2015 WORKFORCE SURVEY

The Royal New Zealand
College of General Practitioners
Te Whare Tohu Rata o Aotearoa

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NEW ZEALAND'S GENERAL PRACTICE WORKFORCE, ITS CHANGING DEMOGRAPHICS AND RETIREMENT INTENTIONS, AND THE RISE OF WORKFORCE GAPS AND SHORTAGES

INTRODUCTION

From the President and Chief Executive

Last year, we released a baseline snapshot of the general practice workforce in New Zealand.

Its objective was to create an evidence base that could be used in conversations to ensure all New Zealanders will have a working GP in their community in a decade's time.

It painted the first comprehensive view in several years of our general practitioners: their age, work hours, urban and rural distribution, income, and retirement intentions.

The stand-out finding last year was that 36 percent of GPs intended to retire by 2024.

This year, the survey finds that 41 percent now intend to retire by 2025.

So of the 4500 members of the Royal New Zealand College of General Practitioners' membership, 1850 will be gone by 2025.

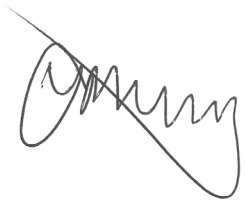
It is a sobering forecast, and we are committed to doing all we can to slow the attrition by training additional GPs to compensate for those who retire and encouraging older GPs to remain in the workforce.

This year's survey also looked more deeply into the difference reported in 2014 between male and female respondents' income, even when working similar hours and in similar employment arrangements.

This year, after asking some additional questions, we found a statistically significant difference in income between genders after factoring in all available variables.

There are a number of possible explanations for this, which we will explore in future surveys to attempt to find the root cause of these differences.

We would like to thank the more than 2500 GPs who responded to the 2015 survey. Without your contributions we would not have the data to advocate on behalf of you and general practice.



Dr Tim Malloy

President

Helen Morgan-Banda

Chief Executive

BACKGROUND

New Zealand requires appropriate general practice (GP) workforce levels to ensure adequate service provision, and to enable safe, high quality primary health care.

In recent years, the results of the Medical Council of New Zealand's (Medical Council) annual workforce surveys have shown that the GP workforce is ageing and is also shrinking in size relative to the general population.

While the Medical Council's data provides valuable and authoritative information on the whole medical workforce, it does not provide all the information required to have a full understanding of the GP workforce.

The Royal New Zealand College of General Practitioners' 2015 workforce survey provides more comprehensive information including GPs' retirement intentions, rurality, income, employment status and provides the College, its members, government and other sector stakeholders with a strong knowledge base that will help inform future decisions about general practice in New Zealand.

It provides data about workforce gaps and shortages, as well as information that can help inform decisions on how to address those gaps.

DISCUSSION

The 2015 survey aimed both to investigate new areas, and also to help us build on existing knowledge.

Integration

One area we investigated for the first time was the level of integration that exists between GPs and other health providers.

We found that the majority (67%) of respondents stated that they worked with health care providers in addition to other doctors or registered and enrolled nurses. Respondents from larger practices and rural practices were more likely to report that they "worked with other providers", as were younger GPs, those who graduated more recently and GPEP 1 teachers.

Integration was most frequently reported with pharmacists, with 31% (603) of the 1965 respondents who provided information on whether they "worked with other providers" reporting that they "worked with" pharmacists in some way.

Our survey also probed the degree of integration that existed with different professional groups. We found the highest level of integration was usually found when GPs worked with nurse practitioners, practice assistants, physician assistants and social workers.

Recommending general practice as a career

A new question looked at whether GPs would recommend general practice as a career. We found that most GPs were fairly enthusiastic about general practice as a career choice, with female GPs being particularly positive.

We also looked at GP work in special interest areas for the first time. We found that 41% of respondents undertook clinical work in a special interest area, with a wide range of interests listed. The most common special interests were in minor surgery (13% of all respondents), palliative care (6%) and youth health (4%).

The size of the general practice workforce

The results of the College's survey also confirmed and reinforced some of our existing knowledge. We already had an awareness that the size of the general practice workforce has not increased sufficiently to meet population demands, and in fact the number of full-time equivalent (FTE) GPs per head of population has been decreasing. In 1999 there were 84 FTE GPs per 100,000 New Zealanders. This had fallen to 74 per 100,000 in 2012[1]. By comparison, the ratio in Australia in 2012 was 111.8 FTE GPs per 100,000[2].

1 Data from the annual Medical Council workforce surveys.
2 Medical Workforce report 2012. Australian Institute of Health and Welfare.

New Zealand has a shortage of general practitioners. In addition to the low and falling FTE GP to population ratio, further evidence can be seen in the existence of waiting lists for patients wishing to enrol with a practice, and practices with closed books. It is known that some regions within New Zealand struggle to attract GPs and in these locations vacancies remain unfilled for extended periods. The College's survey continues to provide information and analysis on this situation.

International medical graduates

The survey revealed that 40.4% of respondents were international medical graduates (IMGs) of which UK graduates were the largest group (45%). Rural areas were particularly dependent on IMGs with 46% of respondents from rural practices being IMGs compared to only 37% of urban respondents. IMGs who gained their primary medical qualification in the United Kingdom or South Africa comprised 52% and 14% respectively of all rural IMGs.

Age

The survey also reminds us that the GP workforce is ageing, with the average male GP aged 53 years, and there are considerably fewer GPs in the cohort aged 35-50 than in the cohort aged 50-65.

The figures around age support those already published by the Medical Council. Their survey results demonstrate that in 2012, 54.8% of GPs were aged 50 or over. Some of the Medical Council's historical data provides a telling comparison. Data from 1998 showed that only 25.3% of GPs were aged 50 or over.

The ageing of the GP workforce continues to be of particular concern when considered alongside the low levels of GP recruitment in recent years and the growth in the wider population. Additionally the survey shows us that GPs also tend to work fewer hours than they did in the past. Over half of GPs now work part-time. These factors all potentially contribute to lowering the availability of GP services.

Increasing demand

We also know that future demand for primary care is going to increase as a result of the increase in chronic disease due to New Zealand's population ageing, unhealthy lifestyle choices, a desire to shift services from secondary to primary care, and increasing patient expectations.

It is possible that the impact of the increase in demand may be partially, but not completely, mitigated by other factors including a move to greater self-management by patients, better use of technology, and a shift of some services to other practitioners, such as nurses.

Overall, however, the picture is one of increasing demand for GP services as part of the broader general practice team.

Responding to concerns

The College, and the sector as a whole, is responding to these concerns. With funding assistance from Health Workforce New Zealand (HWNZ), the College has been able to increase the number of training places available to new GPs. In 2007, 69 new trainees entered the general practice training programme – in 2015/16 there will be 187.

The College has been working with HWNZ to ensure that general practice is seen as an attractive career option for new graduates. General practice was a popular career choice among medical school graduates in the 1980s, when most of those now aged in their 50s graduated. Since then, there has been a marked decline in the proportion of medical school graduates choosing to enter general practice, with the majority of graduates instead choosing secondary care specialties. Between 1998 and 2012, the New Zealand population increased by 17%[3]. During that same period, Medical Council workforce survey results reveal that GP numbers increased by only 13.8% (435), while hospital specialist numbers increased by 68.6% (1739).

The large cohort of GPs currently in the 50-65 age bracket has considerable skill, knowledge and expertise. In order to appropriately train sufficient new GPs, there is going to be a significant reliance on this cohort as teachers, mentors and role-models.

In 2015 the College published a practical resource on *General practice from midlife to retirement* with the aim of helping to ensure that this cohort is supported and encouraged to continue in the workforce for as long as they are willing and able. Further work in this important space is needed.

The College also needs to look at ways to make teaching more attractive to more GPs. Currently 34% of GPs have some involvement in teaching, and more needs to be done in order to help the new generation of registrars to develop into competent and confident GPs.

The changing face of general practice

The survey also sends us some clear messages about the changing face of general practice. While older GPs are predominantly male, younger GPs are predominantly female. These younger female GPs are more likely to work part-time and as employees, and it is unclear whether they will continue working part-time in future years or look to increase their hours either as employees or practice owners.

While both Māori and Pasifika doctors continue to be underrepresented among respondents, the long-term trend is upwards. However, the GP population is still a long way from being representative of the general population.

In the regions

The survey reveals significant regional differences in New Zealand. Some regions contain more of the older GPs and more GPs who intend to retire in the near future. There is also considerable variation in terms of age, gender and hours worked across the regions. This survey's information will be of considerable interest to planners in those regions.

3 New Zealand Census 2013. Statistics New Zealand.

GPs' income

The report contains new information about GP income. Research in other parts of the world tells us that secondary care specialists tend to earn more than GPs, and this may be a factor in the major shift in medical graduate career preferences over recent years[4].

While income should not be the most significant factor in choosing a career in medicine, or in general practice, the evidence suggests that expected future earnings do influence specialty choice[5]. It is therefore important to have accurate information on income both to present to policy makers and to medical graduates.

This year we undertook a specialised analysis to further explore the finding from the 2014 survey that female GPs earned less per year than their male colleagues with similar employment status and working similar hours per week.

This new analysis found that although allowing for differences in hours worked, employment status and age did reduce the gender difference in income, the difference remained statistically significant.

When responses to the question asking whether parental leave had been taken in the past 10 years were also included in the analysis, the gender difference in income reduced further but remained statistically significant.

It is possible that as responses to this question can be expected to correlate closely with whether or not the GP has children under 10 years of age, that having children may be what is correlated with lower income rather than the taking of parental leave in itself. Further research is needed to clarify this.

The techniques we used in 2015 built on and improved those we used in the process of conducting the 2014 survey. In future years the College will continue to improve the structure and content of the survey, to make it easier for GPs to answer and to ensure that we obtain information more efficiently.

Some questions may be removed from future surveys and others may be added in to provide new information and to better inform the College about the areas of concern identified in this survey.

4 Dr Anthony Scott. Getting the balance right between generalism and specialisation: Does remuneration matter? *Australian Family Physician*. Vol 43;4. April 2014. Pages 229-232.
5 Ibid.

DATA COLLECTION AND RESPONSE RATE

The survey was conducted in March 2015 and April 2015. A link to the electronic survey was emailed to 4576 fellows, members and associates of the College and the Division of Rural Hospital Medicine.

The College database, which includes the vast majority of doctors working in New Zealand general practice, was used to identify and contact survey recipients. In New Zealand, doctors are legally able to work in general practice without the additional training required for vocational (specialist) registration, and these non-vocationally registered doctors are not usually included in the College database.

The number and proportion of those who have not undertaken or completed vocational training in general practice is decreasing. As at March 2015, there were 640 non-specialists practising in primary care, 14% of the workforce[6]. We received only 33 responses from doctors currently working in general practice who indicated that they were not vocationally registered or training towards vocational registration in the scope of general practice. Hence the results of the survey are not able to be generalised to this group.

We received 2490 responses of which four were not valid, leaving 2486 usable responses and giving a response rate of 54.3%. This included 67 incomplete responses. These were included in the analysis as the majority were missing only the responses to some questions.

The 27 respondents who worked in rural hospital medicine but not in general practice were not included in the analysis completed for this report, and their responses will be considered separately.

Survey recipients included doctors who are retired, currently out of the workforce, working in other careers, or working overseas. Unless otherwise specified, the data in this report refers to the 2228 respondents who stated that they were currently working in New Zealand in general practice. These doctors made up 90% of all respondents.

A comparison of the age profile of respondents with the age profile of those on the College database at 1 April 2015 (table 1) and suggests minor variations in the response rate among the various age cohorts. There is a slight overrepresentation of those aged 34 years or less and those aged 45-54 years and a slight underrepresentation of those aged 65 years or over.

6 MCNZ registration data as at 16 March 2015.

Table 1: Comparison of the age profile of survey recipients and respondents

	Recipients	Responses
<= 34y	10%	12%
35-44y	19%	18%
45-54y	30%	31%
55-64y	30%	30%
>= 65	11%	9%

Female respondents were slightly over represented among respondents at 47% of those emailed the survey but 53% of respondents.

All data in this report is presented un-weighted. Not all questions were compulsory and the survey was structured so that respondents were not asked questions that were not relevant to them. The totals in the tables differ according to the number of doctors who responded to the relevant question.

DEMOGRAPHICS

THE AGE AND GENDER PROFILES OF NEW ZEALAND'S GENERAL PRACTITIONERS ARE KNOWN TO BE UNUSUAL

RESPONDENT DEMOGRAPHICS

Age and gender

The age and the gender profiles of New Zealand's GP workforce are known to be unusual.

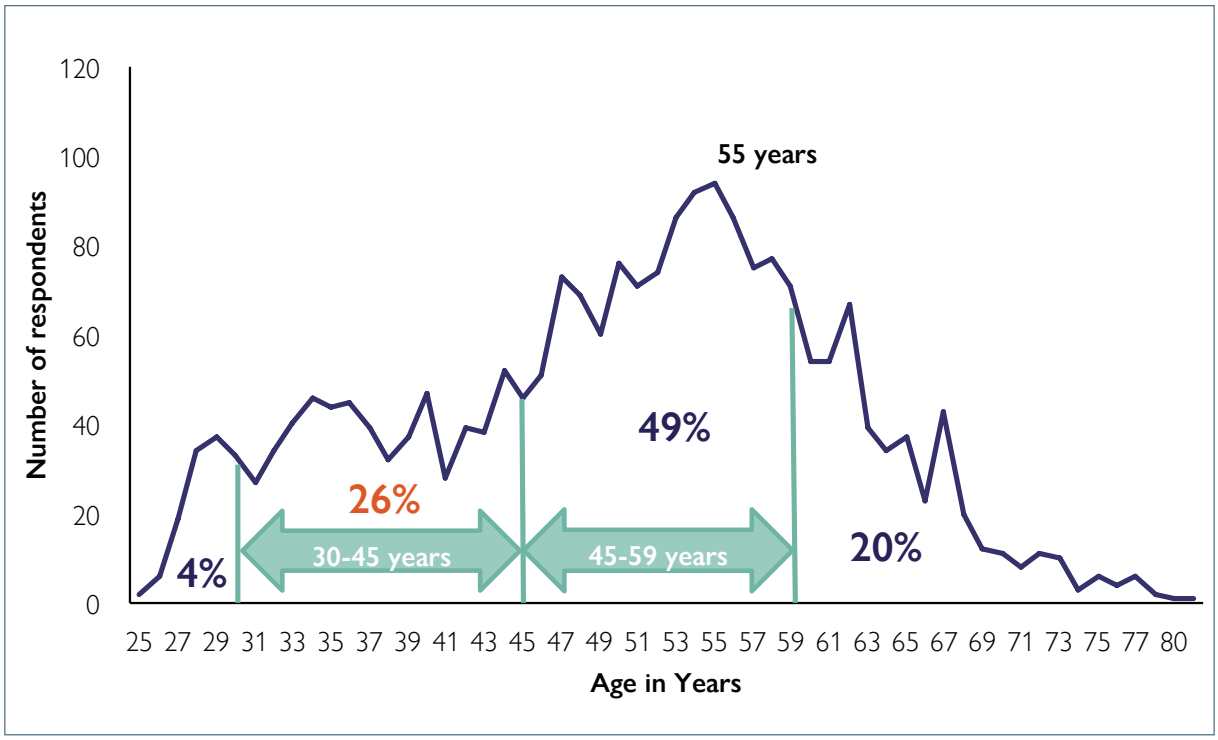
There is a concentration of GPs aged in their 50s but much smaller numbers in their 30s and early 40s. Female GPs tend to be younger and male GPs older. The survey results are consistent with this.

