreme weather events can quickly isolate an area. Similarly, distance and geography may make it difficult for rural people to access even their local health services, let alone travel to centralised secondary or tertiary services, especially those on low incomes or with chronic health problems. Many older patients will choose to stay close to home and family, cared for by their local health professionals.

Rural doctors must be true generalists; able to work independently in an extended general practice role, providing ‘birth to death’ care for their patients. They work in environments which their more urban counterparts do not, such as at road accidents, and provide safe and effective pre-hospital care and transfer for patients who require admission to base hospital.
Many rural general practitioners are also vocationally registered as ‘rural hospital doctors’, managing inpatients in their local rural hospital, which adds a whole dimension to their ability to care for their patients.

A doctor fills a vital role in a rural community, bringing with it the satisfaction of knowing they are really making a difference to the lives of individuals and the community. But they also face the challenges of availability and visibility, along with issues of social and professional isolation.

**Rural health competencies**

**Communication**

The GP will demonstrate the ability to:

- communicate and consult with sensitivity to particular rural issues including difficulty in accessing some services due to work, distance and cost constraints, diagnostic uncertainty, and patients’ wish to receive care close to home and family
- communicate with local community support and resources, with members of the primary care team, which may include rural hospital staff, and emergency services
- provide telephone and/or electronic consultation and management advice for patients in remote situations
- communicate clearly with patients, their families/whānau and colleagues around decisions to transfer to the base hospital or manage locally
- work in teams, and treat colleagues from all disciplines in a respectful and inclusive fashion
- communicate and maintain supportive relationships with colleagues at the base hospital.

**Clinical expertise**

The GP will demonstrate the ability to:

- deliver clinical decision-making in a rural context and manage uncertainty
- manage acute medical presentations in a rural setting, including appropriate pre-hospital interventions, such as coronary thrombolysis
- manage acute paediatric presentations, including neonatal resuscitation
- manage acute trauma, such as wounds, dislocations and fractures, including conscious sedation and regional anaesthesia, and pre-hospital trauma care
- manage acute obstetric emergencies and work in a team with a midwife to manage these emergencies
- update and maintain a procedural ability to support the extended skills required, including more difficult IV cannulation, intra-osseous access, chest drains and airway management
- manage acute psychiatric emergencies, including de-escalation techniques, restraint, emergency sedation and transport, within the criteria of the Mental Health Act
- initiate treatment for a wide range mental health conditions, conduct monitoring and develop knowledge of local resources for psychological treatments and support
- understand risk assessment, and appropriate strategies for managing self-harm in a rural situation
- provide ongoing care post-hospital discharge
- provide care for patients that extends to admission to a rural hospital for appropriate conditions, in-patient care, discharge planning and follow-up post-discharge
provide comprehensive palliative care and end-of-life care, including managing uncertainty around diagnosis and disease progress, and some procedures, such as paracentesis and pleural effusion drainage

recognise their own limitations so that management will be limited to safe and quick transfer of care.

**Professionalism**

The GP will demonstrate the ability to:

- understand the pressures to work outside their competency, manage uncertainty and recognise their limitations, seeking advice and help appropriately
- recognise and manage the ethical dilemmas and challenges facing rural GPs, such as confidentiality and conflicts of interest
- provide leadership within a rural health team and community
- maintain professional boundaries and confidentiality in a rural community
- maintain individual probity and public behaviour in a manner appropriate to a small rural community
- understand the self of the doctor, their role in and interaction with the community, and how this affects their family
- care for themselves, their family and colleagues in an isolated area.

**Scholarship**

The GP will demonstrate the ability to:

- develop a commitment to career-long learning, identifying areas not only for their own professional development but also those that will benefit the health care of the rural community
- provide leadership in developing and improving the local health service, including using e-health
- teach and mentor future rural health professionals.

**Context of general practice**

The GP will demonstrate the ability to:

- demonstrate awareness of factors in diagnosis and management that are particular in rural practice, for instance limited availability of diagnostic laboratory and x-ray, how these affect patient care and how they might be addressed
- appreciate the unique role of general practice and the primary care service in a rural community
- discuss the demographic profiles of rural communities and their relevance to health care
- understand the health culture of their rural community, including occupational health issues, demographics and ethnicity
- establish relationships with other health providers in the rural community.

**Management**

The GP will demonstrate the ability to:

- understand how a rural primary care team can function effectively and the leadership role of the doctor
- manage the effective, safe and appropriate use of the team to meet the need of the rural population
make efficient use of a limited pool of skilled health professionals in a rural area
understand and use different funding streams
identify contents of, source and maintain and own a complete doctor’s bag for home visiting and out-of-hours use
consider and employ appropriately different business models in a rural environment.

The parts of the curriculum in which rural health is specifically mentioned

**Acute Care**
- The Acute Care statement includes: “Māori, Pacific and some rural patients will tend to present with more serious and advanced illness than other New Zealanders”.
- The Acute Care statement states: “In rural areas, acute care is a far more significant part of the general practitioner’s daily work, with the rural practice and/or community hospital acting as the emergency department. The doctor on duty must be prepared to manage any patient who walks, or is carried, through the door, or who they are called to urgently. This requirement is one of the defining features of rural medicine and can seem daunting or overwhelming.”
- Acute Care competencies under the Management domain include: “involve and lead the wider primary care teams in acute care provision, for example nurse triage and assessment, local ambulance service, rural hospital staff”.

