



## New Zealand Rural General Practitioners 1999 Survey Part 4: analysis of specific sub-groups

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### Abstract

**Aims** To compare and contrast the demographics, working characteristics, and computer usage of 5 sub-groups of rural general practitioners (GPs) using data from the New Zealand Rural GPs 1999 Survey.

**Methods** Anonymous postal questionnaires were mailed out to 559 rural and semi-rural GPs in November 1999.

**Results** Of the 417 completed questionnaires returned (response rate = 75%), 338 were from GPs scoring  $\geq 35$  points on the Rural Ranking Scale (RRS), and these 'rural' GPs formed the study group. Analysis of sub-groups showed that a significantly higher percentage of younger doctors (<45 years old) were vocationally trained, doing accreditation, working in group practices, or working part-time. A higher percentage of the more isolated rural GPs (RRS  $\geq 55$ ) were working on the South Island, in solo practice, in areas with 3 or less GPs, working as rural hospital doctors, or doing intra-partum obstetrics.

Of the vocationally trained GPs, a higher percentage expected to be in their current practice in 3 years, were doing accreditation or re-accreditation, were members of an Independent Practitioners' Association (IPA), or had email at the surgery. Compared to overseas graduates, New Zealand graduates were more likely to have been working in NZ rural general practice for  $\geq 10$  years.

**Conclusions** The trend of younger doctors wanting to work part-time, in group practices, and not own their practice, has significant implications for the rural workforce shortage—especially as older, predominantly male rural GPs retire. This may be especially problematic for the South Island, where rural isolation appears to be a greater problem.

Rural general practice in New Zealand (NZ) is facing increasing difficulties with recruitment and retention<sup>1</sup> and the rural GPs in the current workforce are stressed.<sup>2,3</sup> The NZ Rural GPs 1999 Survey<sup>4,5</sup> has confirmed as a key issue the significant workforce shortage, which in turn leads to heavy workloads, frequent oncall commitments, and lack of locums to enable time off for professional development and holidays.

Solutions to these problems have been suggested.<sup>3,5,6</sup> Female rural GPs, while sharing many of the same concerns as their male counterparts, have additional issues (e.g. security while oncall, combining family and work).<sup>7</sup> The purpose of this paper is to examine 5 other sub-groups within the rural GP workforce: to compare and contrast their demographics, working characteristics and computer usage, using data from the New Zealand Rural GPs 1999 Survey. The 5 characteristics chosen for sub-group

analysis were: age, rurality (Rural Ranking Scale score), vocational training, country of graduation, and geographic (island) location.

## Methods

Anonymous postal questionnaires were mailed out in November 1999 to 559 GPs identified as rural or semi-rural from a database compiled by one of the authors (RJ). Non-responders were initially posted a reminder card in December, a reminder questionnaire in January 2000, and then had a further reminder (by telephone or facsimile) 1 month later. Inclusion criteria comprised a rural ranking scale (RRS) score of equal or greater than 35 (maximum score = 100 points) and currently working as a GP in New Zealand. A detailed description of methods is presented elsewhere.<sup>4</sup>

Quantitative data were entered into an Access database. Epi Info software was used for analysis. Chi-squared tests were carried out to detect statistically significant differences in demographic and practising characteristics between the sub-groups of rural GPs. The 5 key characteristics chosen for sub-group analysis were: age in years (<45; ≥45), rurality score measured by the RRS (≤50; ≥55), vocationally training, country of graduation and Island location (North Island or South Island).

## Results

Questionnaires were sent to a total of 559 rural and semi-rural GPs, of which 417 were returned completed for an overall response rate of 75%. Of the 417 completed questionnaires, 74 had RRS scores of less than 35 points, and 5 had not completed the RRS, which provided 338 appropriately completed questionnaires for analysis.

Table 1 summarises the data for each of the sub-groups studied.

