

# **Rural General Practice in New Zealand:**

## **The success of recent retention and recruitment initiatives**

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## **SUMMARY**

### Aim

*To investigate the success of recent retention and recruitment initiatives among rural general practitioners (GPs) in New Zealand (NZ).*

### Method

*An anonymous postal survey of 547 rural GPs was conducted, that is, GPs with a score of 35 and over on the Rural Ranking Scale (RRS). GPs were identified through the New Zealand Rural GP Network (NZRGPN). Questions focussed on accessibility to Reasonable Roster Funding (RRF), Rural Workforce Retention Funding (RWRf) and measures of success such as intention to remain in the rural workforce.*

### Results

*274 questionnaires were returned (response rate=50%). After the exclusion of retirees and those who had left rural practice or NZ, 233 were analyzed. Of these, 95 received RRF (41%) and 169 received RWRf (73%). 142 (61%) felt they had adequate annual leave. 151 (65%) felt their roster was ok, good or great. 169 (73%) had an on-call roster of 1:4 or less often. Of this group, 23% still found the roster stressful or intolerable. 61% felt they had adequate or more than adequate annual leave, over half the respondents getting three weeks or more. 63% indicated they had adequate or more than adequate CME each year, over half the respondents getting 6 days or more. 49% of respondents indicated that in the current conditions they would be leaving the rural GP profession in New Zealand within five years. 131 (56%) chose to make written comments about the initiatives. Key issues were related to inaccessibility of funding, intolerable on-call and difficulty getting locums to cover for leave and CME.*

### Conclusion

*From this study, some key insufficiencies in the current recruitment and retention policies came to our attention. Thus far, retention and recruitment policies have been designed under the assumption that solutions will impact uniformly across rural general practice. However, this approach lacks sophistication and can miss subtleties. Our study highlighted the importance of designing context-sensitive solutions. It is only in this way that the will and the drive exist to ensure policies are acted on. We found the nature of rural general practice to be highly individualistic. For example, for some rural GPs the on-call roster has little impact on their job satisfaction and intention to stay; for others, it is an onerous roster that driving them into urban centres or into becoming a locum. Our study highlighted the importance of designing context-sensitive solutions. It is only in this way that the will and the drive exist to ensure policies are acted on. Serious attention must be paid to the make-up of the rural GP population to allow a tailored rather than simplistic approach. In particular, more investigation should go into the provision of locums and attaining rosters and working conditions that rural GPs are happy with.*

## INTRODUCTION

Rural GPs in New Zealand have more stress and face longer hours than GPs working in urban areas<sup>1</sup>. Rural communities often have high deprivation levels and some have a high proportion of Maori, presenting challenges in terms of cultural differences. Seasonal fluctuations in some rural populations can pose difficulties when planning and funding local health services, and large distances and geographical obstacles often isolate GPs from secondary care support centres. Major issues facing rural GPs are frequent on-call commitments, difficulty finding locums to cover for holidays and CME<sup>2</sup>, and the diminishing rural GP workforce as NZ trained doctors are lured overseas by higher salaries and better working conditions<sup>3</sup>.

Maintaining the rural general practice workforce is important. With 26% of New Zealanders living in rural or semi-rural areas<sup>4</sup>, rural health has been emphatically on the political agenda for some years. International standards for developed countries suggest a desirable doctor/patient ratio in urban areas of 1:1200. In 2000, NZ was 145 full time equivalents (FTEs) short of achieving this<sup>5</sup>. Attention drawn to this insufficiency resulted in government initiatives targeted at retention and recruitment of rural GPs. In May 2002, the Honourable Annette King announced \$32 million to be allocated over the next three years to support the retention and recruitment of the rural primary health care workforce. Subsequently, NZ saw the roll-out of programs such as Reasonable Roster Funding (RRF), aimed at addressing on-call demands, and Rural Workforce Retention Funding (RWRf), available via Primary Health Organisations (PHOs) and intended for more creative use by individual rural practices and their associated communities<sup>6</sup>. Given the diversity of rural communities, it was the PHOs that were deemed best placed to come up with locally developed solutions<sup>7</sup>. For example, the funding may provide support to give a GP extra leave, CME opportunities or provide a direct financial incentive.

Access to RWRf is based on the rural Ranking Scale (RRS), a system adopted in November 1999<sup>8</sup> as a way of defining “rural”; only GPs scoring 35 points or more (up to 100) are defined as “rural” and entitled to bonus payments. For example, a practice population of 1200 people with a low RRS may receive a premium of \$8900 through its PHO. At the other end of isolation, a comparable practice population with a much higher RRS may receive \$22,500 through its PHO to spend on workforce retention<sup>7</sup>. The RRS is currently under review to improve the reflection of rurality of practices.

In contrast, access to RRF is granted on a case-by-case basis where GPs are on-call every night, every second night or every third night and are too isolated to share rosters with other practices<sup>7</sup>. Reasonable on-call rosters are important for providing New Zealand’s rural population with reliable after-hours care<sup>8</sup>. In addition, a reasonable roster is an important factor in successful recruitment and retention<sup>9,10</sup>.

Another government initiative was the development of NZLocums. Established in 2001, this is a non-profit government funded service administered by the New Zealand Rural GP Network (NZRGPN). The aims of NZLocums are to recruit enough locums to provide eligible rural General Practitioners throughout New Zealand with a minimum of two weeks cover per year and also to source long term and permanent General Practitioner and Nurse Practitioner candidates for rural primary health care practices<sup>9</sup>.

In addition to these three programs, funding was made available to develop national programmes in areas such as recruitment programmes, incentives to recent medical graduates to undertake rural general practice training, and funding of post-graduate training programmes<sup>7,8</sup>.

With these initiatives, the government hoped to address the issues of heavy workloads and inability to take leave. They also wished to develop a supportive working environment with financial viability and incentives.

Four years after the introduction of retention and recruitment funding, it is time to take a look at the impact these initiatives have had on the morale and working conditions of rural GPs. Up-to-date information about the rural workforce is crucial to the future of good policy making further development of current initiatives.

This is the first nationwide investigation specifically designed to gauge the success of RRF and RWRF since their implementation in 2002.

## **METHOD**

The design of this study was two fold. Firstly, a case study was done on a rural practice whose retention and recruitment efforts have been successful. Following this, a questionnaire was designed to discover the impact of similar retention and recruitment efforts on the rural GP workforce nationwide.

The case study entailed travelling to the rural practice under investigation and conducting interviews with key people there: the practice manager, a rural GP, the general manager of the PHO and the general manager of the DHB. Interviews focussed on retention and recruitment initiatives at both government and local level. Informed consent was obtained from interviewees and, where interviewee permission was obtained, interviews were recorded on cassette tape for transcription purposes.