**Addictions**
- The Addictions competencies in the context of general practice domain include: “familiarise themselves with local agencies who treat and support patients and their family/whānau living with addictions, recognising the particular challenges in small or rural communities”.

**Adolescent / Rangatahi / Youth Health**
- The Adolescent / Rangatahi / Youth Health statement includes the point that: “For rural youth there may be a particular risk of alcohol misuse and drunk driving; for Māori, depression, suicide and disability rates are higher”.
- The Adolescent / Rangatahi / Youth Health competencies under the Context of General Practice domain includes: “demonstrate understanding of the particular issues that may affect rural or disabled youth and those at boarding school or in residential facilities; confidentiality remains paramount”.

**Cardiovascular**
- The Cardiovascular competencies in the Communication domain includes the following competencies specific to rural practice: “The GP will demonstrate the ability to:
  - communicate the benefits and risks of pre-hospital thrombolysis to a patient, and the patient’s family/whānau, experiencing an acute MI in a rural setting
  - communicate the risks and benefits of staying in rural hospital versus transfer to a base hospital to an elderly patient, and the patient’s family/whānau, experiencing a stroke in a rural setting
  - communicate clearly the results of any assessments in a way that makes sense to patients, recognising their level of health literacy, and adjust explanations accordingly”.
The Cardiovascular competencies in the Clinical Expertise domain includes the following clinical competencies specific to rural general practice:
- perform advanced management of arrhythmias in a rural setting
- care for a patient with a more severe exacerbation of congestive heart failure requiring admission to a rural hospital
- make considered, rational decisions when discussing with the patient and their family/whānau whether to transfer to a base hospital for investigation and management, or to manage in the rural hospital
- diagnose, from history and ECG, with or without point-of-care blood testing, acute coronary syndrome and implement an appropriate course of action
- manage cardiac arrest in children and adults, demonstrating familiarity with a defibrillator and appropriate airway management
- manage rural hospital in-patient care, rehabilitation, secondary prevention, discharge planning and appropriate follow-up”.

Dermatology

The Dermatology statement includes the following: “In rural New Zealand, where a high level of sun exposure occurs, general practitioners are uniquely positioned as patients’ first point of contact to promote prevention strategies, early diagnosis and appropriate treatment. Being the first point of contact also enables general practitioners to recognise where skin conditions may be the clue to serious systemic disease, infection and malignancy.”

The Dermatology competencies in the clinical expertise domain include: “recognise and manage skin conditions relevant to rural occupations and for patients living in rural settings”.

E-Health

The e-Health statement includes the following: “‘Telehealth,’ the direct (eg videoconferencing) or indirect (eg website) delivery of health information or health care is another emerging field of e-health, which may become more widespread, for example providing care in rural areas.”

End-of-life Care

The End-of-life Care statement states: “A recent cross-sectional survey of 168 rural general practitioners showed that 98 percent provided palliative care within their patient population and, in the previous 12 months, 7.3 was the average number of palliative care patients each had seen”.

The End-of-life competencies under the clinical expertise domain include: “manage patient care that is specific to their location, whether that be in their own home, a hospital, a hospice or a residential care facility and identify the special needs of rural patients”.

The End-of-life competencies under Context of General Practice includes: “recognise that in rural communities the general practitioner may need to lead the palliative care team with appropriate support from distant specialist services”.

Endocrinology

The Endocrinology statement includes: “Although not frequent, the first line treatment of the four most prevalent endocrine emergencies (diabetic ketoacidosis, adrenal crisis, thyrotoxic storm or myxoedema coma) in rural areas is usually managed by the general practitioner or rural hospital team. A good understanding of the presentation, investigation and treatment of these is essential to any comprehensively trained generalist”.
Eye
- The Eye competencies under the domain of scholarship include: “undertake further training in eye-related presentations and examinations, such as skills in slit lamp use in the rural community”.

Gastroenterology
- The Gastroenterology statement includes: “When working in a rural setting, the general practitioner needs to be able to work more independently in an extended general practice role. They need to provide safe and effective management of acute presentations and timely transfer for those patients who require referrals to specialist services or admission to base hospital”.
- The Gastroenterology statement under the Clinical Expertise domain includes: “manage sub-acute bowel obstruction conservatively but appropriately to the rurality of the setting with appropriate subsequent follow-up and investigation”.
- The Gastroenterology competencies in the Context of General Practice domain include the following: “manage acute conditions in both the urban and rural setting involving a team approach and communication with other specialists, transport teams and support staff as appropriate” and “evaluate the effect of access issues, such as income or increasing rurality of the community, on disease presentation, access to health services and clinical outcomes and seek to reconcile any significant differences”.

Genetics
- The Genetics competencies in the context of general practice domain include: “engage with local genetic services and enable access to genetic counselling in isolated or rural areas”.

Health and Work
- The Health and Work competencies in the Professionalism domain include: “reflect on the professional and personal boundary issues encountered when working in a rural community”.

Mental Health
- The Mental Health statement includes: “Primary care is the first point of contact for most patients with mental illness, and so general practitioners and their teams, especially in rural practice, must be prepared to effectively manage acute mental health crises in a manner that protects patient and staff safety”.
- The Mental Health competencies in the professionalism domain include: “reflect on issues around confidentiality, privacy and the need to involve family/whānau in patient care within and outside practice, particularly in rural or small communities”.