As illustrated by Figure 1, the 15 year interval from 45-59 years contains 49.4% of all working respondents whereas only 26.1% of respondents were aged within the fifteen year interval of 30-44 years.

Significantly 20.1% of respondents were aged 60 or over, an increase on the 18% seen in the 2014 survey. The remaining 4.4% of respondents were aged less than 30 years.

The peak containing the largest number of respondents is now at 55 years, having increased by one year since the previous year's survey. In total, 56.1% of working respondents were aged 50 years and over, compared to 54.8% in 2014.

Figure 1: Age profile of respondents



To provide some context, among nurses (another workforce where aging is causing concern), the proportion aged 50 years and over in 2013 was only 46.2%.[7] The average of age of respondents remained at 50 years.

The Medical Council of New Zealand (Medical Council) undertakes an annual survey of all doctors.

In 2013, its survey revealed 57% of GPs were aged 50 or over[8]. Some of the Medical Council's historical data also provides a telling comparison. In 1998 only 25.3% of GPs were aged 50 or over and the largest number of GPs were aged 39[9].

Over recent years the number of younger GPs has started to increase slightly, and this has altered the shape of the age profile making the very low numbers currently in their late 30s and early 40s more apparent. As the GPs in the older bulge retire, this will unmask the insufficient numbers, "the missing GPs" in the younger age cohort that follows it.

General practice was a popular career choice among medical school graduates in the 1980s when most of those doctors now in their 50s graduated. Since then, there has been a marked decline in the proportion of medical school graduates choosing to enter general practice, with the majority of graduates choosing secondary care specialties instead. Between 1999 and 2012, the New Zealand population increased by 16%. During that same period, Medical Council surveys reveal that GP numbers increased by only 12% (394), while hospital specialist numbers increased by 62% (1628).

The overall gender balance among respondents approximated that in the New Zealand population. Females made up slightly more than half (53%) of all survey respondents, a slight increase on the 2014 survey proportion of 52%. This is a slight overrepresentation of females in the survey sample. The average age of female respondents was 47 years, and male respondents 53 years. These were the same as in 2014.

By comparison the 2013 Medical Council survey[10] found that 46% of GPs were female.[11] Among all doctors, the Medical Council found that 42% were female.

The gender balance among GPs has not always been so close to reflecting that of the population.

In 1980, for example, only 13% of New Zealand GPs were female[12]. Figure 2 illustrates the effect that this increase in the number of females over time has had on the gender balance within successive age cohorts.

Respondents younger than 55 were more likely to be female, and those older than 55 were more likely to be male, with differences becoming even more noticeable at each end of the age spectrum, although sample sizes here are small.

7 Nursing Council of New Zealand. The New Zealand Nursing Workforce. A profile of Nurse Practitioners, Registered Nurses and Enrolled Nurses 2012-2013. http://www.nursingcouncil.org.nz/Publications/Reports

8 In the MCNZ workforce survey some GP registrars are counted in a separate registrar category to GPs and as registrars are usually young this will influence the results.

9 New Zealand Medical Manpower Statistics 1980. Department of Health Blue Book Series 1982.

10 MCNZ 2013 Workforce Survey data via Health workforce New Zealand

11 GP registrars are not included in this count and the majority of GP registrars are female.

12 New Zealand Medical Manpower Statistics 1980. Department of Health Blue Book Series 1982.

Figure 2: Gender of respondents by age

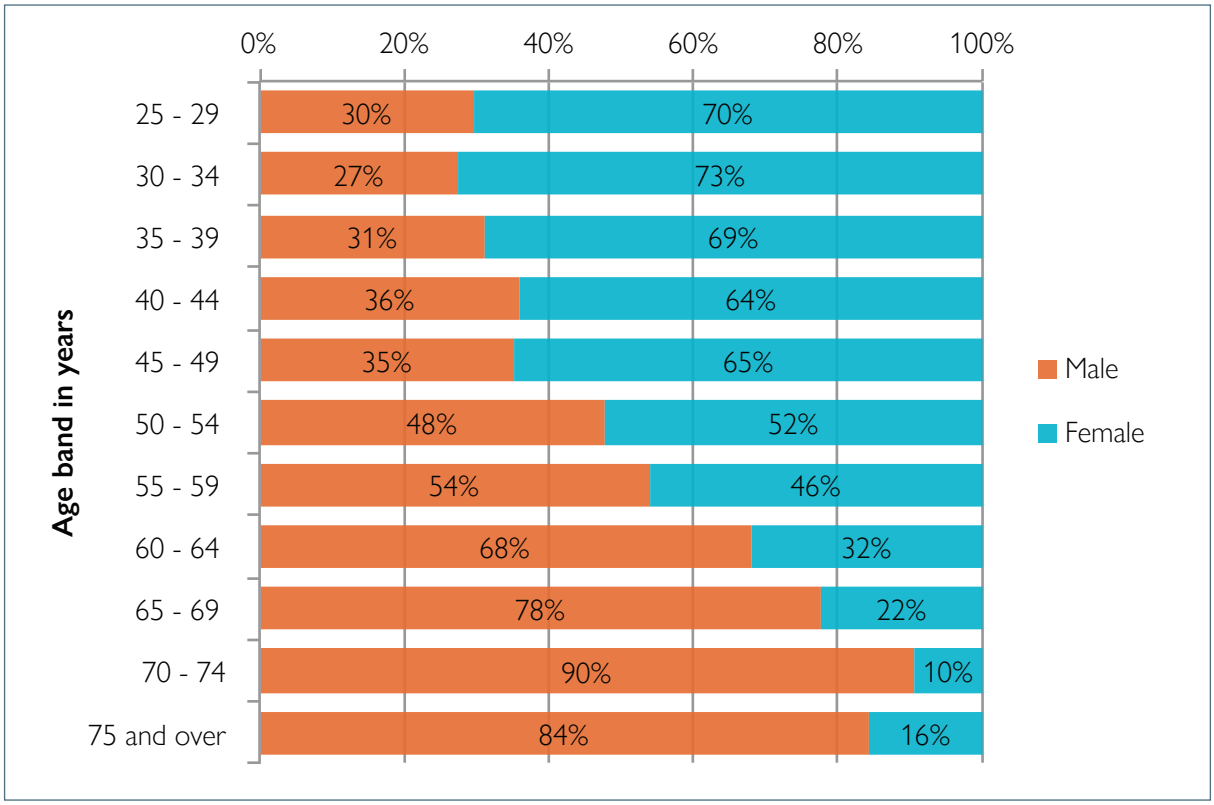


Table 2: Total number of survey respondents by age and gender

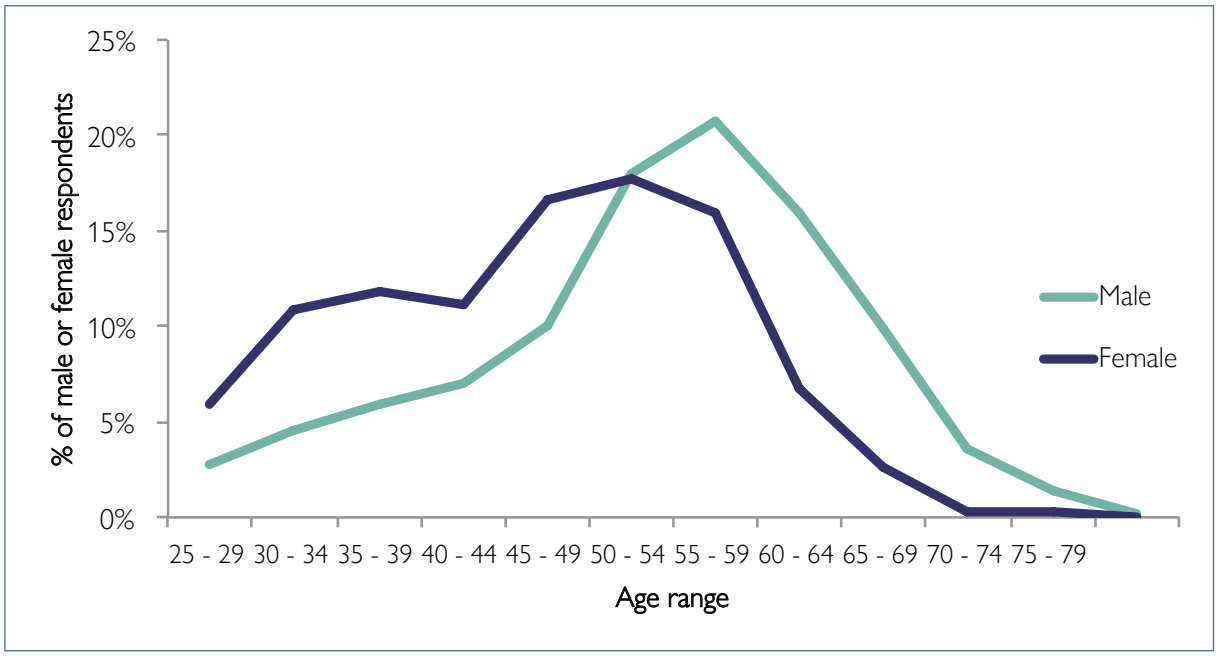
	Female		Male		Total
	#	%	#	%	#
25 - 29 years	69	3%	29	1%	98
30 - 34 years	127	6%	48	2%	175
35 - 39 years	137	6%	62	3%	199
40 - 44 years	130	6%	73	3%	203
45 - 49 years	193	9%	105	5%	298
50 - 54 years	206	9%	188	9%	394
55 - 59 years	186	8%	217	10%	403
60 - 64 years	79	4%	167	8%	246
65 - 69 years	30	1%	104	5%	134
70 - 74 years	4	0%	38	2%	42
75 - 79 years	3	0%	14	1%	17
> 80 years		0%	2	0%	2
Grand Total	**1164**	**53%**	**1047**	**47%**	**2211**

The average age of respondents was 50 years, with the average age of female respondents at 47 years, and male respondents at 53 years. This is similar to the findings in 2014.

It is an interesting reflection of the magnitude of the transformation from a predominantly male GP workforce to an increasingly female workforce, to note that proportionately there are more males still remaining in the 65-69 cohort (104) than in either the 30-34 year cohort (48) the 35-39 year cohort (62) or the 40-44 year cohort (73).

The difference in age profiles between male and female respondents can be seen in Figure 3.

Figure 3: Age profile by gender 2015



International medical graduates

International medical graduate (IMG) is the term that describes doctors who gained their primary medical qualification in a country other than where they are currently working.

A total of 901 survey respondents (40.4%) were IMGs.

This is a slight decrease on the 42% found in the 2014 College survey and lower than the findings of the Medical Council 2013 survey which reported that 44% of New Zealand GPs were IMGs. At 43% the proportion was also high amongst hospital specialists.

Overall the Medical Council 2013 survey found that 42% of New Zealand doctors were IMGs. New Zealand's reliance on IMGs is known to be a particular concern, with the OECD reporting that New Zealand had the highest proportion of migrant doctors among OECD countries.[13]

In the survey, respondents who stated that they were IMGs were asked to name the country where they gained their primary medical qualification.

The United Kingdom was the most commonly mentioned, with 45% of IMGs having gained their primary medical qualification there.

13 Health workforce and international migration: can New Zealand compete? Pascal Zurn and Jean-Christophe Dumont. OECD Health working paper 33 (2008).

Rural and urban respondents

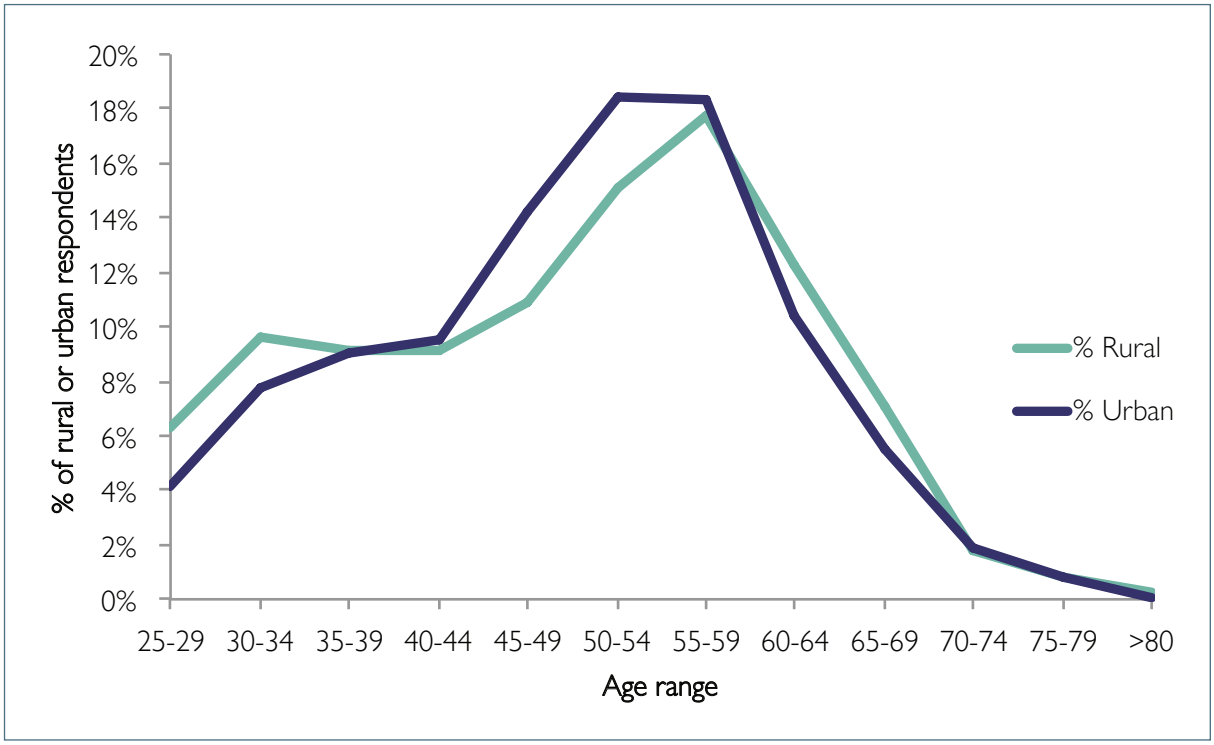
There is currently no universally accepted definition of rural general practice. In this survey we asked respondents to self-identify the practice where they worked as urban, rural or not clearly urban or rural.