After transcription, key issues and themes were identified and served as the focus for questionnaire design. Of particular note was the positive influence of being owned by a larger body and hence being able to offer salaried positions to GPs. This meant that GPs could work at the practice without the large financial investment involved in becoming a practice partner. This option was found especially attractive given the uncertain financial remuneration opportunities in many rural areas. GPs enjoyed the freedom of practicing without having to run the business side of things, a time consuming undertaking which was the responsibility of the owners. Salaries were substantially more than those offered in urban centres: managers felt that financial incentives were essential if recruitment and retention were to be at all successful.

Another outcome of conducting the interviews was insight into the relationships between practice, PHO and DHB. Interestingly, the PHO is currently in a phase of expansion, and communication between the three bodies is one area under development. Further discussion on the lifestyle of rural GPs provided insight into the personal cost of on-call responsibility. Typical frustrations for rural GPs and ideas for workforce development were also recounted.

The questionnaire was designed to investigate these nationwide. Questions centred around: the impact on a practice of being owned by a larger body; access to RRF and how this makes a positive difference; on-call rosters and who helps cover after-hours; adequacy of the NZ Rural GP Network (NZRGPN) locum scheme; adequacy of annual leave and CME leave; access to RWRF and how it is used; the number of permanent GP positions being filled by short or long-term locums; the intentions of rural GPs regarding staying in the workforce.

The prototype questionnaire was trialled on a focus group of six GPs. In addition, advice was obtained from other researchers with experience in postal research. The prototype was then revised.

The final questionnaire comprised 26 questions including five demographic-related questions. Questions were either yes/no (e.g. "Is your GP work salaried?"), Likert scale style (e.g. "The Reasonable Roster Funding has been ..... in making my practice more sustainable: Very helpful, Quite helpful, Helpful, Slightly helpful, Of no help to me"), or short answer (e.g. "How has the Reasonable Roster Funding made a difference?").

Participants were contacted using the New Zealand Rural General Practice Network (NZRGPN) database, the NZRGPN kindly sending addressed envelope labels for our use. The database contains all rural GPs in New Zealand. Questionnaires were mailed to all 547 GPs in the database. Anonymity was preserved. The date of postage was December 8, no reminders were sent, and the deadline for return was December 21. Return of the questionnaire was taken as consent to take part in this study.

Returned questionnaires were entered into a Microsoft Excel database and analyzed using "Statistical Package for the Social Sciences" (SPSS) version 14.0 for Windows. Descriptive statistics such as frequency tables, cross tabulations and Pearson Chi-Square Tests were used as appropriate.

## **RESULTS**

### ***The Sample***

Of the 547 questionnaires sent out, 274 were returned, giving a response rate of 50%. Given the short turnaround time of thirteen days and the proximity to Christmas, this can be considered a pleasing rate of return.

**Key inclusion criteria:** working as a rural GP in New Zealand.

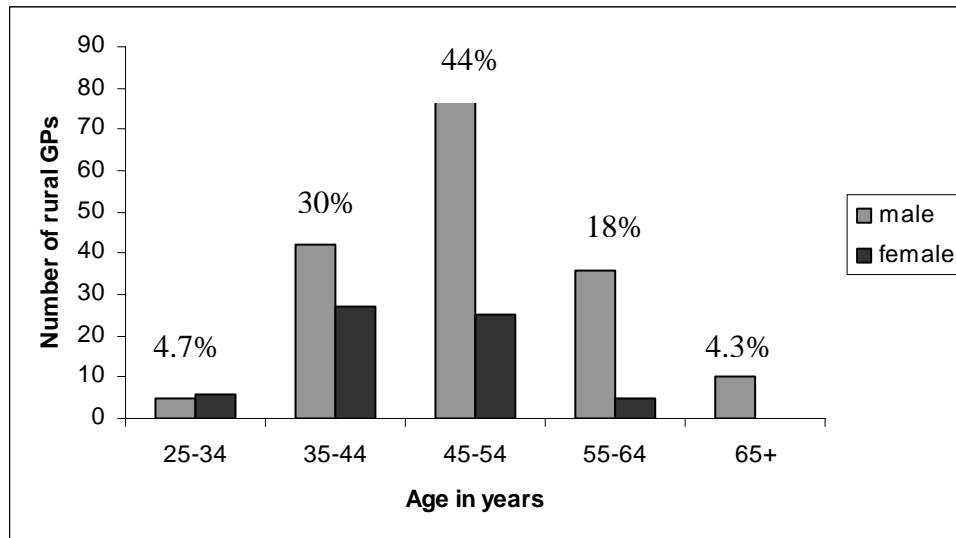
**Key exclusion criteria:** retired, no longer in rural practice, no longer in New Zealand.

25 responses were excluded based on the exclusion criteria. 16 additional responses were received too late to be included in the analysis. This left 233 questionnaires for analysis.

Of these responses, 170 (72%) were male and 63 (27%) were female. This is similar to the gender picture for the rural GP population in New Zealand (71% male and 29% female<sup>11</sup>).

The age distribution was bell shaped with the largest percentage of GPs being in the 45-54 year bracket. As shown in Figure 1, this was also true of the just male GP group, whereas for females the largest percentage was in the 35-44 year bracket. Other studies have shown a similar age distribution<sup>2,11</sup>.

Figure 1: Age distribution of respondents



140 respondents were from the North Island (60%) and 93 from the South Island (40%). Again, this is similar to the rural GP population distribution between the islands (62% and 38% respectively<sup>2</sup>).

Similar to other studies, only 107 (46%) respondents were NZ trained (the most recent study found 42%<sup>11</sup>). The next largest group were trained in the UK, with various other countries represented as shown in Table 1.

Table 1: Country of graduation of respondents

Country of graduation of respondents	Number	Percentage
NZ	107	45.9
UK	48	20.6
South Africa	28	12.0
Germany	6	2.6
USA	4	1.7
Australia	3	1.3
India	2	.9
Sri Lanka	2	.9
Canada	2	.9
Serbia	1	.4
Netherlands	1	.4
Norway	1	.4
other country unspecified	28	12.0
Total	233	100.0

On the basis of the findings reported above and their consistency with previous research, the sample was considered representative of the population of rural GPs in NZ and hence meaningful to analyze.

### ***Reasonable Roster Funding***

95 respondents (41%) had access to RRF as shown in Table 2. Of this group, 82 (86%) found the funding helpful-very helpful in making their practice more sustainable (see Table 3). The impact on sustainability was even greater among GPs with the most frequent on call rosters (1:1, 1:2 or 1:3). As shown in Table 4, of this group 40 (93%) found RRF helpful-very helpful. Further investigations comparing salaried and non-salaried respondents and repeating the above three cross tabulations showed nothing of note.