Neurology
- The Neurology statement states: “Significant accidents leading to neurological consequences commonly happen on rural roads”.
- The Neurology competencies in the Clinical Expertise domain include: “manage head injury, including acute assessment, transfer from a rural area as necessary, and post-concussion issues”.
The Neurology competencies in the Context of General Practice domain include: “understand the impact of disabling neurological conditions especially when living in rural and remote areas”, and “evaluate the effect of access issues, such as income or increasing rurality of the community, on disease presentation, access to health services and clinical outcomes, and seek to reconcile any significant differences”.

**Older Person**

- The Older Person statement includes: “Rural-dwelling elderly people in New Zealand are at risk of isolation from families, health and social agency support. General practice is a safety net for these elderly patients and needs to be sensitive to their needs and the characteristics of the local community”.
- The Older Person competencies in the Professionalism domain include: “describe the potential difficulties of managing unwell older people in rural or remote communities and the ways of maintaining their safety and care”.
- The Older Person competencies in the Management domain include: “compare the allocation of resources to older people living in rural and urban communities and devise strategies to maximise equity”.

**Oncology**

- The Oncology competencies in the Clinical Expertise domain include: “recognise the capabilities of the rural hospital and team delivery for cancer treatment, if appropriate”.
- The Oncology competencies in the Management domain include: “recognise the impact of rurality on patients with cancer and work on strategies to reduce the inequalities in care”.

**Renal and Urology**

- The Renal and Urology competencies under the Professionalism domain include: “establish clear professional boundaries for confidentiality within the practice team, particularly in rural communities”.
- The Renal and Urology competencies in the Context of General Practice domain include: “access services for home dialysis and, in rural areas in particular, discuss travel and other barriers to dialysis”.

**Respiratory Medicine**

- The Respiratory Medicine competencies in the Context of General Practice domain include: “understand the demographics, occupational health and transport issues affecting their rural community, and plan care of chronic and acute respiratory problems appropriately”.

**Rheumatology**

- The Rheumatology competencies in the Context of General Practice domain include: “examine the effect of increasing rurality of the community on disease presentation, access to health services and clinical outcomes, and seek to reconcile any significant differences”.
- The Rheumatology competencies in the management domain include: “evaluate the effect of access issues, such as income or increasing rurality of the community on disease prevention, access to health services and clinical outcomes, and seek to reconcile any significant differences”.
Travel Medicine

The Travel Medicine statement includes: “For those with temporary visas, such as rural migrant workers or overseas student’s permits, access to funded services is variable. To attain permanent residency or citizenship, an immigration medical assessment may be required and this is often another role for the GP. However, some who are new to New Zealand bring with them significant health issues that are not always apparent initially, particularly those who are refugees. With the added complexity of language and cultural differences, fostering a mutually trusting therapeutic relationship is vital”.

Woman’s Health

The Woman’s Health statement includes: “New Zealand has a strong rural environment. Many women work in the agricultural industry and are exposed to illness related to a rural way of life. Additionally, many older people in rural communities are cared for by their extended families/whānau with much of the caregiver’s role placed on the woman, which brings an added dimension to an already-busy rural life”.

The Woman’s Health competencies in the Professionalism domain include: “up-skill in areas relating to women’s health to meet the needs of their practice population, such as ultrasound scanning skills in rural areas”.
Appendix 2

International recruitment and retention initiatives

What is the international data (particularly pertaining to Australia and Canada) on rural recruitment and retention initiatives and successes?

Background

The World Health Organization (WHO) acknowledges that rural and remote areas in the majority of countries are usually lacking sufficient numbers of health workers. The WHO acknowledges that developing a sufficient and sustainable rural medical workforce requires commitment and cooperation from communities, governments and medical schools. Increasing the proportion of medical students with a rural background, providing positive rural learning experiences in medical school and specific rural residency/vocational training programmes will increase the number of graduating doctors with the interest, knowledge and skills for rural practice. Recruiting and retaining doctors in rural practice requires attention to the practice environment, health system, and financial and other factors.

Both Australia and Canada have large geographical areas inhabited by relatively few people outside of urban centres. In both countries, rural and remote communities work hard to retain doctors, and have created incentives to actively recruit and retain recently trained doctors.

Data collection

We reviewed international literature on interventions aimed at recruiting and retaining doctors in rural areas. Selected articles particularly focusing on Australia and Canada included:

- Recruitment and retention of general practitioners in rural Canada and Australia: a review of the literature (Viscomi M, Larkins S, and Guptal TS)
- How can medical schools contribute to the education, recruitment and retention of rural physicians in their region? (Rourke J)
- Context counts: training health workers in and for rural and remote areas (Strasser R and Neusy A)
- Increasing access to health workers in remote and rural areas through improved retention (WHO).

Findings

Table 26 sets out various interventions identified in the literature aimed at improving the recruitment and retention of doctors in remote and rural areas, and associated positive and negative factors. These have been categorised broadly under the following groups:
Although Australia and Canada were the main focus of this review, similarities have been found in recruitment and retention factors for family practitioners in underserved areas of countries such as the US, South Africa and the UK.