Table 3: Respondents working in rural and urban practices

	Number	%
Rural	384	17%
Urban	1684	76%
Not clearly urban or rural	143	6%
Total	**2211**	**100%**

Table 3 reveals that 76% of respondents considered that they worked in an urban practice, 17% considered that they worked in a rural practice, and 6% considered their practice not clearly rural or urban. This is similar to the findings of the 2014 survey.

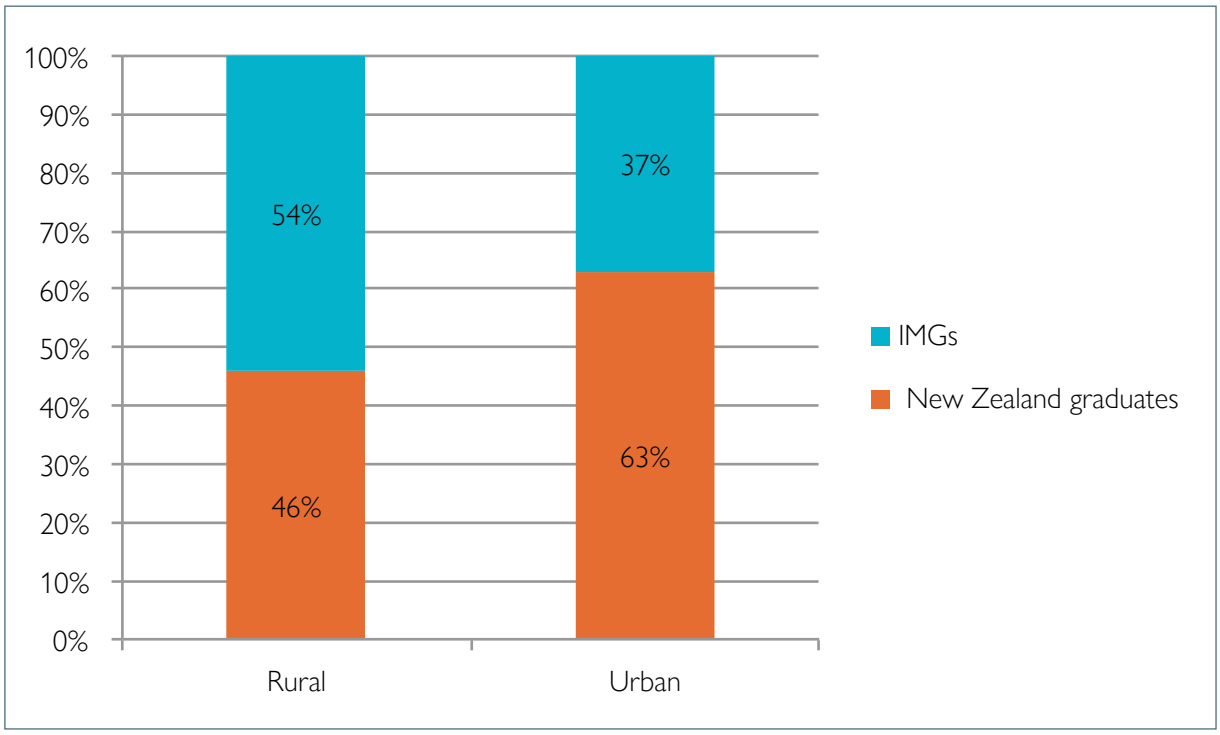
Figure 4: Age profiles of the rural and urban groups



Rural respondents tended to be slightly older, with 40% aged 55 or over compared with 37% of urban respondents. Respondents who classified their practices as rural were also more likely to be male (55%). By comparison 45% of urban respondents were male.

New Zealand's reliance on IMGs is particularly marked within the rural workforce. As shown in Figure 5, more than half (54%) of respondents from rural practices were IMGs. This compares with only 37% of respondents from urban practices.

Figure 5: 2015 Comparison of the proportion of IMGs among rural and urban respondents



IMGs who gained their primary medical qualification in the United Kingdom or South Africa comprise 52% and 14% respectively of all rural IMGs.

Ethnicity

The majority of respondents (83%) identified as European.[14]

Figure 6 compares the proportion of each ethnicity among survey respondents with the proportions found in the New Zealand population at the time of the 2013 census. European, Asian and Middle Eastern/Latin American/African (MELAA) ethnicities were over-represented among respondents compared with their frequency in the New Zealand population. Māori and Pacific Peoples were under-represented.

14 The majority of the apparent increase in the European percentage compared to the 2014 survey is due to the change in the method of calculation.

Figure 6: Comparison of respondents and NZ population by ethnicity

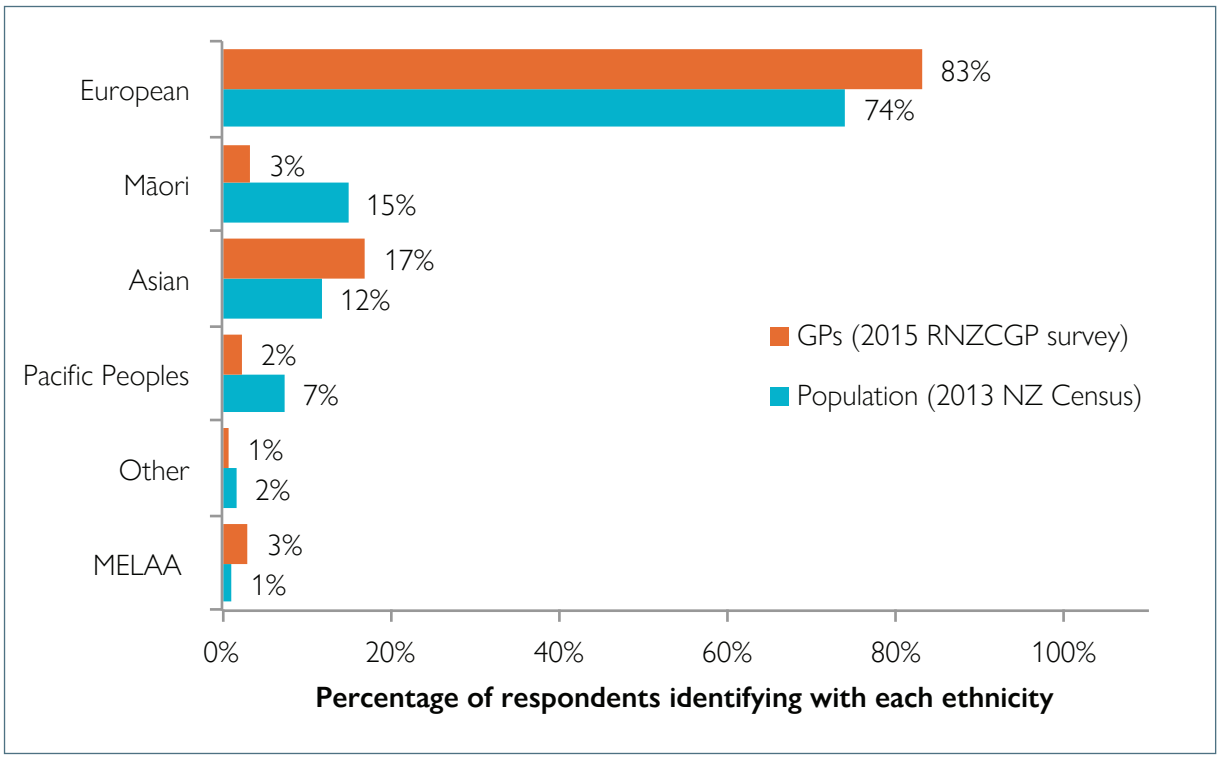
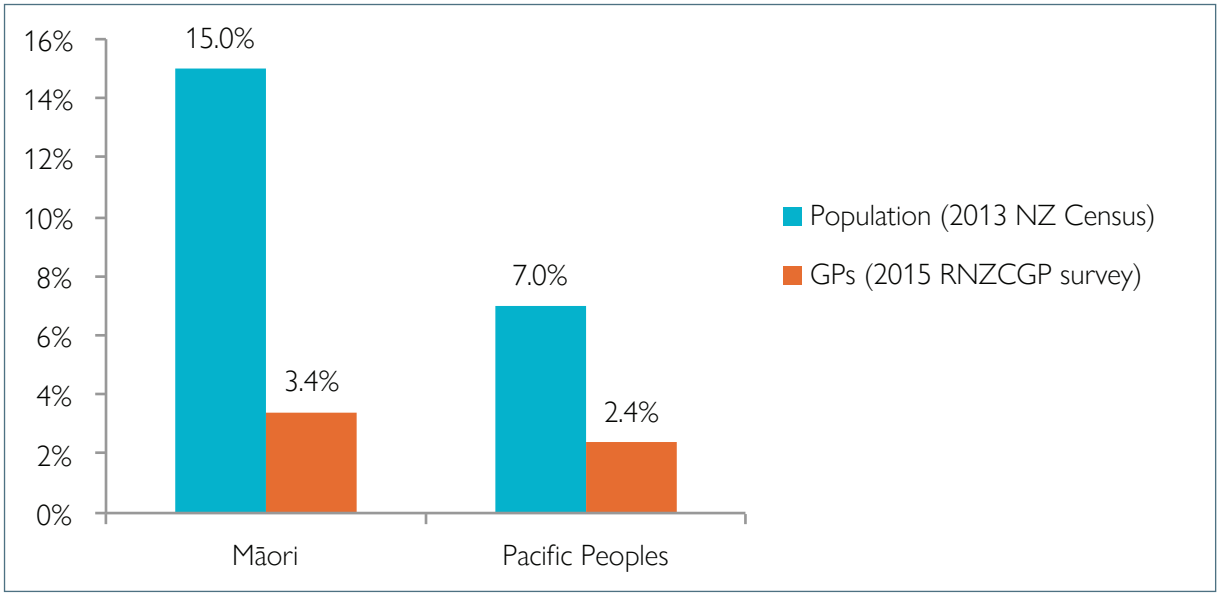


Figure 7: Comparison of population and respondents' ethnicity for Māori and Pacific



Only 76 respondents (3.4%) identified as Māori and 53 (2.4%) selected the Pacific Peoples category[15]. This was considerably lower than the proportions of these ethnicities in the New Zealand population as is illustrated by Figure 7. Census data reveals that 15% and 7% of the New Zealand population identify as Māori and Pacific respectively (Table 4).

15 The analysis of 2015 survey responses used a different technique to that in 2014 to calculate percentages so the results of the two years are not directly comparable

Table 4: Comparison of the ethnicity of respondents and the NZ population[16]

Ethnicity	Population (2013 NZ Census)	GPs (2015 RNZCGP survey)
European	74.0%	83.0%
Māori	14.9%	3.4%
Asian	11.8%	17.0%
Pacific Peoples	7.4%	2.4%
Other	1.7%	0.9%
MELAA	1.2%	3.1%
Total %	**111.0%**	**109.8%**[16]

Between our 2014 and 2015 surveys there was a small decrease in both the number and proportion of respondents identifying as Māori from 3.8% (85) in 2014 to 3.4% (76) in 2015.

The numbers identifying with the Pacific Peoples ethnicity category, however, increased from 33 to 53.

Numbers in both groups are unfortunately small and as a result can be expected to fluctuate from year to year depending on who responds to the survey. During 2015 the College introduced a Pacific Chapter and this may have encouraged Pacific GPs to respond to College initiatives such as the survey.

The College database records 149 members as Māori and 61 as Pacific People. However these figures are not directly comparable with survey results as only one ethnicity is recorded against each individual on the database and for 7% of members there is no ethnicity recorded on the database.

Although by no means sufficient there has been some increase in the participation of both Māori and Pacific People in the general practice workforce in recent years. Medical Council workforce data reveals that in 1998 2.2% of GPs (68) identified as Māori and 0.5% (17) as Pacific Peoples (Table 5). Over this time the proportion of GPs identifying as European has declined from 83% to 72%.

16 In both the RNZCGP survey and the Census respondents were able to record more than one ethnicity. As a consequence the sum of the percentages exceeds 100%

Table 5: Changes in the ethnicity of the GP workforce; Medical Council workforce survey data 1998 and 2013

Ethnicity	1998		2013	
	n	%	n	%
European	2631	83.3%	2654	72.1%
Other	127	4.0%	493	13.4%
Chinese	151	4.8%	171	4.6%
Indian	136	4.3%	171	4.6%
New Zealand Māori	68	2.2%	94	2.6%
Pacific Island	17	0.5%	63	1.7%
No Answer/refused	29	0.9%	33	0.9%
Total	**3159**	**100.0%**	**3679**	**100.0%**

As shown by Table 6, among younger respondents the proportion of both Māori and Pacific Peoples was considerably higher. The proportion of Māori among respondents aged 40 and above was only 2.2% but among younger respondents this rose to 7.8%.

For Pacific Peoples the proportions were 1.7% among respondents aged 40 and over and 5.1% among those under 40 years. This will reflect the younger age profile of both Māori and Pacific Peoples in the population but is also likely to reflect the impact of initiatives to encourage and support Māori and Pacific people to choose a career in medicine.

Given the higher proportion of both Māori and Pacific Peoples among younger respondents there will be an increase in the numbers of Māori and Pacific GPs over time. However to achieve proportions of Māori and Pacific GPs commensurate with current and increasing population proportions will require continuing initiatives to encourage and support Māori and Pacific medical students and registrars.