Table 2: Receipt of RRF according to respondents

Do you receive RRF in the last 12 months?	Number	Percent
yes	95	40.8
no	137	58.8
unsure	1	.4
Total	233	100.0

Table 3: Respondents reporting receiving RRF and how helpful they found the funding in making their practice more sustainable

How helpful has RRF been in making your practice more sustainable?	Number	Percent
very helpful	45	47.4
quite helpful	18	18.9
helpful	23	24.2
slightly helpful	6	6.3
of no help to me	3	3.2
Total	95	100.0

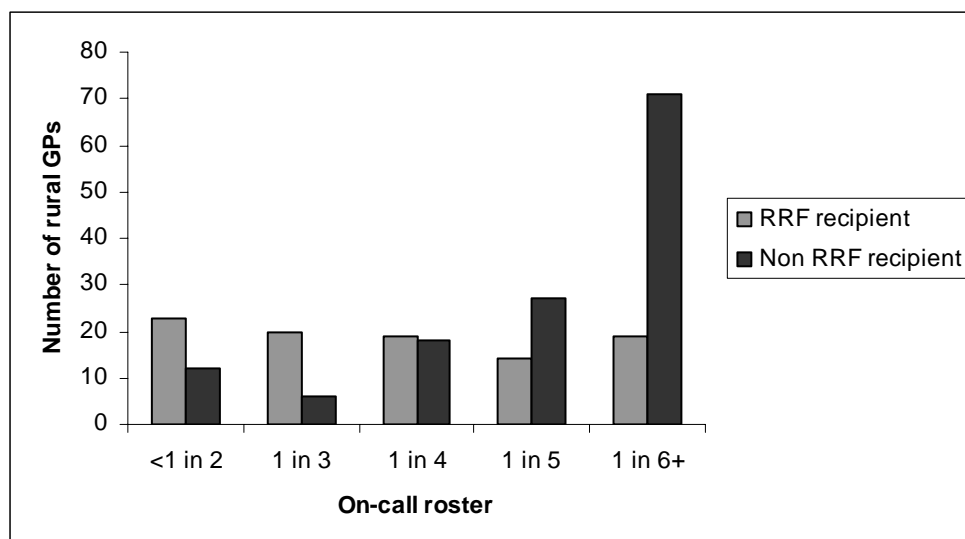
Table 4: Respondents with access to RRF and with rosters of 1:1, 1:2 and 1:3: how helpful RRF was considered in making practices more sustainable.

How helpful has RRF been in making your practice more sustainable?	Number	Percent
very helpful	25	58.1
quite helpful	5	11.6
helpful	10	23.3
slightly helpful	3	7.0
Total	43	100.0

The remaining 13 RRF recipients reported the funding only slightly helpful-of no help or did not respond.

We then looked at RRF with respect to rosters. As shown in Figure 2, there were some respondents with rosters of 1:1, 1:2 and 1:3 who should be eligible for RRF but were non-recipients.

Figure 2: RRF recipients and non-recipients and their on-call rosters



To further investigate RRF and rosters, we looked at RRF recipients and their feelings about their roster. 67% of those who received RRF and reported finding it helpful found their roster ok, good or great. However, 9% of this group still found their roster intolerable despite saying the funding had helped (Table 5).

Table 5: Respondents with access to RRF and who found it helpful-very helpful: their feelings on their roster

I feel my roster is...	Number	Percent
A great roster	5	5.8
A good roster	14	16.3
Just ok	35	40.7
Stressful	21	24.4
Intolerable	8	9.3
Blank	3	3.5
Total	86	100.0

We further analyzed RRF recipients by looking at the RRS distribution for this group. The RRS distribution of practices receiving RRF was slightly skewed towards higher values (Table 6). 28 participants were unsure of their RRS or unsure of whether they received RRF.

Table 6: RRF recipients and non-recipients: their RRS distribution

		RRF		Total
		yes	no	
RRS	35-40	17 (26%)	46 (74%)	63 (100%)
	45-50	17 (40%)	25 (60%)	42 (100%)
	55-60	25 (52%)	23 (48%)	48 (100%)
	65-70	13 (54%)	11 (46%)	24 (100%)
	75-80	10 (62%)	6 (38%)	16 (100%)
	85-90	5 (62%)	3 (38%)	8 (100%)
	95+	2 (50%)	2 (50%)	4 (100%)
Total		89 (43%)	116 (56%)	205(100%)

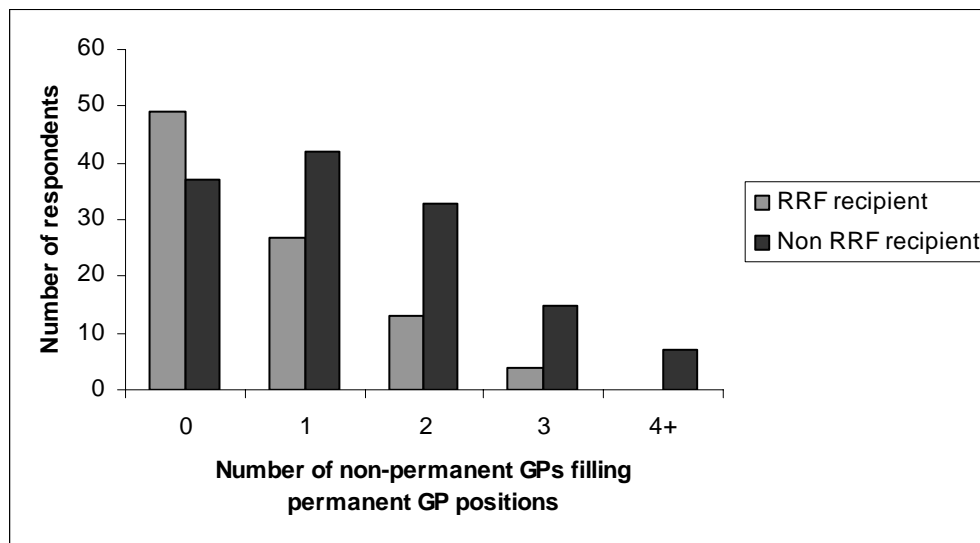
To look at this a different way, we then selected just those on rosters of 1:3 or worse . We looked at whether or not they received RRF and the RRS distribution for this group. Table 7 shows what we found. Of 57 with rosters of 1:3 or worse, all eligible for RRF, only 41 (71%) were receiving it, with some of those not receiving it from areas with a very high RRS.

Table 7: Respondents eligible for RRF: their RRS distribution

RRS	Do you receive RRF?		Total
	yes	no	
35-40	1 (20%)	4 (80%)	5 (100%)
45-50	8 (100%)	0 (0%)	8 (100%)
55-60	9 (90%)	1 (10%)	10 (100%)
65-70	9 (69%)	4 (71%)	13 (100%)
75-80	8 (72%)	3 (28%)	11 (100%)
85-90	5 (62%)	3 (38%)	8 (100%)
95+	1 (50%)	1 (50%)	2 (100%)
Total	41 (71%)	16 (29%)	57 (100%)

We then wished to look at RRF and stability. A potential marker of stability was the number of non-permanent GPs filling vacancies of permanent GPs. There was an association found between access to RRF and the number of non-permanent GPs filling permanent positions as shown in Figure 3 (Pearson Chi-Square test,  $p=0.002$ ).

Figure 3: Receipt of RRF relative to the number of non-permanent GPs filling permanent positions in a practice.