Table 26. Interventions to improve recruitment and retention in rural areas and positive and negative predictors

<table>
<thead>
<tr>
<th>Education</th>
</tr>
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<tbody>
<tr>
<td><strong>Intervention</strong></td>
</tr>
<tr>
<td>Undergraduate rotations in general practice</td>
</tr>
<tr>
<td>Core and elective rural rotations during medical school programmes</td>
</tr>
<tr>
<td>Rural elective exposure throughout entire medical school programme</td>
</tr>
<tr>
<td>Final two years of clinical education are integrated in the rural/regional setting</td>
</tr>
<tr>
<td>Students are matched to rural placements where they are likely to have a positive experience</td>
</tr>
<tr>
<td>Students in rural practices closely linked with academic programme activities</td>
</tr>
<tr>
<td>Rural clinical schools with a curriculum that considers the health needs of the community</td>
</tr>
<tr>
<td>Medical school is committed to serving underserved geographical areas</td>
</tr>
<tr>
<td>Curriculum with a rural orientation alongside rural clinical placements</td>
</tr>
<tr>
<td>Rural clinical school campuses of metropolitan medical programmes</td>
</tr>
<tr>
<td>Community-based health practitioners are recruited as faculty members</td>
</tr>
<tr>
<td>Rural-based postgraduate training</td>
</tr>
<tr>
<td>Pre-rotation briefings on potential negative aspects of rural rotations</td>
</tr>
<tr>
<td>Postgraduate medical training programmes emphasise the provision of health services in rural areas</td>
</tr>
<tr>
<td>General practice training programme includes a mandatory two months’ rural service</td>
</tr>
<tr>
<td>Increased mandatory and elective postgraduate rural training opportunities</td>
</tr>
<tr>
<td>Advanced skills training</td>
</tr>
<tr>
<td>CME for rural doctors</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Positive predictors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate exposure to positive rural experiences</td>
</tr>
<tr>
<td>Completing satisfactory electives in rural areas and having a personal and family rural background</td>
</tr>
<tr>
<td>Substantial and meaningful rural elective exposure throughout entire medical school programme</td>
</tr>
<tr>
<td>Trained rural clinical teachers</td>
</tr>
<tr>
<td>Electives where doctors are good role models</td>
</tr>
<tr>
<td>Gaining an understanding of the needs of people living in rural areas during elective</td>
</tr>
<tr>
<td>Intention to become a generalist</td>
</tr>
<tr>
<td>Internship in a regionally based hospital</td>
</tr>
<tr>
<td>Positive rural experiences during postgraduate training</td>
</tr>
<tr>
<td>Improvements in opportunities for CME and CPD</td>
</tr>
<tr>
<td>Good variety of clinical presentations</td>
</tr>
<tr>
<td>Increased breadth of clinical presentations</td>
</tr>
<tr>
<td>Increased demand for procedural work</td>
</tr>
</tbody>
</table>
### Negative Predictors
- Unsatisfactory rural elective experience
- Elective experiences where doctors are reluctant to allow students to partake in procedural work
- As a medical student, noting a lack of collegial support among rural GPs
- Lack of undergraduate or postgraduate training in rural medicine
- Lack of appropriate skills
- Intention to specialise
- Misconception that rural doctors are less qualified than urban specialists

### Regulatory Intervention
- Targeted admission of rural origin students
- GP registrars speak to high school students in rural communities
- Community involvement in selection of students
- Conditional licensing (licence to practise in exchange of location in rural areas for international medical graduates)
- Recognition of overseas qualifications
- Establishing a physician recruitment agency
- Producing different types of health workers (mid-level cadres, substitution, tasks shifting)
- Funding for rural and regional incentives
- Funding for specialist recruitment and retention

### Positive Predictors
- Living in a rural community for at least six years during childhood
- Completing high school in a rural area
- Students are from communities where doctors are highly regarded and actively involved in community life

### Negative Predictors
- –

### Financial Compensation (Direct and Indirect)

#### Intervention
- Financial incentives to undergraduate medical students and GP registrars
- Return-of-service bursary for medical students who practise rural general practice
- Bonding schemes (scholarship/payment in exchange for training/services in rural areas for a designated period)
- Return-of-service funding to establish or join group family practices in communities of need
- Taxable financial incentives to establish a full-time practice in an eligible rural community
- Substantial remuneration in rural generalist pathway
- Rural allowances including installation kit
- Higher salaries for rural practice
- Pay for performance
- Physician long service fund
- Funding for CME
- Accommodation
- Paid vacations
- Loans (housing, car)
- Grants for family education
### Positive Predictors
- Increased remuneration
- Availability of financial incentives
- Allowances

### Negative Predictors
- Suboptimal remuneration
- Lack of private sector
- Financially supported by parents during medical school

### Management, Environment and Social Support

#### Intervention
- Support for rural medical placements
- University-based rural health clubs for students
- Medical students are recruited to serve as ambassadors within the medical school
- Communities are actively involved in hosting students and contributing to their educative experiences
- Supportive supervision
- Reparation marketing campaign to target doctors using Facebook and other social media
- Flexible contract opportunities for part-time work
- Remote contact through telemedicine and telehealth
- Adequate supplies of technologies and drugs
- Professional and specialist networks
- Rural physician societies
- Support for CPD and career paths
- Lifestyle and professional support programmes to assist rural doctors
- Special award and social recognitions
- Opportunities for child schooling
- Opportunity for spousal employment