Recent initiatives to increase the proportion of Māori among of medical students are now taking effect. According to the University of Otago's head of communications Megan McPherson, "This year's final-year MBChB will be the last with the historically low proportion of Māori; the current fifth-year cohort is 40 strong or just over 16 per cent Māori"[17].

17 http://www.nzdoctor.co.nz/news/2015/september-2015/24/maori-doctors-a-growing-force-%E2%80%93-but-don%E2%80%99t-take-them-for-granted.aspx

Table 6: Comparison of the proportions of Māori and Pacific people among younger and older respondents

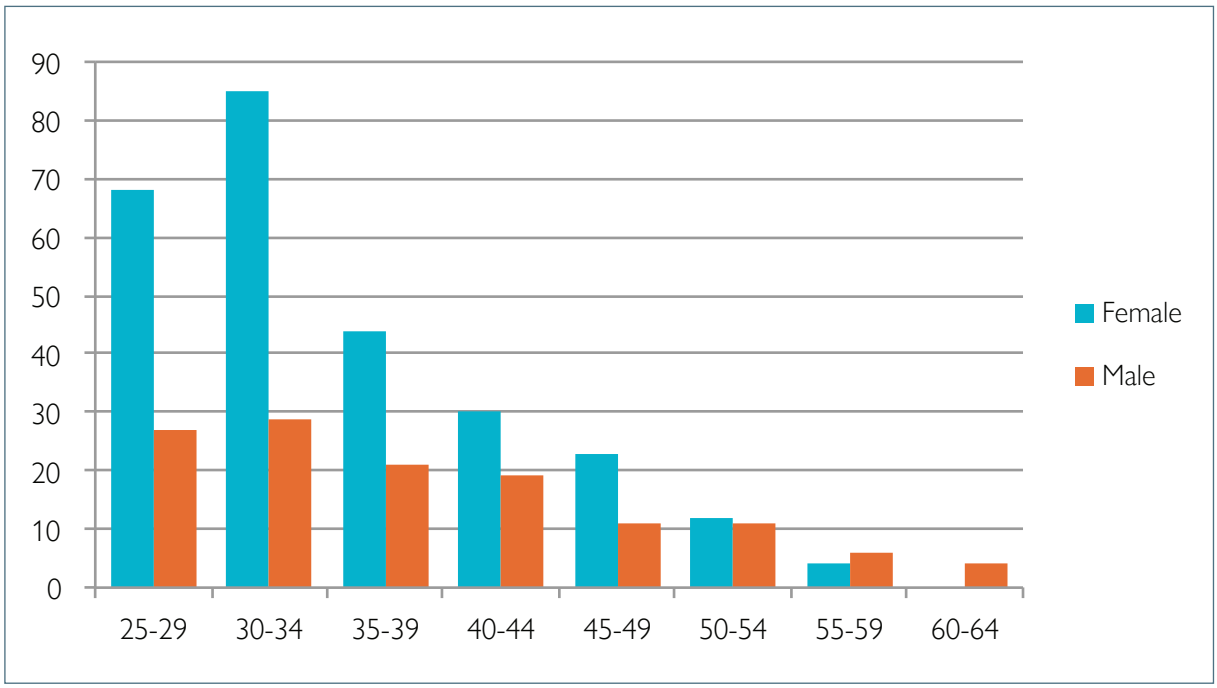
	Māori		Pacific		All
	#	%	#	%	#
Under 40 years	37	7.8%	24	5.1%	473
40 and above	39	2.2%	29	1.7%	1745
Total	**76**	**3.4%**	**53**	**2.4%**	**2218**

Māori and Pacific Peoples are underrepresented in the overall medical workforce as well as in the GP workforce. In 2013 only 2.7% of all doctors identified as Māori and 1.8% as Pacific.

GPEP Registrars

Figure 8 illustrates the age and gender of respondents who were in the GPEP training programme. It includes respondents in both the intensive GPEP1 year and respondents in GPEP years 2/3 and beyond. Sixty eight percent of respondents in GPEP were female.

Figure 8: Number of respondents in GPEP training programme by age and gender

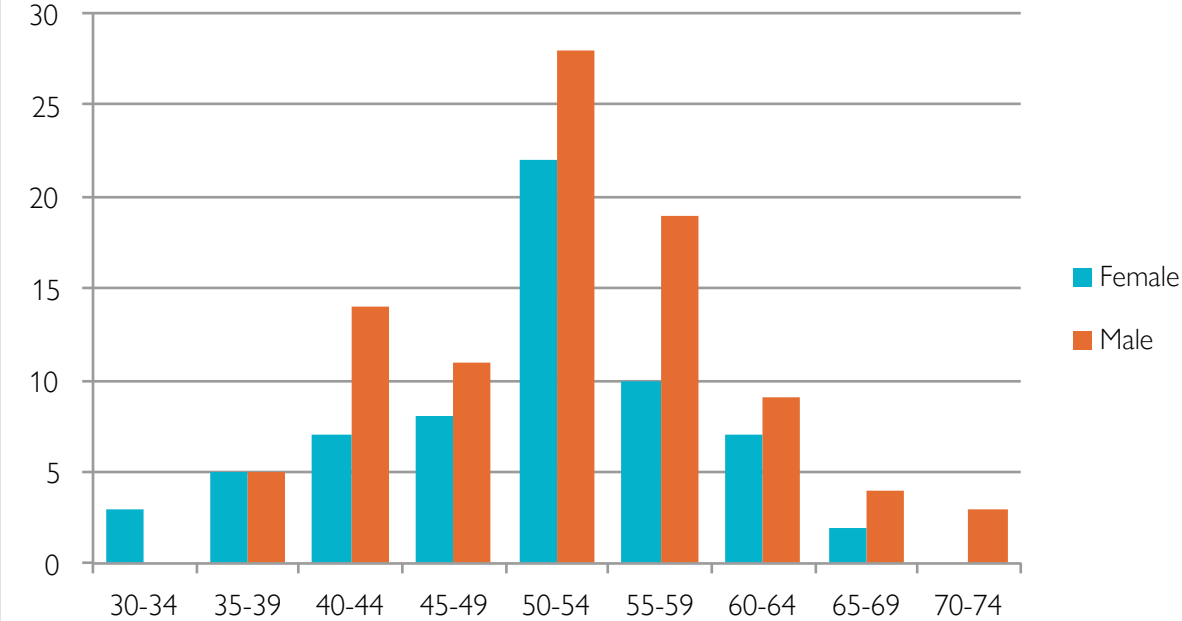


Teachers

Forty one percent of respondents (902) had been involved in some capacity of teaching in the past year. This is an increase on the 34% in the 2014 survey although there was also a change in the wording of the question.

Seven percent of respondents (157) were GPEP1 teachers. Figure 9 shows the age and gender of the GPEP1 teachers who responded to the survey. The majority were male (59%).

Figure 9: Number of GPEP1 teachers by age and gender



WORKING HOURS

IN RECENT YEARS, THE NUMBER OF HOURS WORKED BY GENERAL PRACTITIONERS AND HOSPITAL SPECIALISTS HAS DECLINED

WORKING HOURS

Background

The supply of GPs is determined not only by the number of doctors, but also by the hours worked by each doctor. In recent years there has been a decline in the number of hours worked by doctors in New Zealand, including by both GPs and hospital specialists. This decline in hours worked has also been observed internationally[18].

While this has positive benefits for the work/life balance of GPs and can also have positive benefits for patients,[19] [20] it is important that the number of GPs increases sufficiently to avoid negative effects on the availability of general practice services to patients.

Medical Council survey data reveals that younger GPs are increasingly working part-time.

In 1998, 61% of 35-39 year old GPs were working at least 40 hours per week. By 2012, this proportion had almost halved to 33%.

Some of this difference may be attributable to the rise in the number of females in the workforce, as the data shows female GPs are more likely to work part-time than male GPs. In 1998, females made up 35% of the GP workforce as opposed to 46% in 2012.

The hours worked by GPs fell from an average of 39 per week in 1999 to 35 in 2012.[21]

Medical Council surveys reveal that between 1999 and 2012, GP numbers increased by 394, a 12% rise.

However, because of the decrease in hours worked, the increase in GP full-time equivalents (FTEs) over this same time was only 2% — considerably less than the 12% increase in headcount. During the same period the New Zealand population increased by 16%, and the net effect was to decrease the FTE GP/100,000 population ratio from 84 to 74 between 1999 and 2012 (Fig 10).

The net result of the changes in working hours and the minimal increase in the number of GP FTEs has been a concerning decline in the ratio of GP FTEs per head of population from 84 FTE GPs per 100,000 population in 1999, to 74 FTE GPs per 100,000 population in 2012.

The decline in average hours worked has played a major part in the overall decline in the availability of GP services.

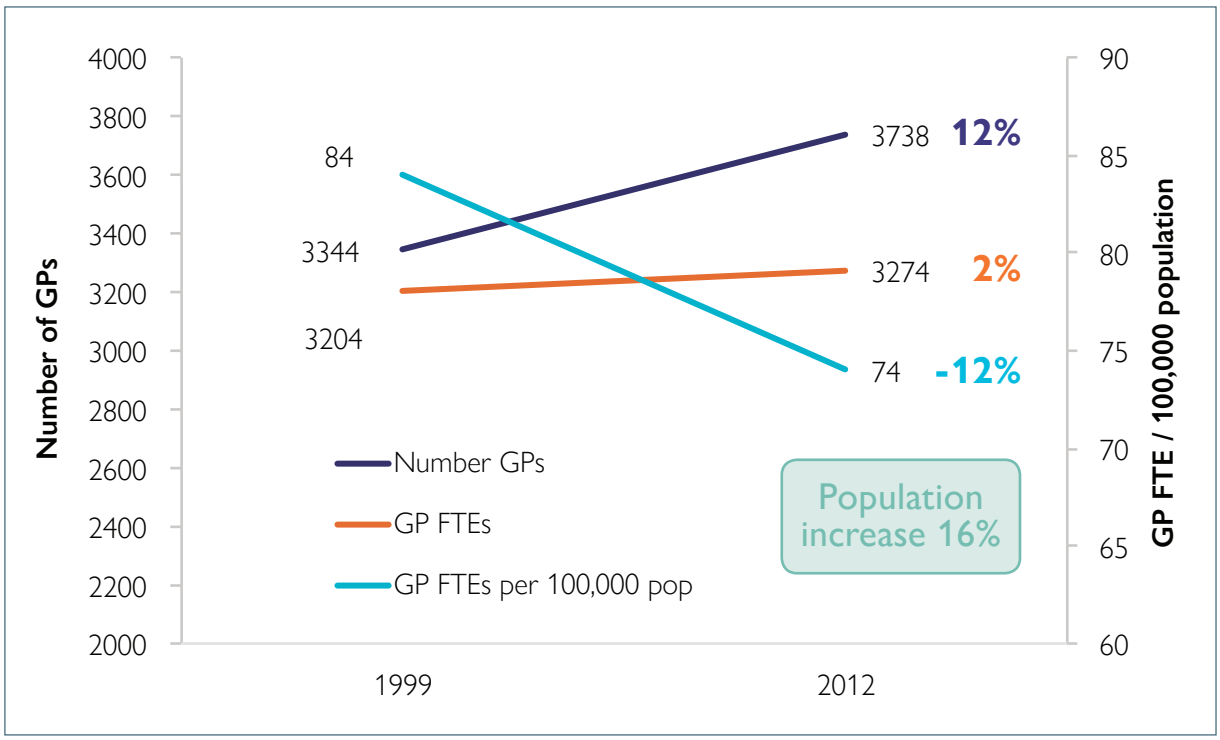
18 Joyce C, Wang W, Cheng T. Changes in Doctors' Working Hours: A Longitudinal Analysis. *Med Care Res Rev*. 2015 Oct;72(5):605-21.

19 Panattoni et al. Patients report better satisfaction with part-time primary care physicians, despite less continuity of care and access. *J Gen Intern Med* 22 Nov 2014.

20 Dwan et al. Are "part-time" general practitioners workforce idlers or committed professionals? *BMC Family Practice* 2014.

21 The calculation method used here is based on MCNZ workforce survey data supplied by MCNZ. It differs from that used in the MCNZ workforce survey reports available at https://www.mcnz.org.nz/news-and-publications/workforce-statistics/ which show a decrease in average hours worked per week from 41 in 1999 to 37.3 in 2012.

Figure 10: Trends in GP numbers, GP FTEs and GP FTE to 100,000 population ratio 1999-2012 (MCNZ)



Survey findings

Because of the importance of hours worked to the supply of GP services, this survey included several questions regarding current working hours as well as future intentions regarding working hours.

Respondents were asked to select the hours they worked per week in general practice. When determining this, respondents were instructed to include the on-call time actually worked as well as time spent on patient-related activities such as paperwork.

For the purposes of this survey, those respondents working fewer than 36 hours per week have been deemed to be working part-time in general practice.

Figure 11 shows a small majority of respondents (51.3%) worked full-time in general practice. This is a slight decline on the 54% of respondents from the 2014 survey but a change in survey design may have contributed to this decline.[22]

Median hours worked in general practice remained at 36-40 hours per week.

22 The addition of a question on hours worked on practice and non-practice medical activities in total may have resulted in some respondents reading the question more carefully and discriminating more accurately between hours worked in general practice and in other medical work. This may have led to some reduction in the reported hours worked in general practice.