### Age

Younger doctors (<45 years) were more likely to be vocationally trained, doing accreditation, and using full electronic medical records than those 45 years or older. Not unexpectedly, younger doctors were less likely to have been 10 or more years in NZ rural general practice. They were also less likely to work in a practice by themselves, work fulltime, own their own practice, or be members of either the Rural GP Network or New Zealand Medical Association (NZMA).

### Rural Ranking Score

GPs working in less isolated rural areas (RRS score ≤50) were more likely to be on the North Island and belong to an IPA. They were less likely to work in a practice by themselves, have 3 or less GPs in their locality, work as a rural hospital doctor, do intrapartum obstetrics, or have email at the surgery.

### Vocational Training

Rural GPs who have completed a general practice vocational training programme (either in NZ or abroad) were more likely to be younger, expect to be in their current practice in 3 years, be doing either accreditation or reaccreditation, be members of an IPA, and have email at the surgery. They were less likely to be working in a practice by themselves.

### NZ medical graduate

The only difference between rural GPs who graduated from NZ medical schools, as compared to overseas graduates, was that NZ graduates were more likely to have been in NZ rural general practice for longer than 10 years.

**Table 1. Comparison of rural general practitioners by age, rurality (Rural Ranking Scale [RRS] score), vocational training, country of graduation and Island**

	AGE (years)		RRS score		Voc. Trained		NZ graduate		Island	
	<45	≥45	≤50	≥55	Yes	No	Yes	No	North	South
<i>N</i> =	211	123	199	135	197	135	155	177	195	138
AGE: <45 years	-	-	64%	61%	<b>72%</b> §	<b>50%</b>	64%	63%	62%	65%
RRS ≤50	61%	58%	-	-	61%	57%	61%	58%	<b>68%</b> †	<b>51%</b>
GP Vocationally Trained	<b>68%</b> §	<b>45%</b>	61%	57%	-	-	61%	58%	55%	65%
NZ graduate	48%	46%	48%	45%	48%	45%	-	-	45%	51%
North Island	57%	60%	<b>65%</b> †	<b>48%</b>	55%	65%	55%	62%	-	-
<b><u>WORK CHARACTERISTICS</u></b>										
Solo practice (works alone)	<b>19%</b> †	<b>34%</b>	<b>20%</b> *	<b>32%</b>	<b>20%</b> *	<b>33%</b>	21%	28%	25%	24%
≤3 GPs in rural area	36%	30%	<b>19%</b> §	<b>56%</b>	31%	39%	30%	37%	<b>25%</b> §	<b>46%</b>
<10 years in NZ rural practice	<b>71%</b> §	<b>21%</b>	54%	50%	54%	49%	<b>38%</b> §	<b>64%</b>	53%	50%
Full-time (10/10ths)	<b>71%</b> †	<b>87%</b>	74%	81%	77%	77%	75%	78%	78%	75%
Work at rural hospital	39%	43%	<b>36%</b> *	<b>47%</b>	42%	39%	37%	43%	<b>32%</b> †	<b>53%</b>
Intrapartum obstetrics	20%	24%	<b>19%</b> †	<b>27%</b>	25%	18%	25%	19%	21%	22%

Own their practice	<b>73%</b> *	<b>85%</b>	79%	75%	80%	74%	78%	77%	77%	80%
Be in current practice in 3 years	72%	76%	77%	68%	<b>79%</b> *	<b>65%</b>	76%	71%	72%	77%
<b><u>MEMBERSHIPS</u></b>										
RNZCGP <sup>¥</sup> : doing accreditation	<b>37%</b> §	<b>8%</b>	30%	20%	<b>30%</b> §	<b>20%</b>	28%	24%	23%	30%
RNZCGP: doing MOPS <sup>#</sup>	<b>37%</b> §	<b>60%</b>	47%	43%	<b>51%</b> §	<b>37%</b>	47%	43%	50%	40%
Rural GP Network	<b>45%</b> *	<b>58%</b>	49%	53%	54%	44%	55%	46%	46%	57%
NZ Medical Association	<b>49%</b> §	<b>73%</b>	60%	55%	54%	63%	62%	53%	56%	60%
IPA <sup>^</sup> member (or similar group)	74%	77%	<b>81%</b> †	<b>65%</b>	<b>81%</b> †	<b>66%</b>	79%	72%	71%	81%
<b><u>COMPUTER USAGE</u></b>										
Email at home	70%	76%	73%	72%	71%	74%	67%	77%	74%	69%
Email at surgery	48%	45%	<b>42%</b> *	<b>54%</b>	<b>52%</b> *	<b>38%</b>	44%	49%	45%	50%
Electronic medical records	<b>47%</b> *	<b>34%</b>	42%	42%	41%	43%	44%	40%	40%	46%