#### Positive Predictors
- Adequate collegial support
- Better supervision
- Opportunity to practise full skill set
- Increased clinical and managerial autonomy
- Community has health needs that match career interests
- Increased opportunities for recruitment to civil service
- Regular work hours
- Desirable on-call arrangements
- Group practice arrangement with other doctors
- A cohesive and supportive team environment within the rural practice
- A high sense of satisfaction among support staff at the practice
- Improved hospital infrastructure and availability of services
- Improvement in information technology with electronic databases of patient records
- Friendly specialist referral network via telephone, fax and internet
- Access to allied health professionals
- Strong professional relationship with academic institutions
- Improved hospital infrastructure and availability of services
- Enjoyment of the rural lifestyle
- Recreational activities are abundant and enjoyable
- A partner with a rural background
- Older, male doctors with a partner who is interested in living in a rural area
- Partner satisfaction and integration into the rural community
- Assistance with finding spousal employment
- Access to desirable childcare and schooling
Negative predictors

- Inadequate accommodation facilities during elective
- Lack of clear career profiles
- Experiencing burnout in rural practice
- Perceived lack of collegial support
- Lack of management support
- Undesirable on-call arrangements
- Long working hours and work overload
- Lack of opportunity to take vacations for personal and CME
- Poor relationships with hospital administration and hospital-based doctors
- Lack of appreciation for services provided
- Decline of health services
- Small rural hospitals with underdeveloped infrastructure
- Difficulty in achieving a balance between a professional relationship with patients and a personal relationship with the community
- Perceived difficulty in being accepted by the local community
- Poor living conditions
- Social isolation from family and friends
- Long-term plan always included practising in urban areas because of family situation (despite excellent rural training)
- A partner who wants to live and work in the city
- Lack of jobs for partners
- Lack of schooling for children

Training for Health Equity network (THEnet)

Established in 2008, THEnet (Training for Health Equity network) is a group of medical schools worldwide with a social accountability mandate. The network’s core mission is to increase the number, quality, retention and performance of health professionals in underserved communities. THEnet schools share the following core principles:

- Health and social needs of targeted communities guide education, research and service programmes.
- Students are recruited from the communities with the greatest health care needs.
- Programmes are located within or in close proximity to the communities they serve.
- Much of the learning takes place in the community instead of predominantly in university and hospital settings.
- The curriculum integrates basic and clinical sciences with population health and social sciences, and early clinical contact increases the relevance and value of theoretical learning.
- Pedagogical methodologies are student-centred, problem- and service-based and supported by information technology.
- Community-based practitioners are recruited and trained as teachers and mentors.
- Partnering with the health system aims to produce locally relevant competencies.
- Faculty and programmes emphasise and model commitment to public service.

The WHO highlights two members of THEnet, Flinders University School of Medicine (Australia) and Northern Ontario School of Medicine (Canada), as illustrations of successful rural-based, socially accountable medical education.
Flinders University School of Medicine

In the 1990s, Flinders University in South Australia pioneered a form of rural community-based medical education. Through the Parallel Rural Community Curriculum (PRCC), a group of students undertake the third year of a four-year medical programme in family practice, living in a rural community. The learning objectives are the same, but students learn all the clinical disciplines in parallel for the whole year, rather than in sequential blocks (ie clerkships rotations).

The PRCC has been found to provide learning experiences that are equivalent to, if not better than, clinical learning in the city teaching hospital. PRCC students consistently outperform their city-based colleagues in the end-of-year examinations. They also have a higher level of confidence and competence, and a broader range of clinical knowledge and skills when compared to their counterparts. After 12 years, 70% of PRCC graduates were practising in rural locations.

Northern Ontario School of Medicine

In Northern Ontario, 60% of the population lives in rural and remote areas. In 2001, the Government of Ontario established the Northern Ontario School of Medicine (NOSM), with a social accountability mandate to contribute to improving the health of the people and communities of Northern Ontario.

NOSM is a rural, community-based medical school that seeks to recruit students from Northern Ontario or from similar northern, rural, remote, aboriginal or francophone backgrounds. Since 2005, about 2000 students apply for 56 places each year. The curriculum relies heavily on electronic communications to support ‘distributed community engaged learning’. Clinical education takes place in a wide range of community and health service settings.

Communities are actively involved in hosting students and contributing to their educative experience. The School developed collaborative relationships with various communities and organisations, which are fostered through various community groups.

The inaugural 2005 class of 56 medical students graduated in 2009. NOSM students compare favourably to students from other schools in Canada, such as in the matching to residency programmes and in the national Medical Council of Canada examinations. Seventy percent of NOSM graduates train predominantly in rural family medicine.

The shortage of faculty staff willing to take a position in medical schools in underserved regions remains a challenge. Community-based health practitioners are recruited as faculty with support and training provided by NOSM.

Recruitment and retention of rural doctors in Australia

Murray et al.22 identified the following factors as influences on doctors choosing rural practice:

- student selection – rural-origin students are two to three times more likely than their city counterparts to practise in rural areas after graduation
- doctors graduating from regionally based medical schools are more likely to practise in rural areas
- bonded scholarships and other return-of-service obligations
- the availability of rural-based postgraduate training
a curriculum with a rural orientation, combined with rural clinical placements for students has a positive impact.