Figure 11: Number and percentage of respondents working full-time (36hr pw or more) and part-time

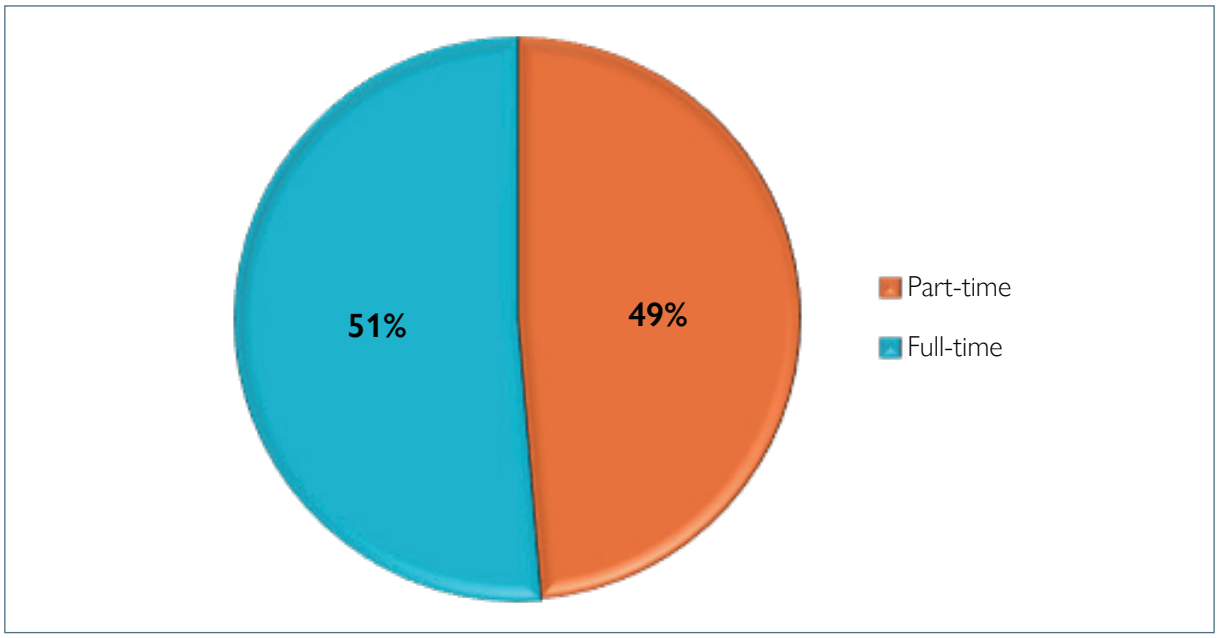


Figure 12: Percent of respondents by hours worked per week in general practice

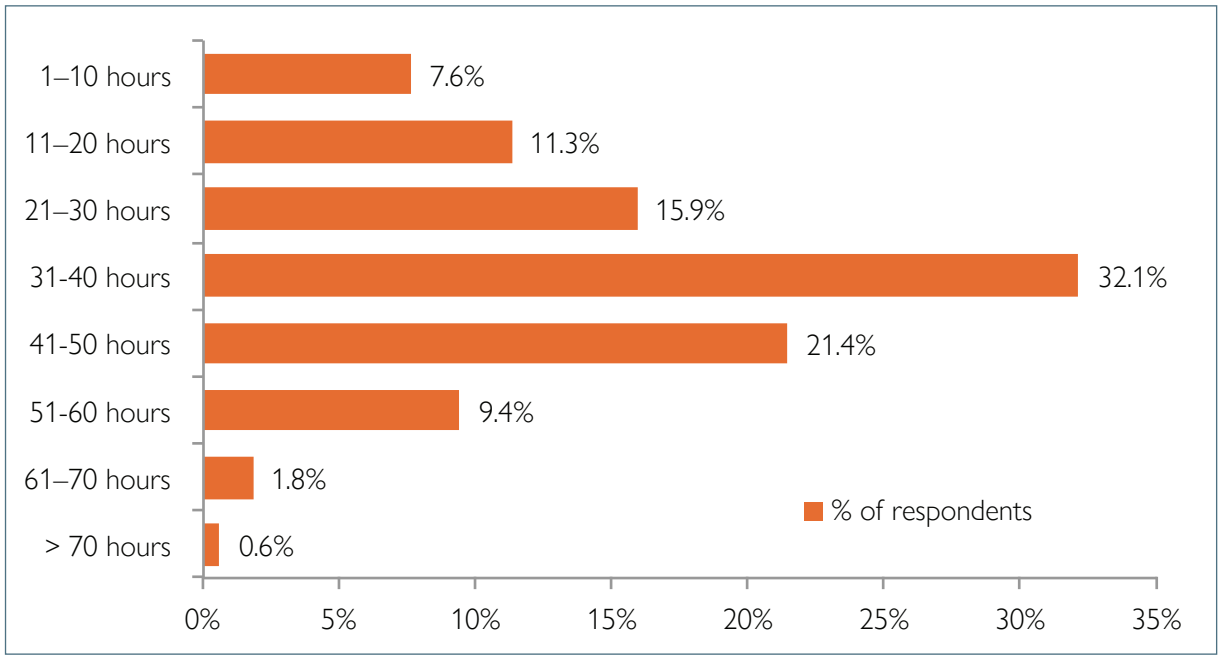


Figure 12 illustrates the proportion of respondents in each hours bracket. The largest group of respondents worked 31-40 hours per week.

Average hours worked per week

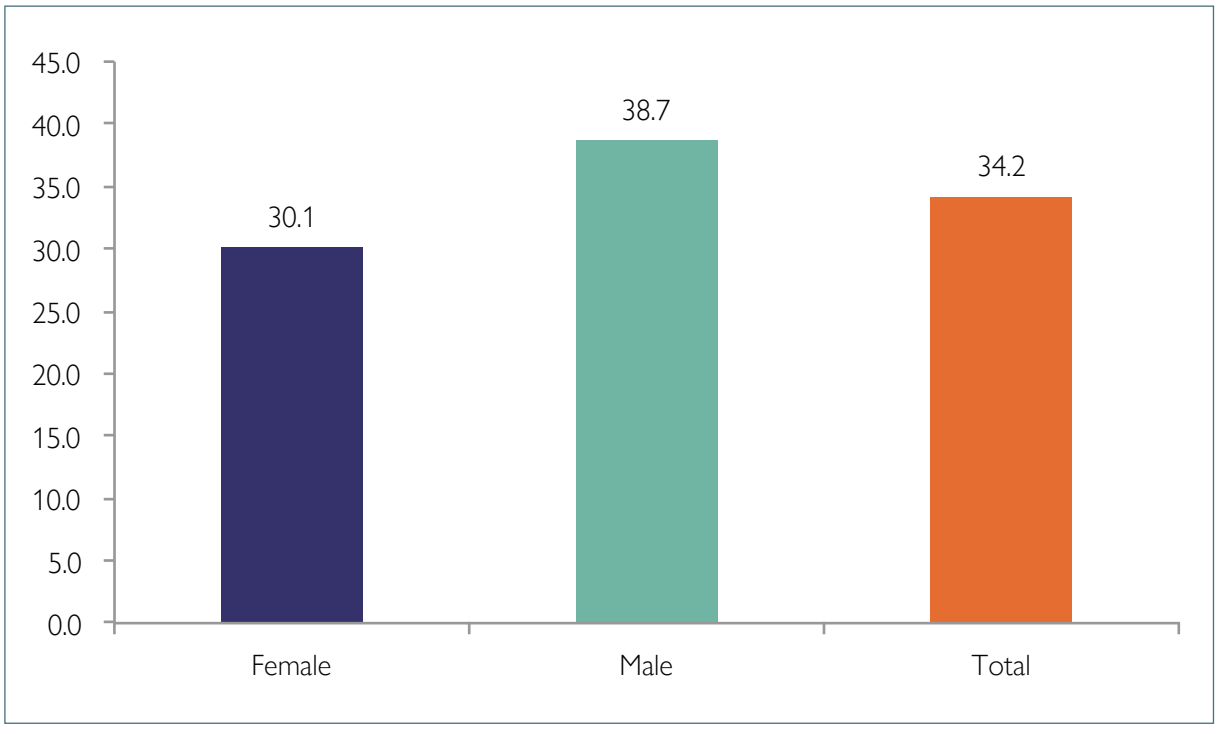
Estimated average hours worked per week in general practice are shown in Figure 13.

When estimated based on the midpoint of the hours range, on average respondents worked 34.2 hours per week in general practice. This compared to 35.3 hours per week in 2014 (calculated using the same method). A change in the survey design may have contributed to this decline[22].

Estimated average working hours for male respondents was 38.7 hours per week, and for female respondents was 30.1 hours per week. Male respondents worked on average 8.6 hours per week more than female respondents.

In the 2015 survey respondents were given the opportunity to provide their actual hours worked and 40% of respondents (863) provided this additional information. The average hours worked calculated from this data (as opposed to the averages above estimated from hours range data) gave a slightly lower average of 32.6 hours per week for all respondents[23].

Figure 13: Estimated average hours worked in general practice



23 Female respondents who tend to work fewer hours per week were more likely to have provided numerical data on hours worked and this will have contributed to the lower average obtained by this method compared to the estimate based on the range.

Hours worked by gender

The survey found appreciable differences in the hours worked by male and female respondents. Male respondents worked between 7.2 and 8.6 more hours on average per week than female respondents (depending on the method of calculation used).

Table 7 shows that 65% of female respondents worked part-time in general practice compared to only 31% of male respondents.

Table 7: Number of respondents working part-time

2015	Female		Male		Total	
less than 36 hrs	753	65%	328	31%	1081	49%
36 hrs or more	414	35%	720	69%	1134	51%
Total	**1167**	**100%**	**1048**	**100%**	**2215**	**100%**

Looked at from another angle, 70% of the respondents working part-time were female and 30% were male.

Hours worked by age

The hours worked in general practice per week varied by the age of the respondent as shown in Figure 14.

Respondents in the 25-29 year and the 55-65 year age bands tended to work the longest hours. Whether the long hours worked by 55-65 year old GPs are a feature of this stage of the life course and future GPs of this age group will continue to work the longest hours, or whether this is a generational effect reflecting the work ethic of GPs of this generation cannot be ascertained from this data. We cannot assume that future GPs of this age group will work similar hours.

Many in the youngest group were GPEP1 registrars and, although it is possible to work part-time during this first year of vocational training, the majority train full-time. Respondents in their 30s and 40s worked fewer hours per week, as did those in the over 65 age bands.

Figure 14: Estimated average working hours in general practice per week by age

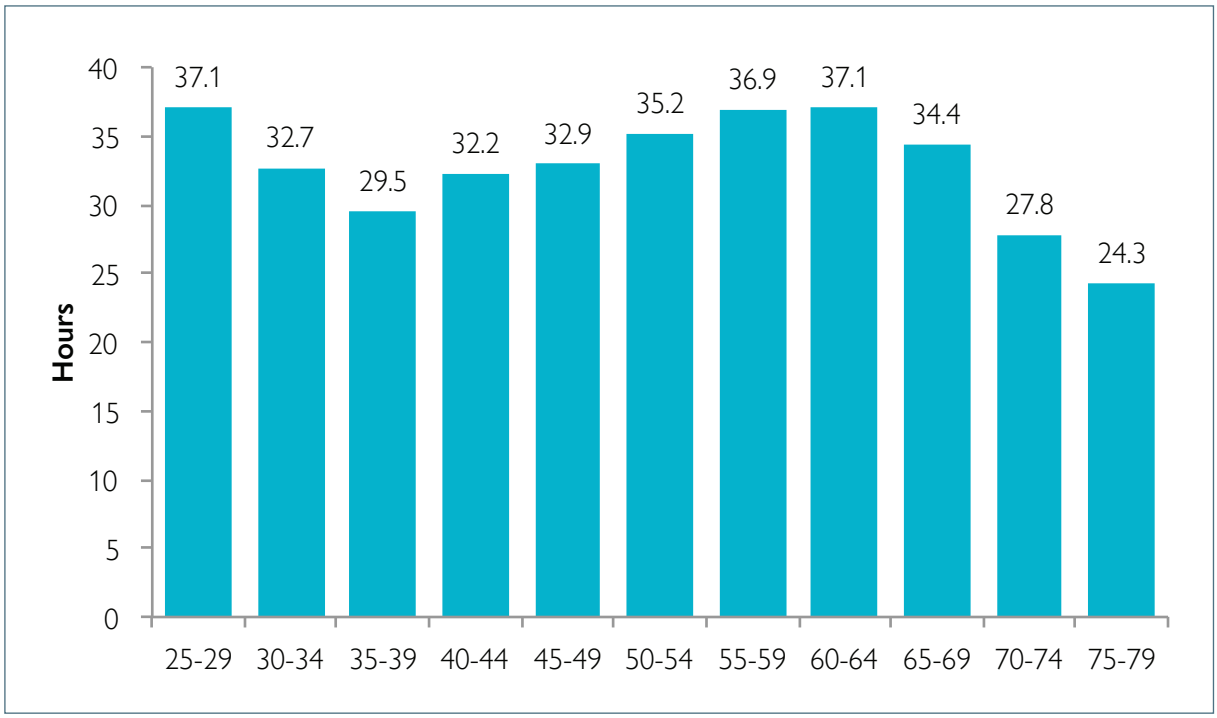


Figure 15 illustrates the average hours worked by both age and gender. Female respondents of all ages worked fewer hours per week in general practice than did males. This difference was less pronounced among the youngest age band and most evident in the 35-44 year age bands.