We then compared the roster distributions of RRF recipients and non-recipients, relative to the number of non-permanent GPs filling permanent GP positions (Table 8, Table 9).

Table 8: RRF recipients: the number of non-permanent GPs filling permanent GP positions, relative to on-call roster distribution

		Number of non permanent GPs				
		0	1	2	3	Total
On call roster	1 in 2 or less	15 (31%)	6 (22%)	0 (0%)	1 (25%)	22 (24%)
	1 in 3	11 (22%)	5 (19%)	3 (23%)	0 (0%)	19 (20%)
	1 in 4	11 (22%)	6 (22%)	1 (8%)	1 (25%)	19 (20%)
	1 in 5	2 (4%)	3 (11%)	7 (54%)	2 (50%)	14 (15%)
	1 in 6+	10 (20%)	7 (26%)	2 (15%)	0 (0%)	19 (20%)
Total		49 (100%)	27 (100%)	13 (100%)	4 (100%)	93 (100%)

Table 9a: RRF non-recipients: the number of non-permanent GPs filling permanent GP positions, relative to on-call roster distribution

		Number of non permanent GPs					
		0	1	2	3	4+	Total
On call roster	1 in 2 or less	8 (22%)	1 (2%)	1 (3%)	1 (7%)	0 (0%)	12 (9%)
	1 in 3	1 (3%)	4 (10%)	1 (3%)	0 (0%)	0 (0%)	6 (4%)
	1 in 4	5 (14%)	5 (12%)	5 (16%)	2 (13%)	1 (14%)	18 (13%)
	1 in 5	5 (14%)	9 (22%)	9 (28%)	4 (27%)	0 (0%)	27 (19%)
	1 in 6+	18 (49%)	22 (54%)	16 (50%)	8 (53%)	6 (85%)	71 (23%)
Total		37 (100%)	41 (100%)	32 (100%)	15 (100%)	7 (100%)	134(100%)

### ***Rural Workforce Retention Funding***

More respondents had access to RWRF than RRF, with 169 (73%) receiving this funding (Table 10).

Table 10: Receipt of respondents to RWRF

Did you receive RWRF in the last 12 months?	Frequency	Percent
yes	169	72.5
no	62	26.6
unsure	2	.9
Total	233	100.0

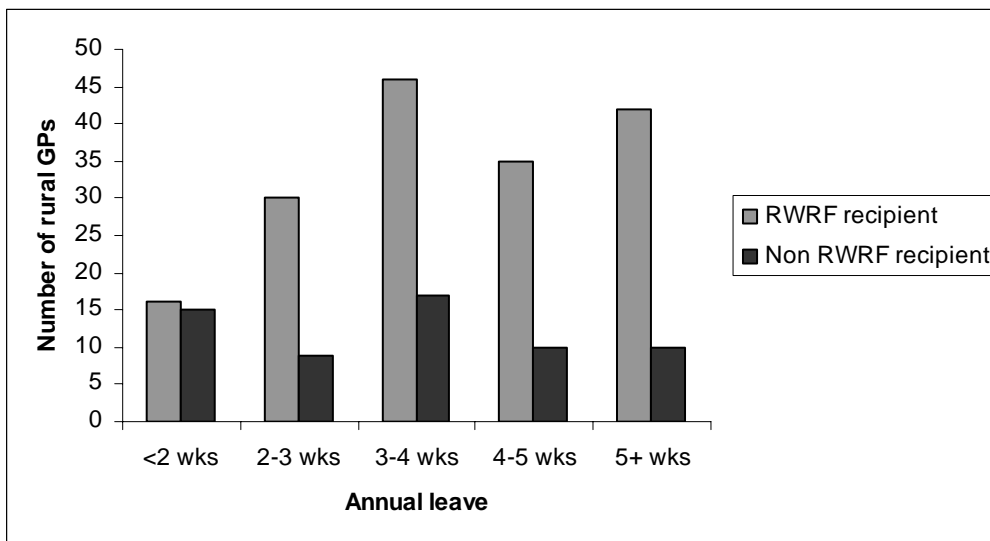
As access to RWRF is based on the RRS of a practice, we further investigated this by looking at the RRS distribution (Table 11). 125 (73%) of the respondents with access to RWRF were from areas with a RRS between 35 and 60. 27 respondents did not know the RRS for their practice. Included in this group were those who did not know whether they received RWRF or not.

Table 11: Receipt of RWRP relative to the RRS distribution

RRS	Do you receive RWRP?		Total
	yes	no	
35-40	50 (78%)	14 (22%)	64 (100%)
45-50	33 (78%)	9 (22%)	42 (100%)
55-60	42 (87%)	6 (13%)	48 (100%)
65-70	17 (70%)	7 (30%)	24 (100%)
75-80	12 (75%)	4 (25%)	16 (100%)
85-90	5 (62%)	3 (38%)	8 (100%)
95+	2 (50%)	2 (50%)	4 (100%)
Total	161 (78%)	45 (22%)	206(100%)

We wished to investigate the impact of RWRP on rosters, CME and annual leave. Of these, there was an association between access to RWRP and annual leave (Pearson Chi-Square test,  $p=0.046$ ), those receiving funding enjoying significantly more leave (Figure 4). There appeared to be no association between RWRP and rosters or CME.

Figure 4: Respondents' receipt of RWRP and annual leave



We then looked at possible reasons for this association by looking at the ways respondents reported using RWRP. The funding was most commonly used to cover locum costs. RWRP was also used to improve information technology, update equipment and facilities for the practice and provide CME for both doctors and nurses.

### ***Rosters***

We were interested in looking at the roster situation among our respondents. There were a wide range of feelings on what was a “good” or “great” roster. As shown in Table 12, 169 (73%) reported having an on-call roster of 1:4 or better

(including those who did not do on-call at all). Earlier research<sup>10</sup> has considered that rosters of this frequency are reasonable. However, 39 (23%) of our respondents with rosters of 1:4 or better still found this “stressful-intolerable” (Table 13).

Table 12: Roster distribution among respondents

I am currently on a roster of:	Frequency	Percent
1 in 2 or less	35	15.0
1 in 3	26	11.2
1 in 4	37	15.9
1 in 5	42	18.0
1 in 6+	90	38.6
blank	3	1.3
Total	233	100.0

Table 13: Respondents on rosters of 1:4 or better and their feelings about their roster

I feel this is:	On call roster			Total
	1 in 4	1 in 5	1 in 6+	
A great roster	0 (0%)	1 (2%)	14 (16%)	15 (9%)
A good roster	7 (19%)	7 (17%)	32 (37%)	46 (23%)
Just ok	20 (55%)	15 (37%)	27 (31%)	62 (19%)
Stressful	8 (22%)	14 (35%)	11 (12%)	33 (20%)
Intolerable	1 (2%)	3 (7%)	2 (2%)	6 (3%)
Total	36 (100%)	40 (100%)	86 (100%)	162(100%)

We then selected those on rosters of 1:3 or worse (Table 14). Of this group, 5 (8%) reported it a “great” or “good” roster.