According to the authors, Australia’s policy interventions include:

- bonded medical rural scholarships and bonded medical places
- rural medical placement support
- rural clinical school campuses of metropolitan programmes
- wholly regionally based medical schools
- selection targets for rural-origin students
- university-based, rural-health clubs for students.

Viscomi et al. explored the factors that attract and retain family doctors in rural and remote areas of both Canada and Australia, and the rationale and successes of programmes and policies. They undertook a review of the literature between 1 January 2000 and 30 June 2012 and analysed 86 sources. The following provides a summary of their findings with respect to Australia.

**Life before medical school**

In 2000, 25% of all medical students were from a rural area, which is less than the 35% of Australia’s total population who reside in rural areas.

Factors before medical school that affect future rural recruitment and retention include:

- completing high school in a rural area – general practice registrars speak to high school students in rural communities to generate interest among students
- living in a rural community for at least six years during childhood
- decreased proportion of rural students applying to medical school. Some progressive medical schools narrow the gap between medical school applicants with urban and rural backgrounds by adjusting an applicant’s grade 12 entry score requirements to account for the rural student’s ‘context score’ (which measures the degree of rurality and/or remoteness of the student’s upbringing).

**Experiences during medical school**

**Demographics:**

Medical graduates are likely to practise in a rural area if they have a partner with a rural background.

**Elective experiences:**

Positive predictors of graduates practising in a rural area are:

- completing undergraduate rotations in general practice
- completing general practice electives in rural regions
- perceiving the rural elective to be a positive experience
- completing satisfactory electives in rural areas and having a personal and family rural background
- completing elective terms where doctors are good role models
- gaining an understanding of the needs of people living in rural areas.
Negative predictors of graduates practising in a rural area are:

– noting a lack of collegial support among rural GPs
– lack of opportunity to take vacations for personal reasons or CME
– undesirable on-call arrangements
– the misconception that rural practitioners are less qualified than urban specialists
– unsatisfactory rural elective experiences
– desire for a metropolitan lifestyle
– having a partner who wants to live and work in a metropolitan environment
– a small rural hospital setting with underdeveloped infrastructure
– elective experiences where doctors were reluctant to allow students to partake in procedural work
– inadequate accommodation facilities
– few social and recreational activities to enjoy
– perceived difficulty in being accepted by the local community
– remaining located far from family and friends over an extended period.

The authors state that as students’ positive rural elective experiences have been repeatedly shown to influence their decision to practise in rural areas, it is important to place students in rural settings where practices and practitioners are closely linked with academic programme activities.

**Career aspirations:**

Medical school deans across Australia (as well as New Zealand) have suggested that graduates are most likely to practise in rural areas if they leave medical school with the following attributes:

– intention of becoming a generalist
– ample rural elective experience
– bonded scholarship agreement (i.e. medical school enrolment in exchange for an undertaking to practise in an underserved region for a designated period).

Conversely, negative predictors are if students:

– intended to specialise
– were financially supported by their parents.

It has also been found that students are more likely to complete an internship in a regionally based hospital if they had substantial and meaningful rural elective exposure throughout the entire medical school programme (even more likely if the student was from a non-metropolitan area).

**Community-based medical education:**

Rural clinical schools, including Australia’s Flinders School of Medicine and James Cook University School of Medicine and Dentistry, have the socially accountable mission of providing a medical school curriculum that considers the health needs of the surrounding community. The final two years of clinical education are integrated in the rural/regional setting and comprise:

– rural-based facilities
– committed and motivated preceptors
– linkages to the academic activities provided by the medical school
– placements in communities where students are likely to encounter clinical presentations that match core curriculum learning requirements.
Experiences during postgraduate training

Despite the pre-registrar training requirements in Australia, the data suggest that Australian interns may choose regional training experiences if they:

- have been exposed to positive rural experiences
- were educated in a school committed to serving underserved geographical areas.

A positive rural experience and an internship in a non-metropolitan hospital are likely to have a positive affect on the recruitment of trainees into generalist programmes in rural Australia.

A 2003 Australian retrospective cohort study found bonded medical students who had agreed to complete two out of the three years of their initial postgraduate training in a rural location were more likely to be practising in a rural location more than five years later.

Of note, substantial remuneration is paid in the Australian rural generalist training pathway, which is not available in Canada.

The Australian College of Rural and Remote Medicine (ACRRM) developed a four-year specialist training pathway toward Fellowship. Trainees may complete their training while working at remote sites through the Remote Vocational Training Scheme.

In the Australian model, general practice training programmes include a mandatory two months of rural service aiming to attract residents into rural medicine.

One study found that pre-rotation briefings on the possible negative aspects of rural rotations may increase success at recruiting new doctors to rural medicine, even in the presence of subsequent negative experiences (Table 27).