Figure 15: Estimated average hours worked in general practice per week by age and gender

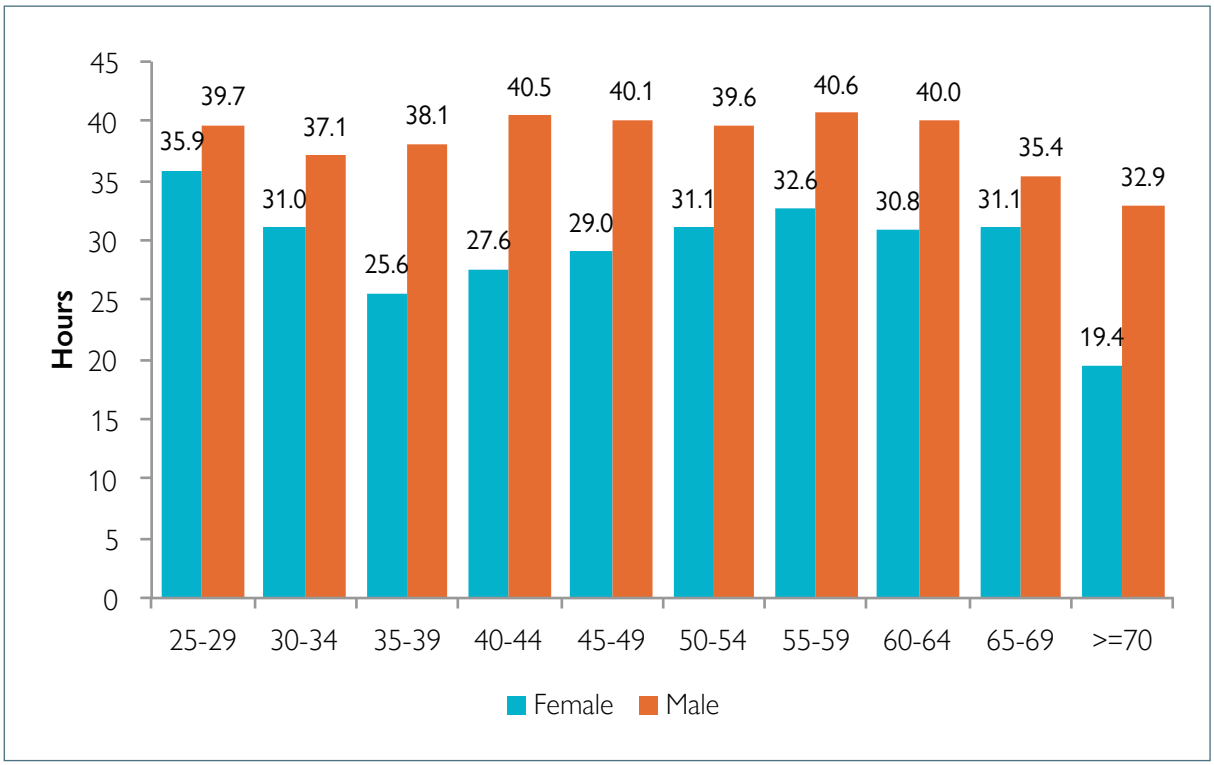
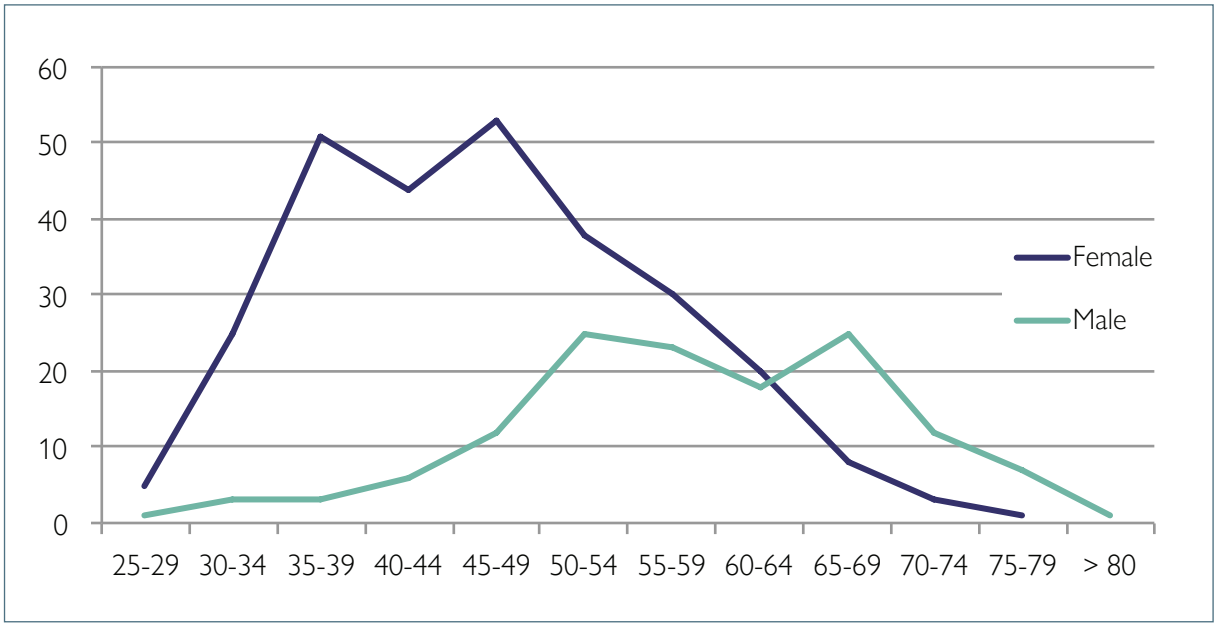


Figure 16 illustrates the age profile of by gender of those respondents who worked 20 hours or less per week in general practice. Male and female respondents have strikingly different age profiles. The average age of females was 46 years and males 59 years, a difference of 15 years.

Figure 16: Number of repondents working 20 hpw or less in general practice by age and gender

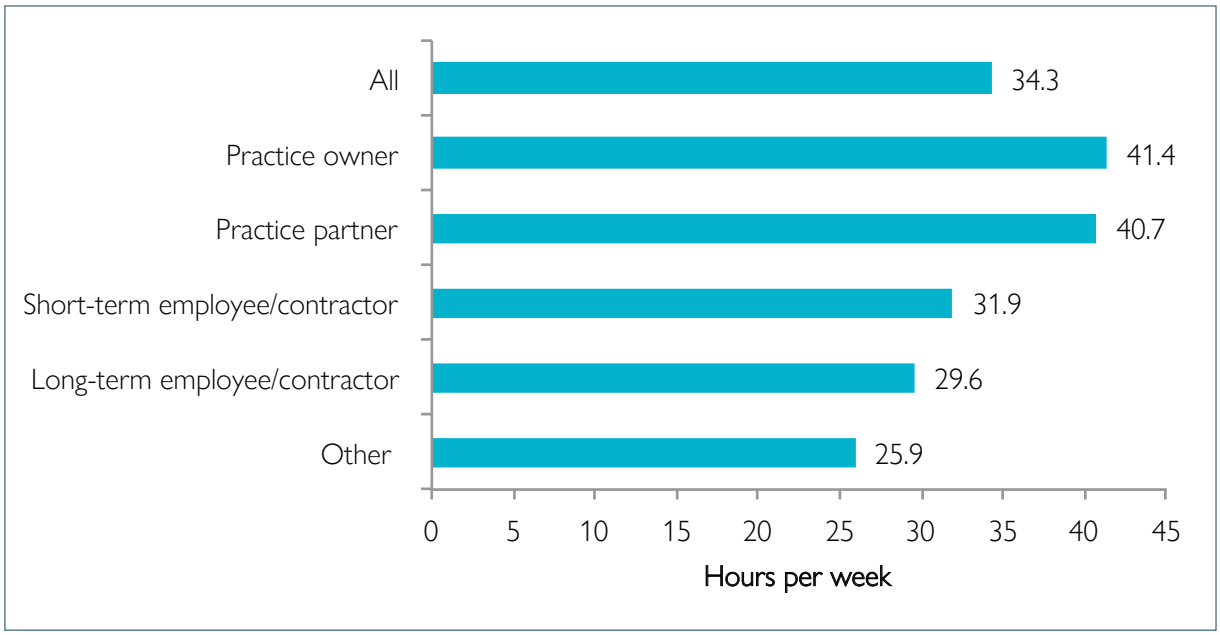


Hours worked by employment status

Practice owners work the longest hours in general practice closely followed by practice partners (Figure 17).

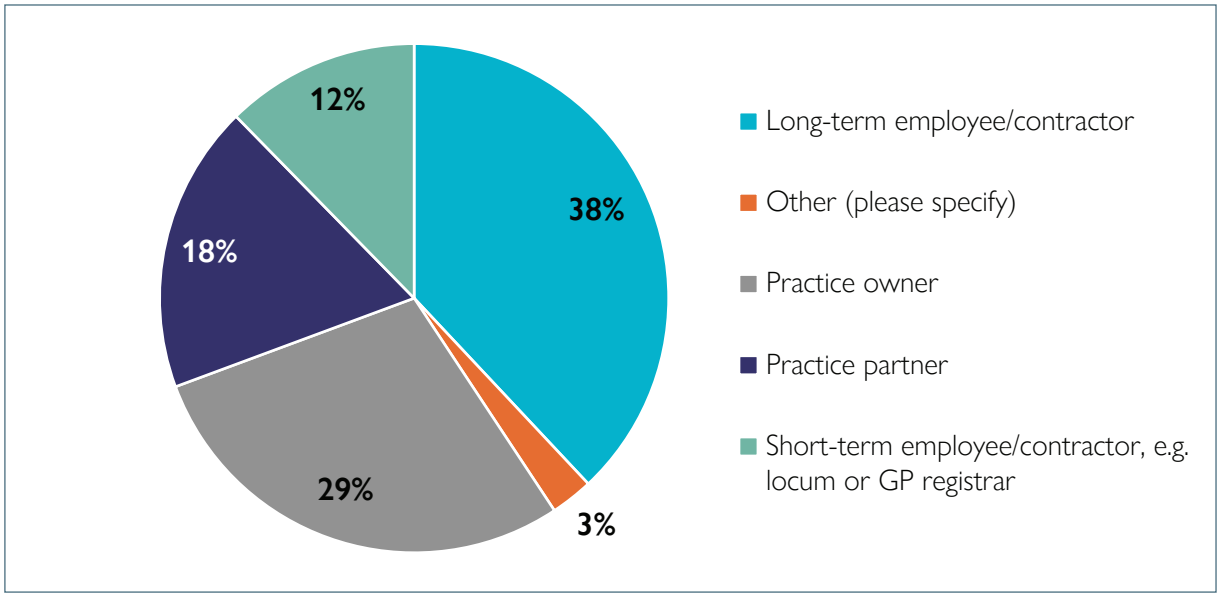
As noted in the previous chapter, practice owners and partners were more likely to be older and male, both of which were also associated with longer working hours.

Figure 17: Estimated average hr pw worked in general practice by employment status



As a result of their large numbers, the greatest contribution to total hours worked in general practice was made by respondents who identified as long-term employees and contractors (38 % of hours worked) as illustrated by Figure 18.

Figure 18: Contribution to general practice by employment status



Hours worked and rurality

As noted earlier in the report 76% of respondents considered that they worked in an urban practice, 17% considered that they worked in a rural practice and 6% considered their practice not clearly rural or urban.

Table 8 compares the hours worked in general practice by respondents working in rural and urban practices. Respondents in rural practices were more likely to work full-time in general practice (66% full-time) than those in urban practices (48% full-time).

The estimated average hours worked per week in general practice was 38.8 hours per week for rural respondents and 33.3 hours per week for urban respondents.

As mentioned previously respondents working in rural practice were more likely to be male and the survey found that male gender was associated with more hours worked per week in general practice.

Table 8: Working hours of rural and urban respondents

	Rural	Rural	Urban	Urban	Combined	Combined
Part-time (< 36 hpw)	129	34%	878	52%	1007	49%
Full-time (>=36hpw)	255	66%	806	48%	1061	51%
Total	**384**	**100%**	**1684**	**100%**	**2068**	**100%**

Reasons for working part-time

Those respondents who reported working fewer than 36 hours per week in general practice were asked to select the reasons relevant to their working part-time.

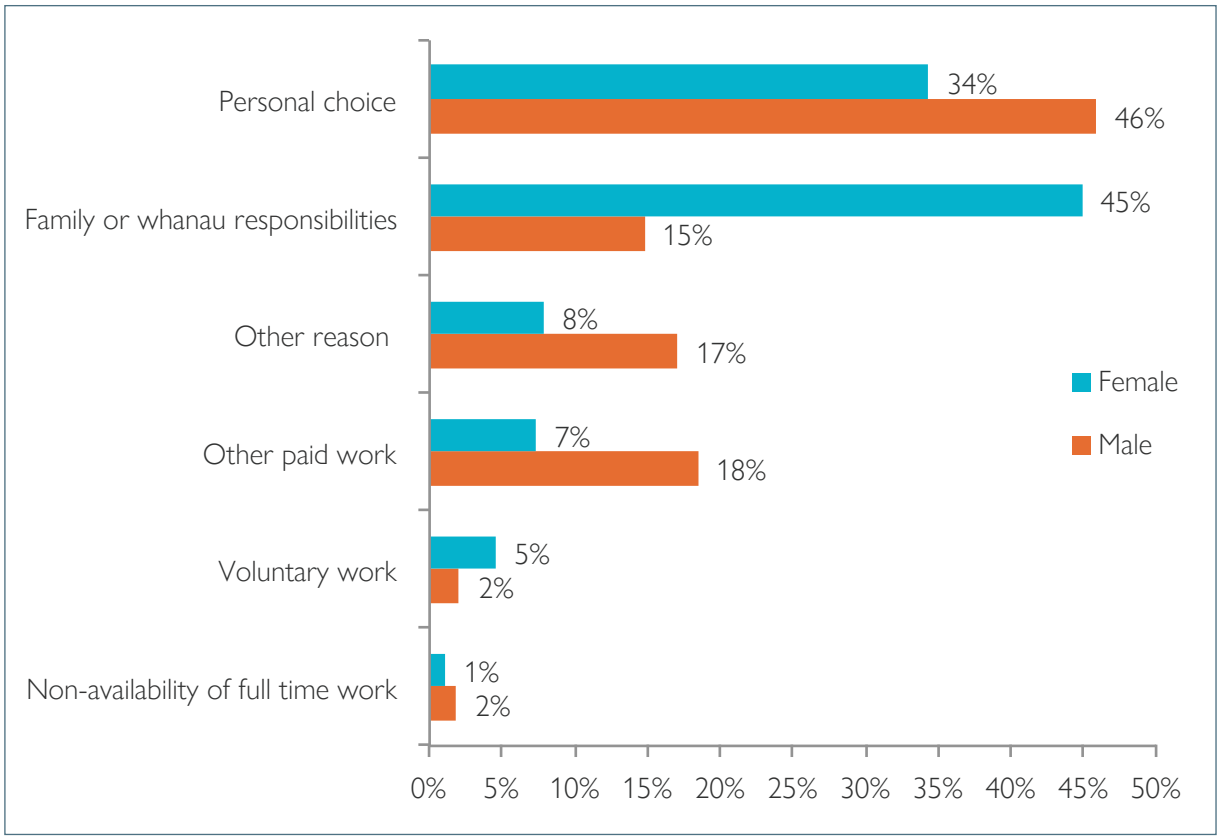
The five options given were family or whānau responsibilities, other paid work, voluntary work, personal choice, and non-availability of full-time work. There was also the option to provide a free text answer.

Looking at both male and female respondents together, personal choice was the most common reason, selected by 583 (54%) of the 1076 individuals working part-time. However it was possible to select more than one reason and 42% of those selecting personal choice also selected the next most common reason, family and whānau responsibilities.

Family and whānau responsibilities was chosen by 566 (53%) of those respondents who indicated their reasons for working part-time, and 502 of these (89%) were female.

Figure 19 compares male and female respondents' answers to this question. The most striking differences are seen in the family and whānau responsibilities category which was selected by 45% of females but only 15% of males, and in the other paid work category which was selected by 18% of males but only 7% of females.