Table 14: Respondents with rosters of 1:3 or worse and their rosters

Feelings about roster	On call roster		Total
	1 in 2 or less	1 in 3	
A great roster	1 (2%)	0 (0%)	1 (1%)
A good roster	3 (8%)	1 (3%)	4 (6%)
Just ok	9 (26%)	15 (57%)	24 (40%)
Stressful	13 (38%)	7 (26%)	20 (33%)
Intolerable	8 (23%)	3 (11%)	11 (18%)
Total	34 (100%)	26 (100%)	60 (100%)

Where on-call rosters were shared, this was mainly between GPs from within the same practice. Locums, GPs from nearby practices and nurses trained in Primary Response in Medical Emergencies (PRIME) also shared some of the burden.

### *Annual Leave and Continuing Medical Education*

We looked at the distribution of annual leave among respondents (Figure 5). We found annual leave quantity correlated with opinion of annual leave (Table 15). 142 (61%) respondents reported they felt they had adequate-more than adequate annual leave. 4 respondents did not say what they thought of their annual leave quantity.

Figure 5: Weeks of annual leave during the last twelve months among respondents

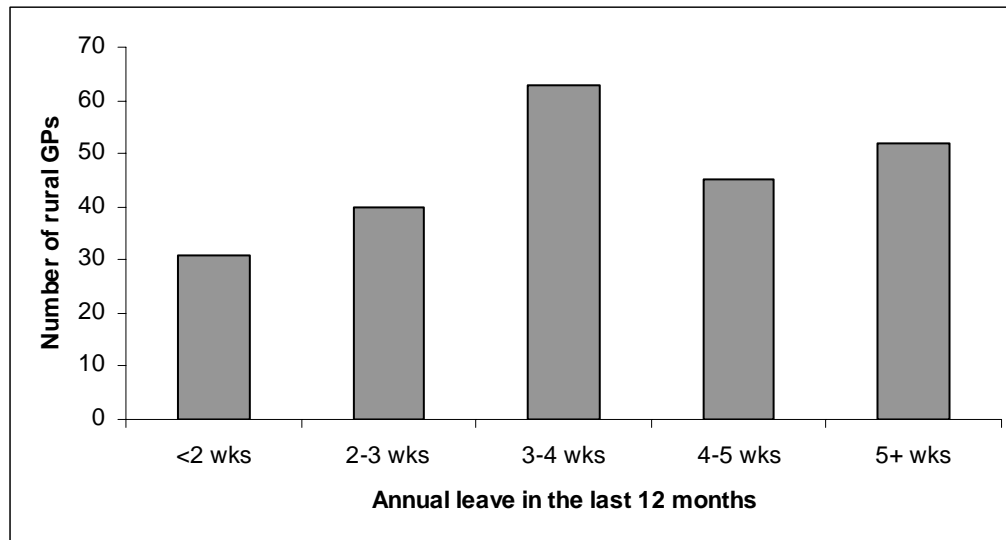


Table 15: Respondents' quantity of annual leave and their feelings about the quantity

		Annual leave opinion			Total
		more than adequate	adequate	less than adequate	
Annual leave quantity	<2 wks	0 (0%)	7 (5%)	23 (26%)	30 (13%)
	2-3 wks	0 (0%)	12 (9%)	27 (31%)	39 (17%)
	3-4 wks	0 (0%)	36 (28%)	27 (31%)	63 (27%)
	4-5 wks	3 (20%)	33 (25%)	9 (10%)	45 (19%)
	5+ wks	12 (80%)	39 (30%)	1 (1%)	52 (22%)
Total		15 (100%)	127(100%)	87 (100%)	229(100%)

To investigate this further, we looked at whether the opinion of annual leave was associated with the opinion of the on-call roster. We found these were associated, as shown in Table 16, with those who considered they had adequate or more than adequate annual leave also considering their roster to be good or great (Pearson Chi-Square test,  $p=0.004$ ). This was independent of the roster itself.

Table 16: Respondents' annual leave opinion matched to their feelings about the on call roster

Roster opinion	Annual leave opinion			Total
	more than adequate	adequate	less than adequate	
A great roster	3 (23%)	7 (5%)	6 (6%)	16 (7%)
A good roster	3 (23%)	35 (29%)	11 (12%)	49 (22%)
Just ok	5 (38%)	50 (41%)	30 (34%)	85 (38%)
Stressful	2 (15%)	23 (19%)	28 (32%)	53 (24%)
Intolerable	0 (0%)	5 (4%)	12 (13%)	17 (7%)
Total	13 (100%)	120(100%)	87 (100%)	220(100%)

We also looked at annual leave relative to RRS (Table 17).

Table 17: Annual leave and RRS

		RRS 35-50	RRS 55+
Annual leave quantity	<2 wks	10 (9%)	15(15%)
	2-3 wks	15 (14%)	20(20%)
	3-4 wks	34 (32%)	24(24%)
	4-5 wks	20 (19%)	20(20%)
	5+ wks	27 (25%)	20(20%)
Total		106(100%)	99(100%)

### *CME*

We next looked at CME (Figure 6). As shown in Table 18, quantity of CME was correlated with opinion of CME (Pearson Chi Square Test  $p < 0.0001$ ). One respondent did not give their opinion on CME. 146 (63%) respondents reported they felt they had adequate-more than adequate CME. This was independent of the roster itself or annual leave quantity.

Figure 6: Days of CME during the last twelve months among respondents

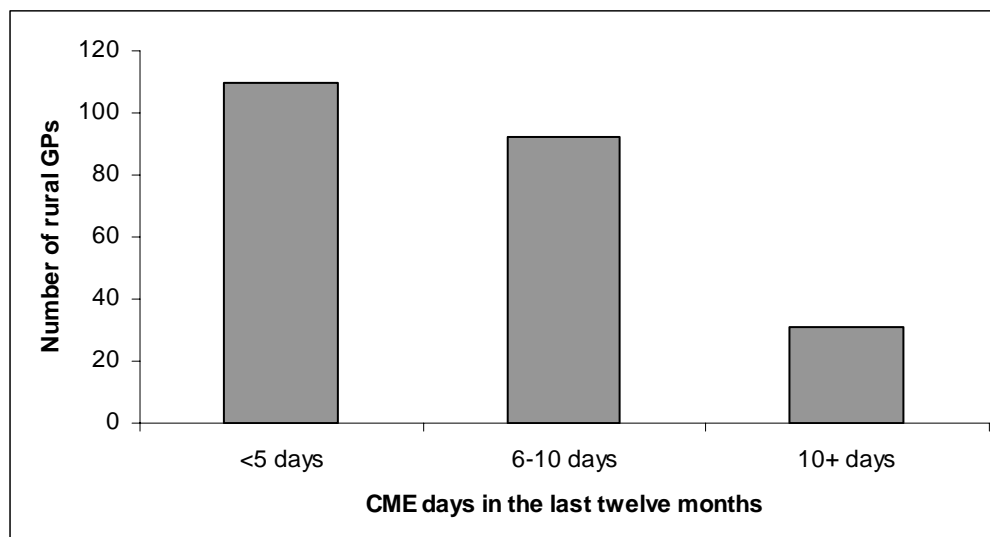


Table 18: Quantity of CME during the last twelve months among respondents and their feeling about the quantity

CME quantity in the last 12 months	CME opinion			Total
	more than adequate	adequate	less than adequate	
<5 days	4	29	76	109
6-10 days	3	80	9	92
10+ days	14	16	1	31
Total	21	125	86	232

### *NZLocums Service*

We investigated how helpful respondents found the NZLocums service in making their practice more sustainable. Less than half (45%) reported finding the NZLocum service helpful-very helpful (Table 19).