Table 27. Expectations and experiences of Australian postgraduate trainees

<table>
<thead>
<tr>
<th>Expectations before placement</th>
<th>Experiences after placement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positive</strong></td>
<td></td>
</tr>
<tr>
<td>Establishing good relationships with rural patients</td>
<td>Lifestyle was enjoyable</td>
</tr>
<tr>
<td>Rural lifestyle outside of practice</td>
<td>Clinical presentations were challenging</td>
</tr>
<tr>
<td>Opportunity to work with specific rural supervisors</td>
<td>Level of supervisory support</td>
</tr>
<tr>
<td></td>
<td>Social experience</td>
</tr>
<tr>
<td><strong>Negative</strong></td>
<td></td>
</tr>
<tr>
<td>Family issues</td>
<td>Separation from partner and family</td>
</tr>
<tr>
<td>Relocation logistics</td>
<td></td>
</tr>
<tr>
<td>Dealing with emergency and trauma situations without much collegial support</td>
<td></td>
</tr>
<tr>
<td>Lack of supervisory support</td>
<td></td>
</tr>
</tbody>
</table>

The expectations of postgraduate trainees may differ depending on the individual trainee, what they are hoping to learn and gain from the rural rotation, and their personal circumstances. A survey of female postgraduate trainees in Australia found that most of the trainees enjoyed the rural term, but those who did not were likely to remain in urban practice and tended to avoid rural practice (Table 28).
Table 28. Positive and negative attributes of rural practice reported by female postgraduate trainees

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to provide whole-patient and multigenerational care</td>
<td>Pressure to work full-time, a lot of on-call time and afterhours consultations</td>
</tr>
<tr>
<td>Nature of the clinical work is challenging and varied</td>
<td>Social isolation, away from family and friends</td>
</tr>
<tr>
<td>There is a sense of connectedness to the patient and the community</td>
<td></td>
</tr>
</tbody>
</table>

Social isolation is one of the most important factors requiring attention to attract postgraduate trainees into rural practice. Potential ways of increasing recruitment include:

- attracting the family to the rural town
- providing suitable housing and employment for the partner
- ensuring children receive quality education.

Recruitment and retention after completion of Fellowship qualifications

Table 29 sets out reasons why doctors choose to practise in rural areas.

Table 29. Positive and negative factors associated with the recruitment of doctors into rural practice in Australia

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequate collegial support</td>
<td>Perceived lack of collegial support</td>
</tr>
<tr>
<td>Desirable on-call arrangements</td>
<td>Lack of undergraduate or postgraduate training in rural medicine</td>
</tr>
<tr>
<td>Strong professional relationship with academic institutions</td>
<td>Social isolation from family and friends</td>
</tr>
<tr>
<td>Group practice arrangement with other clinicians (especially important for female doctors)</td>
<td></td>
</tr>
<tr>
<td>Good variety of clinical presentations</td>
<td></td>
</tr>
</tbody>
</table>

Maintenance action plan: remaining satisfied

The literature suggests that doctors who choose to remain in rural practice are very satisfied with their jobs. Australian and Canadian literature reveals similar results on the positive and negative factors shown to contribute to a GP’s level of satisfaction while in rural practice (Table 30).
Table 30. Positive and negative factors that contribute to the maintenance of a GP’s level of satisfaction

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ Increased breadth of clinical presentations</td>
<td>■ Lack of appreciation for services provided</td>
</tr>
<tr>
<td>■ Increased demand for procedural work</td>
<td>■ Poor relationships encountered with hospital administration and hospital-based clinicians</td>
</tr>
<tr>
<td>■ Working in a cohesive and supportive team environment within the rural practice</td>
<td>■ Suboptimal remuneration</td>
</tr>
<tr>
<td>■ A high sense of satisfaction among support staff at the practice</td>
<td>■ Long working hours</td>
</tr>
<tr>
<td>■ Increased clinical and managerial autonomy</td>
<td>■ Poor on-call arrangements with other GPs in the area</td>
</tr>
<tr>
<td>■ Appropriate remuneration</td>
<td>■ Inability to find locum coverage when wanting to take a vacation or undertake activities for CME</td>
</tr>
</tbody>
</table>

The Rural Incentives Program offers a financial incentive to undergraduate medical students, general practice registrars and registered probationers.

Recruitment and retention of rural doctors in Canada

The findings of the extensive literature review undertaken by Viscomi et al.\textsuperscript{14} between 1 January 2000 and 30 June 2012 identify the following factors in the recruitment and retention of family doctors in rural and remote areas of Canada:

**Life before medical school**

In Canada, a concerning 6% of medical students come from rural regions whereas about 30% of Canada’s population is classified as ‘rural’.

Factors before medical school that affect future rural recruitment and retention include:

■ completing high school in a rural area – hence, family medicine residents speak to high school students in rural communities to generate interest

■ decreased proportion of rural students applying to medical school – likely a result of financial reasons.

**Experiences during medical school**

■ **Demographics:** Canadian medical students were more likely to practise in a rural area if older, male and in a relationship with someone who was also interested in living in a rural area.

■ **Elective experiences:** See above discussion for Australia.

■ **Career aspirations:** Students who came from communities where doctors are highly regarded and actively involved in community life contributed to an interest in family medicine before starting undergraduate medical studies.

■ **Community-based medical education:** See discussion on community-based medical education in Australia, above. The final two years of Canada’s Northern Ontario School of Medicine programme are integrated in the rural/regional setting.
Experiences during postgraduate training

Canadian graduates apply directly into a postgraduate specialty training programme and begin their specialty training immediately on entry. Many Canadian family medicine residency programmes offer the standard two-year training programme, with an optional extra year of focused training in a specialty such as obstetrics, anaesthetics, and emergency medicine.