<sup>¥</sup>Royal NZ College of GPs

<sup>#</sup>Maintenance of Professional Standards (reaccreditation)

<sup>^</sup>Independent Practitioners' Association

\* = **p<0.05**

† = **p<0.01**

§ = **p<0.001**

## Island

North Island rural GPs were less likely to have a higher RRS score ( $\geq 55$ ), work in a locality with 3 or less GPs, or work as a rural hospital doctor.

## Discussion

This is the first study to compare and contrast various sub-groups of NZ rural GPs. It highlights a number of challenges facing rural general practice including the recruitment of young doctors into an 'ageing' workforce and the contrasting rural environments of the North and South Islands. While the survey results were collected 4 years ago (December 1999 to March 2000), the stability of rural healthcare continues to be fragile with workforce shortages still common in many localities.

Some of the differences observed between younger ( $< 45$  years) and older ( $\geq 45$  years) rural GPs were expected. The NZ general practice vocational training programme was only established in 1977,<sup>8</sup> so was not an option for the older GPs.

Likewise, younger doctors are more likely to be involved with accreditation and as such, would be less likely to be doing re-accreditation. While more younger rural GPs are opting to work in group practices (IE. not solo), it is heartening to see a similar percentage, as compared to the older rural GPs, working in more isolated localities (RRS  $\geq 55$ ). The greater number of younger doctors working part-time, is partly explained by the higher percentage of women in this group.<sup>7</sup>

It is also self-evident that the more isolated rural GPs (RRS score  $\geq 55$ ) in smaller centres of population are more likely to have 3 or less GPs in the area, and thus to be more likely to work in solo practice. Likewise, New Zealand rural hospitals are located at a distance from urban centres,<sup>9</sup> so the more isolated rural GPs are more likely to work as rural hospital doctors or be required for intra-partum obstetrics.

While the majority of rural GPs and rural hospitals are located on the more populated North Island,<sup>9</sup> it is interesting to note that a higher percentage of South Island rural GPs (83%) worked as rural hospital doctors, as compared to only 63% of North Island rural GPs. The analysis does raise issues about the differing rural environments in the South and North Islands.

Of the 199 rural GPs with lower RRS scores of  $\leq 50$ , the majority (65%) were located on the North Island. The South Island's few main urban centres are mainly located on its east coast, with large rural areas covering much of the rest of the island.

In contrast, the North Island has more urban centres, which are more uniformly distributed, thereby reducing the geographic isolation of its rural localities. While it may be an oversimplification to state that 'distance to health services is a greater issue for the South Island, while poor socioeconomic status and Maori health are greater health issues for the rural North Island'<sup>10</sup> there is a need to recognise both the commonality and differences between rural general practice experiences in differing areas of NZ.

It is clear that different geography, population characteristics, health infrastructure and patterns of current and future regional rural development will have major impacts on the healthcare of rural people on both the North and South Islands.

Most rural GPs in NZ graduated from an overseas medical school. While it is unclear to what extent this will affect long-term sustainability of rural retention, it is heartening to see that overseas graduates are equally prepared to work in more isolated rural practices.

The observed trend of younger doctors choosing to work part-time, in group practices, and not owning their practice, has significant implications for the rural workforce shortage. As the older, predominantly male, rural GP workforce retires, it will require a greater number of younger, increasingly part-time (and female), rural GPs to replace them. This may be especially problematic for the South Island, where rural isolation appears to be a greater problem.

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