Table 19: Respondents opinion on how helpful the NZLocums service was to them

I find the NZLocums service... in making my practice more sustainable:	Frequency	Percent
Very helpful	52	22.3
Quite helpful	22	9.4
Helpful	33	14.2
Slightly helpful	41	17.6
Of no help to me	83	35.6
blank	2	.9
Total	233	100.0

To investigate this further, we split respondents into two groups based on their roster. We discovered that those with rosters of 1:3 or worse found the NZLocum service the least helpful; those on rosters of 1:4 or better found it the most helpful (Table 20).

Table 20: How helpful respondents found the NZLocums service relative to their on-call roster

I am currently on a roster of:	The NZLocums service has been..... in making my practice more sustainable					
	Very helpful	Quite helpful	Helpful	Slightly helpful	Of no help to me	Total
1 in 2 or less	9 (17%)	2 (9%)	4 (12%)	10 (24%)	10 (12%)	35 (15%)
1 in 3	10 (19%)	2 (9%)	4 (12%)	6 (15%)	4 (5%)	26 (11%)
1 in 4	6 (12%)	4 (18%)	7 (21%)	7 (17%)	12 (15%)	36 (16%)
1 in 5	7 (13%)	5 (23%)	7 (21%)	6 (15%)	17 (21%)	42 (18%)
1 in 6+	20 (38%)	9 (41%)	11 (33%)	12 (29%)	32 (40%)	90 (39%)
Total	52 (100%)	22 (100%)	33 (100%)	41 (100%)	81 (100%)	229(100%)

### *Intention to Stay*

Respondents were asked how long they intended to stay working in their current NZ rural area. 115 respondents (49%) reported an intention to stay less than five years, the majority aged 45-54 (Table 21). This proportion was consistent between those who graduated in other countries (29% or foreign trained respondents), and those who graduated in NZ (49% of NZ trained respondents) as shown in Table 22.

Table 21: Respondents intention to stay working in their current NZ rural area relative to age

Age group	Will practice for...						Total
	<1 yr	1-2 yrs	3-5 yrs	6-10 yrs	10+ yrs	unsure	
25-34	2	1	2	2	4	0	11 (4.7%)
35-44	6	11	10	11	23	8	69 (30%)
45-54	9	14	24	27	24	4	102 (44%)
55-64	3	8	17	10	2	1	41 (18%)
65+	2	3	3	1	1	0	10 (4.3%)
Total	22	37	56	51	54	13	233

Table 22: Respondents intention to stay working in their current NZ rural area by country of graduation

Country of graduation	Will practice for...						Total
	<1 yr	1-2 yrs	3-5 yrs	6-10 yrs	10+ yrs	unsure	
NZ	5 (4%)	17 (15%)	31 (28%)	25 (23%)	23 (21%)	6 (5%)	107(100%)
other country	17 (13%)	20 (15%)	25 (19%)	26 (20%)	28 (22%)	7 (5%)	126(100%)
Total	22 (9%)	37 (15%)	56 (24%)	51 (21%)	54 (23%)	13 (5%)	233(100%)

We then excluded those who were nearing retirement (Table 23), that is, those over 55 years of age, and investigated what role the country of graduation played in doctors' intention to stay (Table 24). Foreign trained doctors were under-represented in the group of doctors planning to stay less than 5 years: of the 106 respondents trained in other countries, only 46 (43%) reported an intention to leave rural general practice in New Zealand within 5 years compared with 43 (56%) or NZ trained respondents (Table 23).

Table 23: Respondents under the age of 55: intention to stay working in their current NZ rural area relative to age

		Will practice for...						Total
		<1 yr	2-3 yrs	3-5 yrs	6-10 yrs	10+ yrs	unsure	
Age group	25-34	2 (18%)	1 (9%)	2 (18%)	2 (18%)	4 (36%)	0 (0%)	11 (100%)
	35-44	6 (8%)	11 (15%)	10 (14%)	11 (15%)	23 (33%)	8 (11%)	69 (100%)
	45-54	9 (8%)	14 (13%)	24 (23%)	27 (26%)	24 (23%)	4 (3%)	102(100%)
Total		17 (9%)	26 (14%)	36 (19%)	40 (21%)	51 (28%)	11 (6%)	182(100%)

Table 24: Respondents under the age of 55: intention to stay working in their current NZ rural area by country of graduation

Country of graduation	Will practice for...						Total
	<1 yr	1-2 yrs	3-5 yrs	6-10 yrs	10+ yrs	unsure	
NZ	4 (5%)	11(14%)	18(23%)	16(21%)	22(28%)	5(6%)	76(100%)
other country	13(12%)	15(14%)	18(16%)	24(22%)	29(27%)	7(6%)	106(100%)
Total	17 (9%)	26(14%)	36(19%)	40(21%)	51(28%)	12(6%)	182(100%)

We then wished to investigate the impact of experience on intention to stay. The potential loss of an experienced workforce can be seen by examining the number of GPs planning to leave grouped by experience in the field, shown in Table 25. When those over the age of 55 were excluded, there was a significant association found between intention to stay and experience (Pearson Chi-Square test,  $p=0.049$ ). Those who had practiced for longer were found to be intending to continue practicing longer.

Table 25: Numbers of respondents intending to continue in rural practice relative to experience in rural general practice.

Have practiced for...	Will practice for...						Total
	<1 yr	1-2 yrs	3-5 yrs	6-10 yrs	10+ yrs	unsure	
<1 yr	3 (60%)	2 (40%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	5 (100%)
1-2 yrs	4 (16%)	4 (16%)	4 (16%)	4 (16%)	6 (25%)	2 (8%)	24 (100%)
3-5 yrs	2 (5%)	7 (20%)	7 (20%)	5 (14%)	11 (32%)	2 (5%)	34 (100%)
6-10 yrs	0 (0%)	5 (15%)	9 (28%)	5 (15%)	10 (31%)	3 (9%)	32 (100%)
10+ yrs	13 (9%)	19 (13%)	36 (26%)	37 (26%)	27 (19%)	6 (4%)	138(100%)
Total	22 (9%)	37 (15%)	56 (24%)	51 (21%)	54 (23%)	13 (5%)	233(100%)

### ***Further comments***

Respondents were given the chance to make any further comments relevant to recent retention and recruitment initiatives. 131 (56%) respondents chose to comment. Of these, 23 were positive comments, 85 were negative and 23 were neutral (Table 26).