The lack of a rural generalist training pathway may be one explanation why Canada has greater difficulty recruiting and retaining doctors into rural areas. One study found that, of the family medicine training programmes, 28% were designated rural but only 10% of all family medicine doctors practise in rural areas. Currently, many family medicine residency programmes have created streams where students may complete most of their training in either an urban or rural area.

All Canadian family medicine training programmes include a mandatory two months’ rural service in an attempt to attract residents into rural medicine. However, individual training programmes determine what is ‘rural’. A study of doctors who completed two years of postgraduate family medicine training from 1991 to 2000 showed that the preferred duration of rural exposure is six months.

Viscomi et al. recommend that programme directors consider whether postgraduate rural training is a positive experience for trainees and ways in which communities may help to recruit trained GPs such as by:

- attracting the family to the rural town
- providing suitable housing
- providing employment for the partner
- ensuring children receive quality education.

Recruitment and retention after completion of Fellowship qualifications

Table 31 sets out reasons why doctors may or may not choose to practise in rural areas in Canada.

Table 31. Positive and negative factors associated with recruitment of doctors into rural practice in Canada

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive rural experiences during postgraduate training</td>
<td>Experiencing burnout in rural practice*</td>
</tr>
<tr>
<td>Availability of financial incentives</td>
<td>Inability of partner to find employment in the rural community</td>
</tr>
<tr>
<td>Partner satisfaction and integration into the rural community</td>
<td>Difficulty in achieving a balance between having a professional relationship with the patient and a personal relationship with the community</td>
</tr>
<tr>
<td>Access to desirable childcare and education facilities</td>
<td>Excellent training received in rural areas, but long-term plan always included practising in urban regions because of one’s family situation</td>
</tr>
</tbody>
</table>

* A lack of locum cover has put Canadian doctors at risk of burnout because of the inability to take a personal holiday or attend sessions for CME. Financial incentives aimed at supporting the doctor’s family (eg accommodation, spousal employment and child daycare) might increase resilience to burnout.
Canadian studies have identified various factors that encourage family physicians to remain in rural communities (Table 32).25,26

### Table 32. Factors favouring retention of family physicians in rural communities in Canada

<table>
<thead>
<tr>
<th>Factor</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Medical education**                            | ■ Trained rural clinical teachers  
■ Undergraduate medical return-of-service agreements  
■ Increased mandatory and elective postgraduate rural training opportunities  
■ Advanced skills training  
■ CME |
| **Rural practice**                               | ■ Friendly specialist referral network via telephone, fax and internet  
■ Improvements in information technology with electronic databases of patient records  
■ Access to allied health professionals  
■ Increased remuneration  
■ Improved call shift arrangements |
| **Incentives**                                   | ■ Cash incentives  
■ Tuition repayment  
■ Accommodation  
■ Paid vacations  
■ Assistance with finding spousal employment  
■ Child daycare |
| **Intrinsic value to practising and living in a rural area** | ■ Opportunity to practise full skill set  
■ Community has health needs that match career interests  
■ Enjoyment of the rural lifestyle |
| **Positive rural experiences during postgraduate training** | ■ Very important for younger doctors relative to older doctors |
| **Personal and professional satisfaction**       | ■ Recreational activities are abundant and enjoyable  
■ Time away only possible with locum coverage |
| **Improvements in opportunities for CME and CPD** |                                                                       |
| **Improved hospital infrastructure and availability of services** |                                                                       |
| **Improved earning potential and regular work hours** |                                                                       |

**Maintenance action plan: remaining satisfied**

A Canadian survey of family practitioners found that the doctors working in small towns and rural areas were more satisfied with their practice arrangement compared to metropolitan doctors, despite being busier and having to accept a higher number of patients. Australian literature reveals similar results on the factors that contribute to a GP’s level of satisfaction while in rural practice – see Table 30.
Other initiatives aimed at addressing recruitment and retention in Canada

- **Saskatchewan**
  - The Ministry of Health supports a range of recruitment and retention programmes, mostly managed by the Saskatchewan Medical Association. This includes annual funding for specialist recruitment and retention, rural and regional incentives, physician long service fund, CME, and parental leave.
  - Expansion of undergraduate medical training in Regina (capital of Saskatchewan) through a distance education programme (for 12 third-year medical students).
  - Establishment of the physician recruitment agency.
  - Development of lifestyle and professional support programmes designed to assist physicians, particularly those in rural areas.
  - A reparation marketing campaign to target physicians who have worked previously in Saskatchewan, College of Medicine graduates working outside the province and current medical school students, which includes funding to market Saskatchewan through Facebook and other social media. University of Saskatchewan medical students are recruited to serve as ambassadors for Saskatchewan within the College of Medicine.

- **Prince Edward Island**
  - The government instituted an optional return-of-service bursary for medical students who plan to practise family medicine on Prince Edward Island. Three bursaries are given each year, until the province fulfils its recruitment needs for family physicians.

- **British Columbia**
  - The Family Physicians for British Columbia (FPs4BC) programme encourages GPs who completed residency training within the past 10 years to establish or join group family practices in communities of need. The programme provides $100,000 per GP (max.) to help fund student debt and set up or join group practices. GPs provide three years return of services.

- **Ontario**
  - Health Force Ontario’s Northern and Rural Recruitment and Retention Initiative (NRRR) offers taxable financial incentives to eligible physicians who establish a full-time practice in an eligible rural community of the province. Grants range between $80,000 and $117,600 over a four-year period.
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