Figure 19: Reasons for working part time as a proportion of all reasons selected by each gender



Family responsibilities as a reason for part-time work in general practice

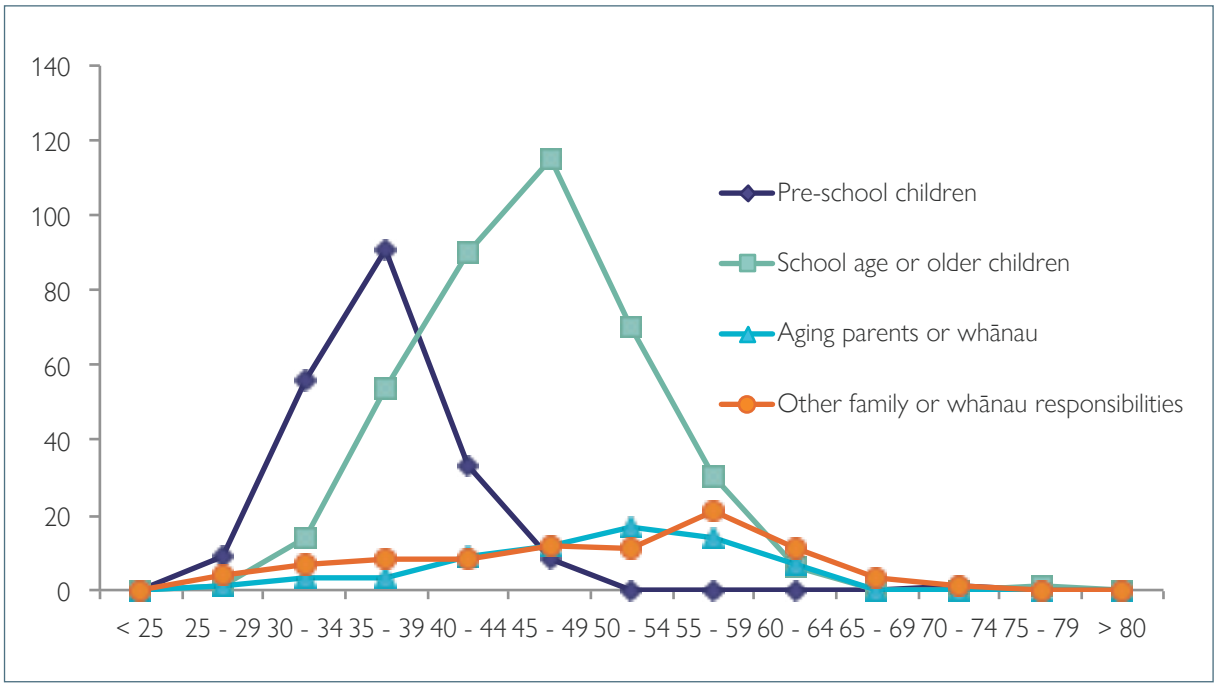
Those respondents who selected the family responsibilities category as one of their reasons for working part-time were asked to specify which responsibilities were relevant to their decision to work part-time from a list of four options. More than one option could be selected.

Sixty eight percent selected school age or older children, 35% selected pre-school children, 12% selected aging parents or whānau and 15% selected other family or whānau responsibilities.

Figure 20 illustrates the age distribution of respondents who selected the various categories. It is notable that responsibilities related to school age and other children was the category most commonly selected, and also that appreciable numbers of respondents in this category were in their 50s, slightly older than the age groups usually associated with child rearing.

This suggests that the effect of child rearing on hours worked is significant well beyond early childhood.

Figure 20: Number of respondents working part-time due to family responsibilities by age and type of responsibility



Other paid work as a reason for part-time work in general practice

Other paid work was selected by only 15% of respondents working part-time as their reason for working part-time.

However 34% of respondents working part-time in general practice indicated in their answer to a different question that they had medically-related paid employment in addition to general practice in their answers to a different question. Among male respondents the percentage was 48% and among females 28%.

In summary a large proportion of those working part-time in general practice had additional medical employment. This was particularly so for male respondents.

Future working hours

The hours worked by GPs in future years will have a significant impact on the number of GPs needed to supply services to the population.

Respondents were asked about the direction of the anticipated change in their hours worked per week in general practice in five years' time (2020). The question did not ask them to quantify the magnitude of the change just the direction.

Forty seven percent anticipated working fewer hours per week, 43% expected to be working about the same number of hours per week and 9% anticipated increasing their hours worked.

Future working hours of female respondents

Overall, 53% of 2015 survey respondents were female[24]. Among those aged less than 50 years, however, this rose to 68%. It appears possible that in 20 years' time around two thirds of the GP workforce will be female; hence the hours worked by female GPs will have an increasingly important effect on the availability of GP services.

Survey data reveals that female respondents aged 55-59 worked seven hours per week more on average than those aged 35-39 years. To determine the hours that will be worked by future female GPs it is necessary to consider whether this increase in hours worked in the older cohort is a life course effect and those female respondents currently in their 30s are likely to increase their hours by a similar amount as they age over the next 20 years, or whether it is a generational effect, i.e. it reflects the increased importance of work/life balance to respondents born in the 1980s compared to those born in the 1950s.

Figure 21: Female respondents intended working hours in 5 years time (2020)

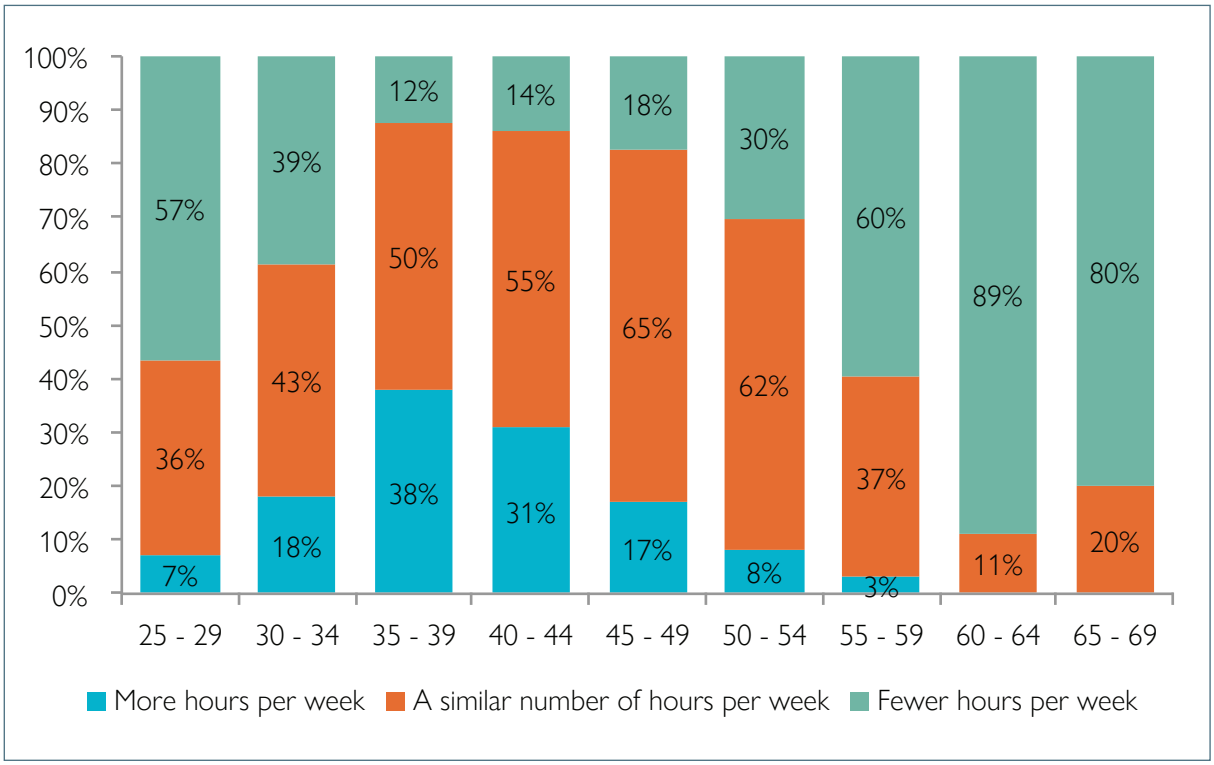


Figure 21 illustrates the responses of female respondents to the question about intended hours of work in five years (in 2020). The proportion intending to increase their hours worked in five years was highest among those aged 35-39 years where it reached 38%. This corresponds to the age band in which the average hours worked by female respondents was lowest. (It should be noted that 20% of females in this band currently work full-time and are therefore unlikely to want to increase their working hours). If only those female respondents currently working 20 hours or less per week are analysed the proportion intending to be working more hours in 2020 rises to 73%, with this peak again occurring in the 35-39 year age band.

Figure 21 clearly indicates that a significant proportion of women aged 35-44 intend to increase the hours that they work in general practice but we do not know by how much, and hence how much this increase may contribute to the workforce in future.

24 As mentioned previously the response rate for females was slightly higher than that for males hence the true proportion of females in the GP workforce will be closer to 50%.

The survey did not ask respondents to quantify the size of the intended increase in hours worked in five years' time because it is often not possible to be able to accurately predict this. Without such information, we cannot reliably accurately forecast the supply of GP FTEs into the future. However by continuing to collect annual data on the actual hours that are worked by this group we hope to be able to build a better picture over time.

The survey does tell us that respondents with pre-school children worked on average 21 hours a week. Respondents with school age children worked on average 23 hours per week, only two hours more per week. Also notable was that the 44% of respondents working part-time due to pre-schoolers intended to increase their hours worked in general practice in five years' time, but among those with preschool age or older children the proportion was only 28%.

Future hours worked by older doctors

There are also issues around forecasting the behaviour of the large group of older doctors, most of whom are male.

We cannot predict whether they will continue the pattern followed by the current generation of older doctors, and continue to make a large contribution to the GP workforce past the age of eligibility for state superannuation.

Currently those aged 70-74 years and still working work only 28% fewer hours per week than those aged 55-59[25]. The older GPs of the next decade may pursue a desire for a better work/life balance and not follow the pattern set by the current cohort of older GPs.

After-hours commitments

The survey revealed that 68% of respondents had after-hours commitments.

Table 9 reveals that male respondents had the heaviest commitments, with 25% of males having after-hours commitments on a weekly basis. Among respondents aged 60 years or older, 56% had after-hours commitments. This proportion fell to 42% of those over 65 years, and 32% of those 68 respondents aged over 70.

Table 9: Number and percentage of respondents by gender and frequency of afterhours commitments

After-hours commitments and frequency	Female		Male		Total	
No after-hours commitments	419	36%	289	28%	708	32%
Yes - but less frequently than monthly	162	14%	107	10%	269	12%
Yes - every month approximately	248	21%	192	18%	440	20%
Yes - every three weeks approximately	68	6%	77	7%	145	7%
Yes - every second week approximately	107	9%	121	12%	228	10%
Yes - every week	161	14%	262	25%	423	19%
Total	**1165**	**100%**	**1048**	**100%**	**2213**	**100%**

25 Average 55-59y works 40.6 hr pw; average 70-74y works 29.1hr pw

Table 10 compares the after-hours commitments of respondents working full and part time. Among respondents working full-time 77% had after-hours commitments with 26% having weekly after-hours commitments. Among respondents working part-time 58% had after-hours commitments and 12% had weekly after-hours commitments.

Table 10: Percentage of part-time and full-time respondents with after-hours commitments

	Part-time	Full-time
Any after-hours commitments	58%	77%
Weekly after-hours commitments	12%	26%

There was also a difference in after-hours commitments by employment status.

Among practice owners and partners, 76% had after-hours commitments compared to 65% of long term employees and contractors

Table 11 compares the after-hours commitments of rural and urban respondents. The after-hours load was heavier for respondents in rural practices than in urban practices.

Among respondents working full-time, 88% of respondents in rural practices had after-hours commitments compared to 74% of respondents in urban practices. A much higher proportion of rural respondents had weekly after-hours commitments than did respondents in urban practices.

Table 11: Comparison of after-hours commitments of rural and urban respondents working full-time

	Rural (full-time)	Urban (full-time)
Any after-hours commitments	88%	74%
Weekly after-hours commitments	48%	19%

EMPLOYMENT STATUS

MALE GPS ARE TWICE AS LIKELY AS FEMALE GPS TO OWN A PRACTICE

EMPLOYMENT STATUS

Survey participants were asked to select their employment status from a list of five options.

Long term contractors or employees were the largest group, making up 44% of respondents. The next largest group was practice owners at 24%, followed by practice partners 15%, short term employees and contractors (including locums and GP registrars) 13%, and other 4%. These proportions are similar to those seen in the 2014 survey[26].

Employment status by age and gender

Table 12 shows that a higher proportion of male than female respondents were practice owners or partners; in fact males were twice as likely (32%) as females (16%) to own practices.

Over half of female respondents (53%) were long term employees or contractors.

Table 12: Numbers and percentages of respondents by employment status and gender

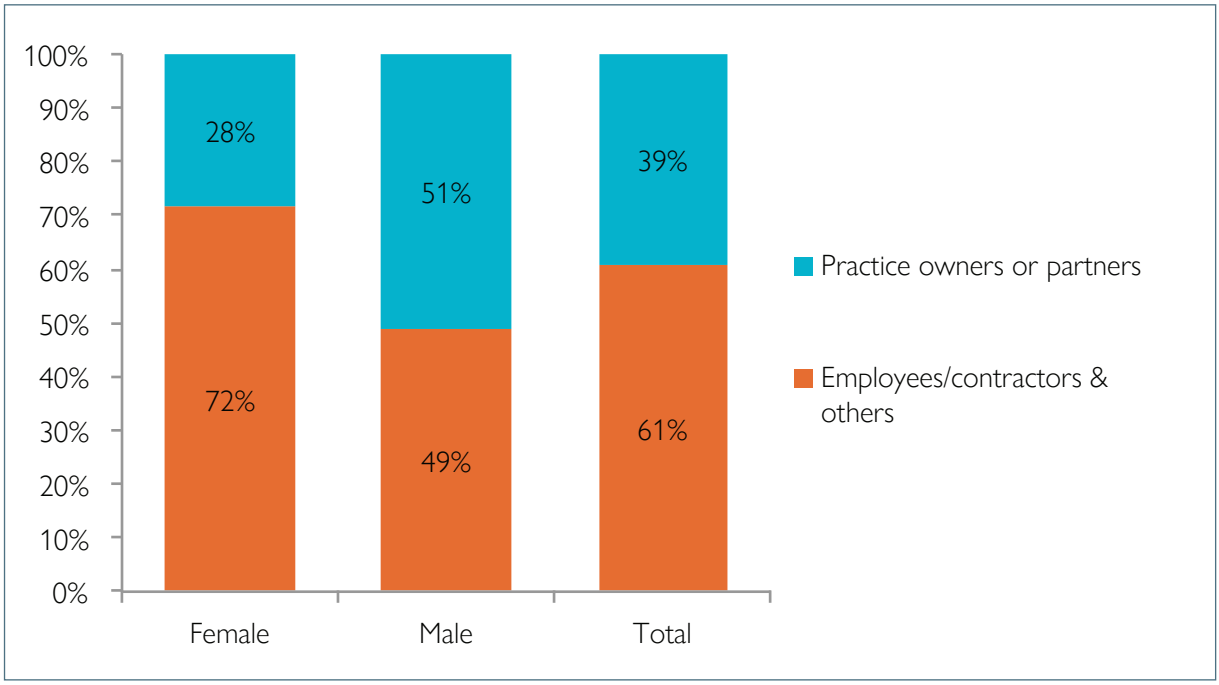
Employment status	Female		Male		Total	
Practice owner	187	16%	338	32%	525	24%
Practice partner	142	12%	197	19%	339	15%
Long-term employee/contractor	616	53%	359	34%	975	44%
Short-term employee/contractor	177	15%	113	11%	290	13%
Other	40	3%	39	4%	79	4%
Grand Total	**1162**	**100%**	**1046**	**100%**	**2208**	**100%**

Practice owners and partners both have a governance and financial stake in their practice. Combining these categories and comparing them with the employee/contractors and other categories is revealing.