Table 26: Numbers of respondents choosing to comment in a positive, negative or neutral light

Comment	Frequency	Percent
positive comment	23	17.6
neutral/suggestion for change	23	17.6
negative comment	85	64.8
Total	131	100

An example of a positive comment was:

*“Retention and recruitment funding is essential for service provision.”*

An example of a negative comment was:

*“Given the current state, would put the clock back and study civil engineering instead.”*

An example of a neutral comment was:

*“Need to stop exposure of undergrads to denigration of GPs by their teachers.”*

## **DISCUSSION**

### ***The Sample***

A questionnaire based study is vulnerable to response bias. In our study we had a 50% response rate. This begs the question: what is the make-up of the group who did not respond? Perhaps those on less onerous rosters were more likely to have time to respond than those on more onerous rosters. Conversely, perhaps those on more onerous rosters were more likely to respond; they may be more unhappy about working conditions and may have seen the questionnaire as an opportunity to express that. The response rate may have been improved by sending follow-up letters. However, due to the nature of a summer studentship, time was a limiting factor. In order to have reasonable numbers to work with on analysis while keeping within the timeframe, it was decided to not do follow-up, but to address questionnaires to all rural GPs so that a lower response rate would still yield a large sample.

In addition to the low response rate, some questions in the questionnaire were open to bias. For example, if one were on a stressful roster, would they not be likely to underestimate their annual leave and CME? This may have been balanced by those who over-estimated their annual leave and CME.

Some questions relied on administrative knowledge. For example, “In the last twelve months, I have received Reasonable Roster Funding: Yes/No”. Some respondents may not have known they were recipients and said “no”, for example, those employees who have funding incorporated into their salary where it is effectively invisible. Others may have thought they did but had it confused with other funding. This would decrease the accuracy of the data.

Other questions were open to misinterpretation. For example, “My current on-call roster is-” may have been interpreted as weekday or weekend call. In addition, 27 respondents did not know their RRS (Table 6). This may have made some comparisons less accurate, especially when already working with small subgroups, for example, the 57 respondents eligible for RRF (Table 7).

Working with small numbers in subgroups of respondents was sometimes limiting. For example, some cross-tabulations resulted in numbers too small for any testing of significant association. Considering almost half of the population being studied responded, this suggests that a more thorough and comprehensive study of the population is needed to overcome such limitations. Notably, even small numbers in the context of rural general practice can be significant; the addition of one extra GP to a rural area can ease significantly ease access to health care for a thousand people, especially if they previously had no GP.

Clearer differentiation in some questions may have made for easier comparisons with previous studies. It was difficult to compare, say, the current state of rosters with previous studies, as previous studies had differentiated between Monday through Thursday on-call and Friday through Sunday on-call. It appeared that GPs in our study had interpreted the single question in our survey as weekday call, with some respondents adding their weekend ratio where it differed. Attention to such detail in future in-depth studies would allow a better comparison.

### ***RRF***

It appeared from our study that RRF was being used well and was reaching those who need it. This was supported by the 82 (86%) of all RRF recipients who reported find the funding helpful-very helpful in making their practice more sustainable (Table 3).

In addition, most recipients on rosters of 1:3 or worse, that is, eligible for RRF, were receiving it (Figure 2). However, 16 eligible respondents were not receiving funding (Table 7). It is possible that they were receiving funding but that it was incorporated into their salary and so they were unaware of it. Or, this may be due to the excessive paper work and bureaucracy involved in applying for funding. This was a theme that came through in the additional comments made by respondents. In fact, 16 (19%) of the negative comments made expressed frustration related to difficulty accessing funding. Respondents felt that funding was announced too late in the financial year and was therefore difficult to incorporate into budgets. Secondly, the extensive paperwork associated with accessing funding was “a major deterrent” to staying in rural general practice itself. Perhaps some doctors in this group were too busy to apply, missed application deadlines, or, as one respondent recounted, applied and were granted funding but it was not paid within that year. As paperwork

increases, the patient load that a doctor can cope with decreases. Evidence of this came through in a few comments, for example:

*“I didn’t train to be an office worker or office manager. I trained to do medicine.”*

Similarly, some ineligible respondents reporting rosters of 1:4 or better had received RRF in the last twelve months. It may be that twelve months ago they did qualify and now have much improved rosters. Indeed, 56% of recipients reported that RRF had improved their rosters and after hours compensation. This brings into question what will happen the next time these doctors apply for RRF: will the withdrawal of funding recreate the more onerous roster and hence make them eligible again? Of course, those on ineligible rosters reporting they receive RRF may simply reflect confusion between RRF and RWRF when answering the question. Or, are some GPs getting funding who are truly not eligible?

Another marker indicating RRF is being used well was the number of permanent positions being filled by non-permanent GPs. More RRF recipients reported nil non-permanent GPs filling permanent positions than non-recipients (Figure 3). Of those with one, two, three, four or more non-permanents GPs filling permanent positions, RRF recipients were consistently below non-recipients (Figure 3). Given the impact of reasonable rosters on attracting rural GPs, we investigated the roster distribution among RRF recipients and non-recipients relative to the number of positions filled by non-permanent GPs (Table 8, Table 9). It appeared that the roster distributions were different. However, we were working with small numbers and so it is difficult to say to what extent the two groups were truly different in this regard.

### ***RWRF***

Similarly, RWRF appeared to be making a positive difference. Supporting this was the significant association found between RWRF and annual leave. RWRF recipients enjoyed more weeks of annual leave than non-recipients (Figure 4). Just over half the RWRF recipients were from areas with RRS between 35 and 50 (Table 9). Perhaps these tend to be areas that find it easier to attract locums and so GPs would enjoy more annual leave with or without the funding.

There were 64 respondents eligible for RWRF who were not receiving funding. Perhaps, again, the demands of paperwork bureaucracy and deadlines are too daunting for some doctors. In addition to the comments made about such demands, for some respondents in some places there appeared to be a lack of trust and good communication between rural GPs, DHBs and PHOs. A few even felt that the PHOs were “hi-jacking” funds or that DHBs were “keeping the money” and “forcing GPs to beg cap in hand” for the rural bonus. Improving communication and goodwill in some places might go some way towards easing the pathway to accessing funds for some practices. It may also be useful to make funding more transparent. Making PHOs payments less arbitrary and more focussed, coupled with decreased paperwork, may help to lower the frustration levels for some rural GPs. This study was not able to quantify the frustration surrounding this issue. However, it may show that this is one area that could be revisited more closely.

### ***NZLocums***

Only 45% of respondents reported finding the NZLocums service helpful-very helpful in making their practice more sustainable (Table 19). Insight into this was provided by some additional comments made, for example:

*“I can get my own locums cheaper”*

Our findings may also suggest that those using the service successfully are able to attract locums better on account of offering less strenuous on-call conditions (Table 20), those on rosters of 1:4 or better finding the service the most useful. There appeared to be a bimodal distribution, with a high proportion of those on strenuous rosters finding the service very helpful. Here, small numbers were a limiting factor in terms of looking at tests of statistical significance.

### ***Rosters***

Our study also suggested that there are multiple factors contributing to the stress associated with on call. Certainly frequency is a factor; of those on rosters of 1:4 or better, 39 (24%, Table 13) found the roster stressful-intolerable while of those on rosters of 1:3 or worse 31 (51%, Table 14) found the roster stressful-intolerable. However, 5 (8%) of those on rosters of 1:3 or worse found their roster good or great (Table 14).

Rural GPs may consider rosters good or bad for a number of reasons. Social responsibility, personal job satisfaction, the degree of patient ownership and continuity, the busyness of the on-call hours, having emergency back-up close at hand, experience and training are all subjective elements that must be considered. Some respondents may have a negative view of on-call regardless of the actual roster. They may be new to the profession and may have had inadequate training for the demands of rural general practice or may have had unrealistic expectation. Others may have less of an ability to feel comfortable settling into a rural community. Certainly one must question the safety of doctors continuing to work under what they perceive as unremittingly stressful conditions. Further research on what makes for a less stressful, more enjoyable on-call experience may prove invaluable.

### ***Future Retention and Recruitment***

It would seem from our results that recruitment remains an important issue. This is supported by a number of findings. Firstly, we found 115 (49%) of respondents intend to stay working in NZ rural general practice for less than five years (Table 21). This figure itself need not be alarming, but would be if replacement of those leaving were an issue. It should also be noted that it is not known what attrition rates are for other medical specialties; this rate from our survey may well be comparable.

Interestingly, there was one recipient of age 65+ who expressed an intention to remain in rural general practice for 10+ years, beyond retirement (Table 22). It is possible that this respondent did not fully understand the question and responded inappropriately. However, it is equally possible that there is a sub-group of rural GPs who do enjoy their work to the extent that they are willing to continue to work well beyond the age of retirement. Or, perhaps they have had so much difficulty in attracting a replacement that they feel obligated to stay at their rural practice for as long as they enjoy good health to do so. Certainly the characteristics of this sub-group of GPs are worth investigating further.

A large proportion of these are GPs in their forties, well before retirement age and representing the experienced subgroup of respondents (Table 21, Table 23). Similarly, other studies have shown a large proportion of the workforce intend to stay less than five years. The 2005 Workforce Survey reported 123 of 358 respondents intended to leave within five years (34%).

Compounding this issue are current workforce trends. 14 new GPs will be required to replace every 10 that leave or retire<sup>11</sup>. This could be due to feminisation of the workforce or increasing numbers of GPs choosing to work part time. Certainly attitudes and expectation of rural GPs appear to be changing, with lifestyle considerations and the nine to five working day having greater importance for some GPs.

If the 115 (49%) intending to leave do leave, and taking the liberty to extrapolate the 49% to apply to the population of rural GPs in NZ, then NZ is facing losing 268 rural GPs over the next five years. If the above figures for workforce trends and the 14:10 ratio are accurate, then NZ may need to have 375 new rural GPs over the next five years to replace the 268 that may intend to leave. This figure is not including making up the current deficit of rural GPs, on which there are no figures. Are current training programs geared to produce this number of rural GPs? The current rural GP training programme offers significantly fewer places than the 75 places that would be required each year. By these calculations, and assuming workforce conditions and attrition rates remain the same, NZ may be considerably short of replacing those who intend to leave.

Our results suggest that retention efforts may be better focussed. Table 25 shows the impact of experience on intention to continue practicing. There appeared to be a bimodal pattern of distribution; those who try rural practice, like it and stay, and those who try rural practice, don't like it and leave. Focussing retention efforts on the latter group may have a greater net effect on retention. This again highlights the importance of better targeted recruitment and training.

Of those currently under the age of 55 intending to leave within five years, foreign doctors were under-represented. Given that NZ already relies heavily on foreign recruitment and overseas supply, it suggests that greater emphasis should be placed on recruiting and training from the pool of young NZ medical graduates.

Previous studies have also reached this conclusion<sup>12</sup>. The difficulty lies in finding the best way to encourage medical students to take up rural general practice, especially given the current negative media attention surrounding it<sup>12,13</sup>. Looking at

international literature can lend some insight into how we might achieve this. A systematic review of 21 studies revealed that policies for staffing rural areas with GPs should be aimed firstly at selecting the right students and secondly, providing in their formal training the curriculum and experiences needed to equip them for rural practice<sup>15</sup>.

As to the first, selecting students from rural backgrounds has been shown to be a significant factor in producing rural GPs<sup>16</sup>. Indeed, of the Physician Shortage Area Program (PSAP) of Jefferson Medical College, the admissions component is one of the most important reasons for its success<sup>17</sup>. Secondly, regarding training programs, the need for exposure to rural medicine in undergraduate classes is important<sup>18</sup>. Developing programs with emphasis on rural areas, like the PSAP, has the potential to aid recruitment and retention. The PSAP, for example, was found to yield eight times as many rural general practitioners with long term retention success of at least eleven to sixteen years<sup>17</sup>. Clearly, there is some value in placing students in rural settings during their undergraduate years.

### **Summary and recommendations**

Our key findings are centred on the need to know the rural general practice workforce better and develop more sophisticated, better targeted recruitment and retention plans. These should be context-sensitive, exchanging a simplistic for a tailored approach.

From our study, it was apparent that retention and recruitment efforts will be more successful if targeted to specific sub groups of rural GPs. We found a bimodal distribution among respondents; those who train in rural general practice, enjoy the work and stay, and those who train and leave either because of the nature of the work or the working conditions.

Targeting retention efforts at the latter group could well make a significant difference. Firstly, what is it about this group that results in poor retention? Are they under prepared? Do they simply represent one end of the Bell curve of any profession? Do they feel trapped in general practice and resent it? Certainly experiences and attitude impact on intention to stay. Making retention efforts individualised rather than blanket-design would go some way for some people towards improving retention. Before this can be successful, the make-up to the GP population needs to be further investigated.

The current review of the RRS will change the balance regarding which rural GPs qualify for retention and recruitment funding. However, the chief problems remain, in that funding is too broad and is bound up in tedious application processes. It is likely that the problems of non-transparency, poorly focussed funding and bureaucracy under the current system will remain. Practices owned by DHBs enjoy a short cut approach to funding. Perhaps this could be investigated further.

Small numbers in the context of rural general practice are significant. The absence of a single rural GP may affect an entire rural community with significant impact on access to health care. This implies that better targeted efforts will make a significant difference to rural communities. Rural immersion programmes and the selection of

rural students for medical school have been shown internationally to improve rates of retention and recruitment; current programmes should be expanded and developed in order to maximise the impact they have.

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