Figure 22 illustrates that overall 39% of respondents were practice owners or partners. The remaining 61% of respondents selected the employees/contactors or other categories. Figure 22 also illustrates a marked gender difference in employment status with only 28% of females being practice owners or partners compared to 51% of male respondents.

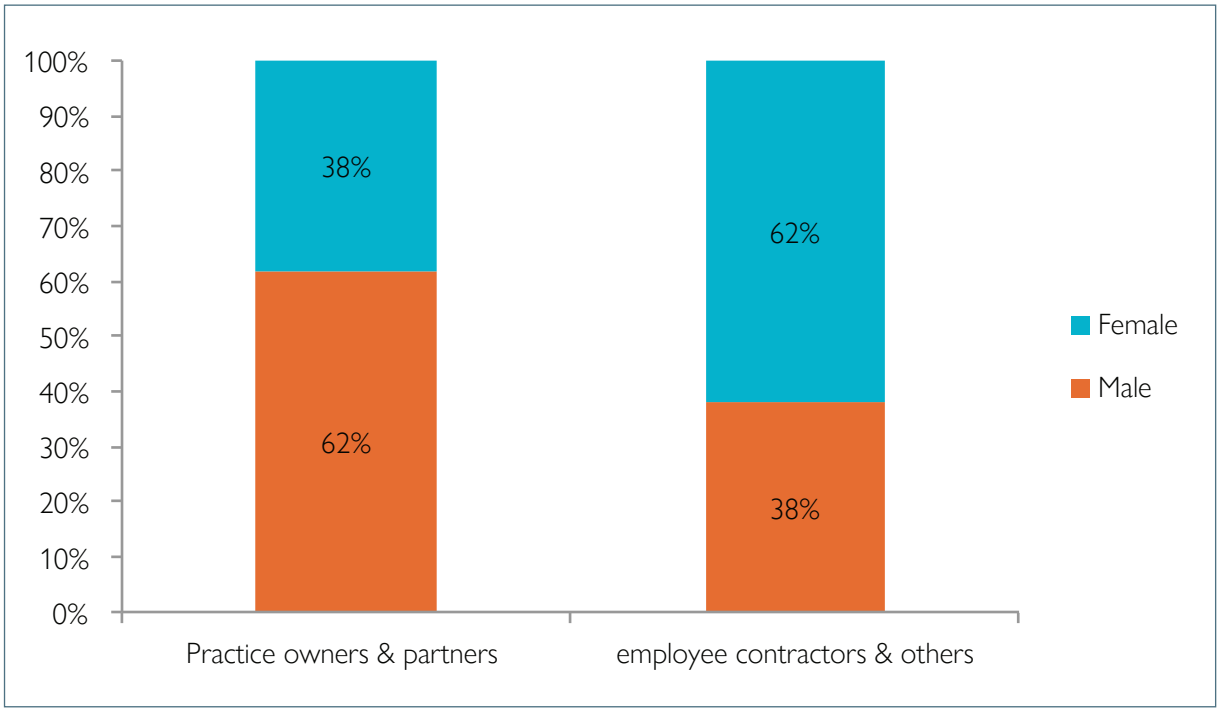
26 Clearer direction to GP registrars to select the short term employment/contractor category in the 2015 survey has seen this category increase slightly with a corresponding decrease in the numbers in the "other" category compared to the 2014 survey.

Figure 22: Employment status of respondents by gender



It is not surprising then that among practice owners and partners the majority (62%) are male as illustrated by Figure 23. Meanwhile female respondents predominate to identical degree among employees/contractors and others.

Figure 23: Employment status by gender



The proportion of respondents in the various ownership categories showed definite trends by age as illustrated in Figure 24.

The proportion owning practices peaked at 41% of respondents at age 60-64. For practice partnership the peak was 22% at age 55-59 years.

Long term employees and contractors made up the largest group overall and reached the highest proportion, 68%, in the 35-39 year age group.

The proportion in short term employment was very high among youngest respondents, 65%, but then declined rapidly in the next age bands. Many in this cohort will be registrars.

Interestingly the proportion of short term employees or contractors increased again among the oldest age bands. This is likely to be related to older GPs changing their working patterns as they head towards retirement by doing sessional or locum work. Given the increasing numbers of older GPs, further research into the work patterns of this group may be warranted.

Figure 24: Employment status by proportion of age group

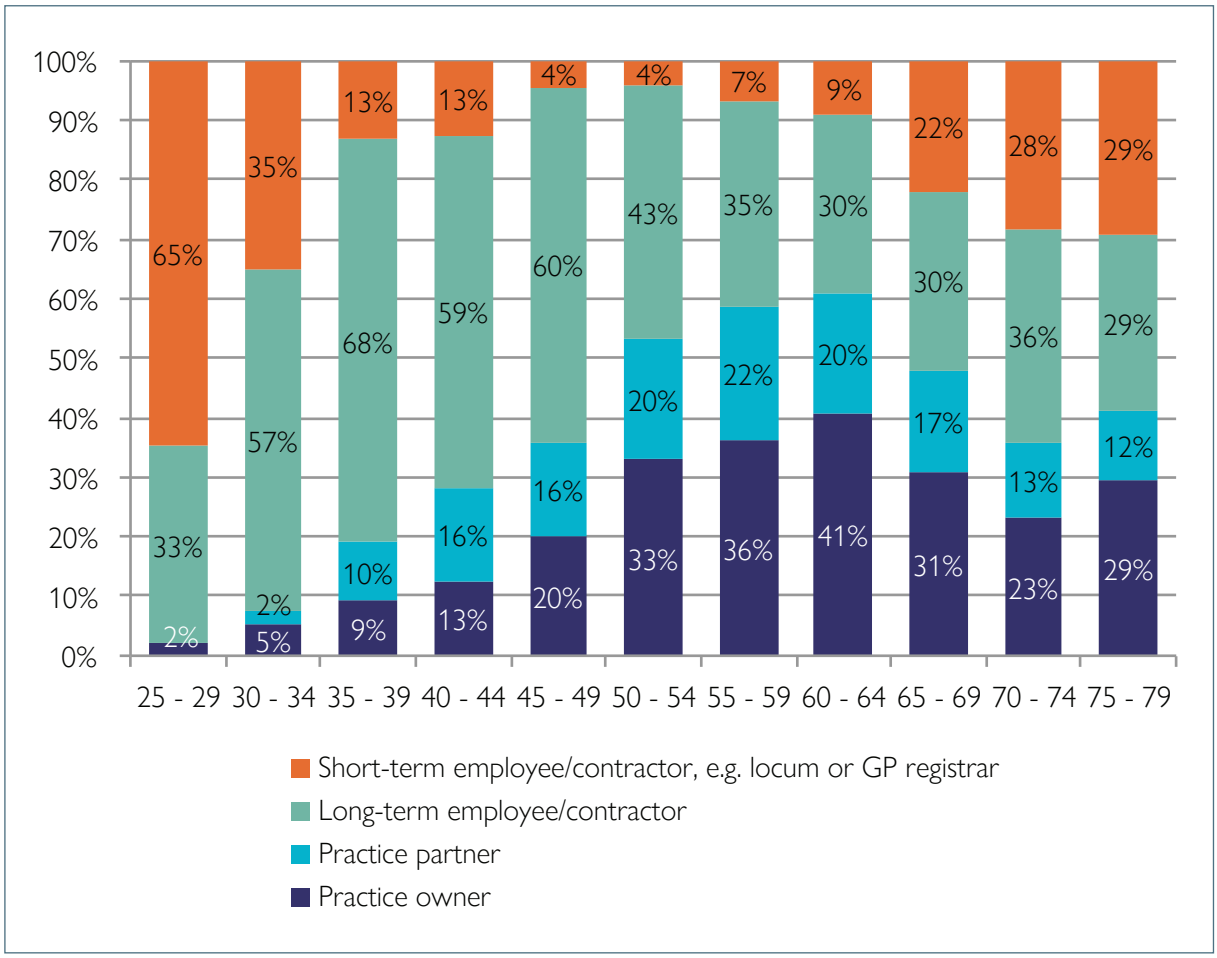


Figure 25: Proportion of respondents who are practice owners or partners by age and gender

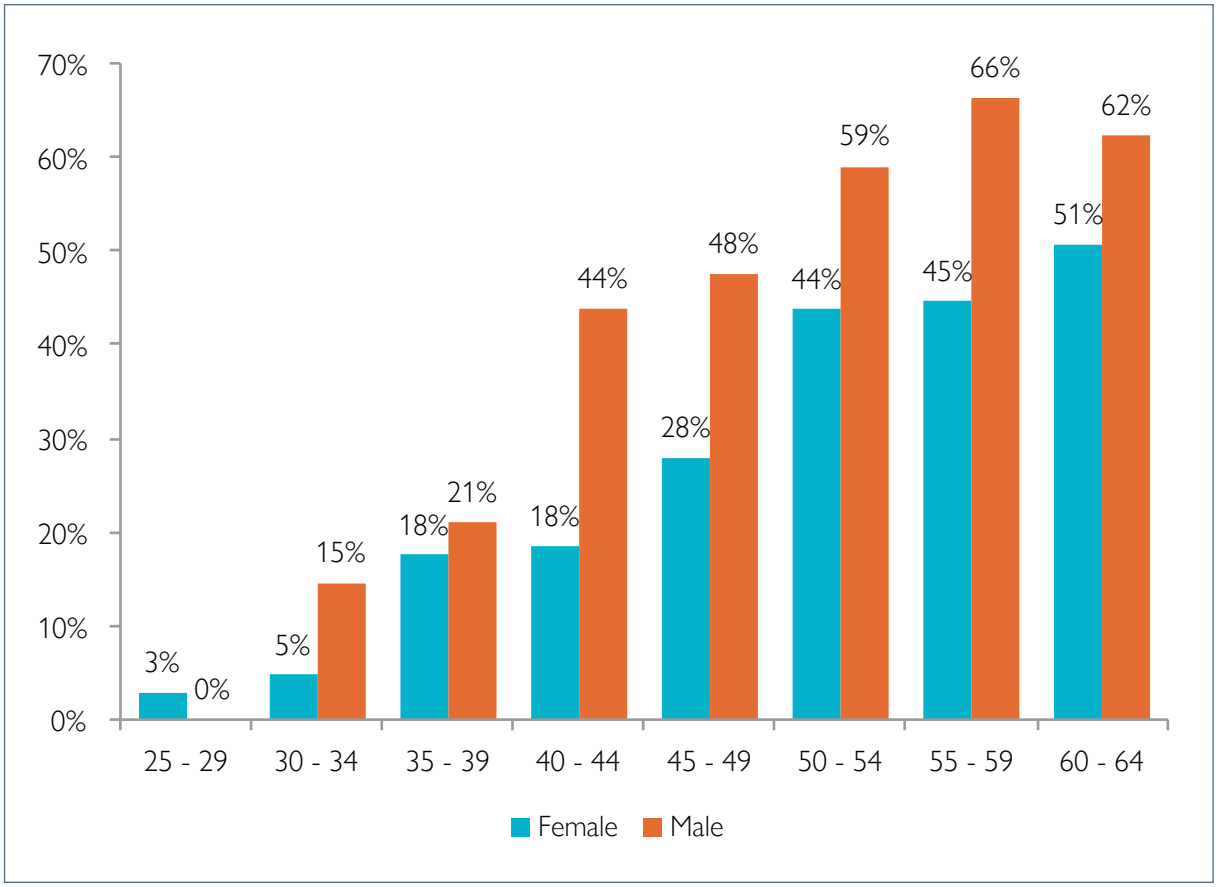


Figure 25 looks specifically at a comparison between the proportion male and female respondents who are practice owners or partners in each age group.

Among male respondents, proportions are highest amongst the 55-59 year age group before starting to decline again. Among females the proportion continued to steadily increase with age.

Females were less likely to be owners or partners at almost all ages. The maximum difference between the genders was seen in the 40-44 year age group. Interestingly there was little difference seen in the 35-39 year age groups. Time will tell whether this cohort and possibly younger female GPs in general, are embracing financial and governance roles in general practice to a greater or lesser extent than previous generations.

In absolute numbers, male practice owners or partners outnumber females in almost all age cohorts. The exceptions are the 35-39 year age cohort where the number of females is almost double the number of males and 45-49 year age cohort where the numbers are very similar.

Employment status and Māori respondents

Among respondents who identified as NZ Europeans, 45% were either practice owners or partners.

The proportion of Māori respondents who were practice owners or partners was considerably lower at 28%. Māori respondents tended to be younger and were slightly more likely to be female compared with all respondents.

To ensure that the difference in practice ownership was not simply due to this difference in demographics, male respondents aged 40-59 years were compared. The lower rate of practice ownership or partnership among Māori remained.

Only 47% of male Māori respondents aged from 40-59 years either owned or were a partner in their practice, compared with 63% of similar respondents who identified as NZ European.

INCOME

MORE RESEARCH IS REQUIRED TO FIND THE REASONS BEHIND THE INCOME GAP BETWEEN MALE AND FEMALE RESPONDENTS

INCOME

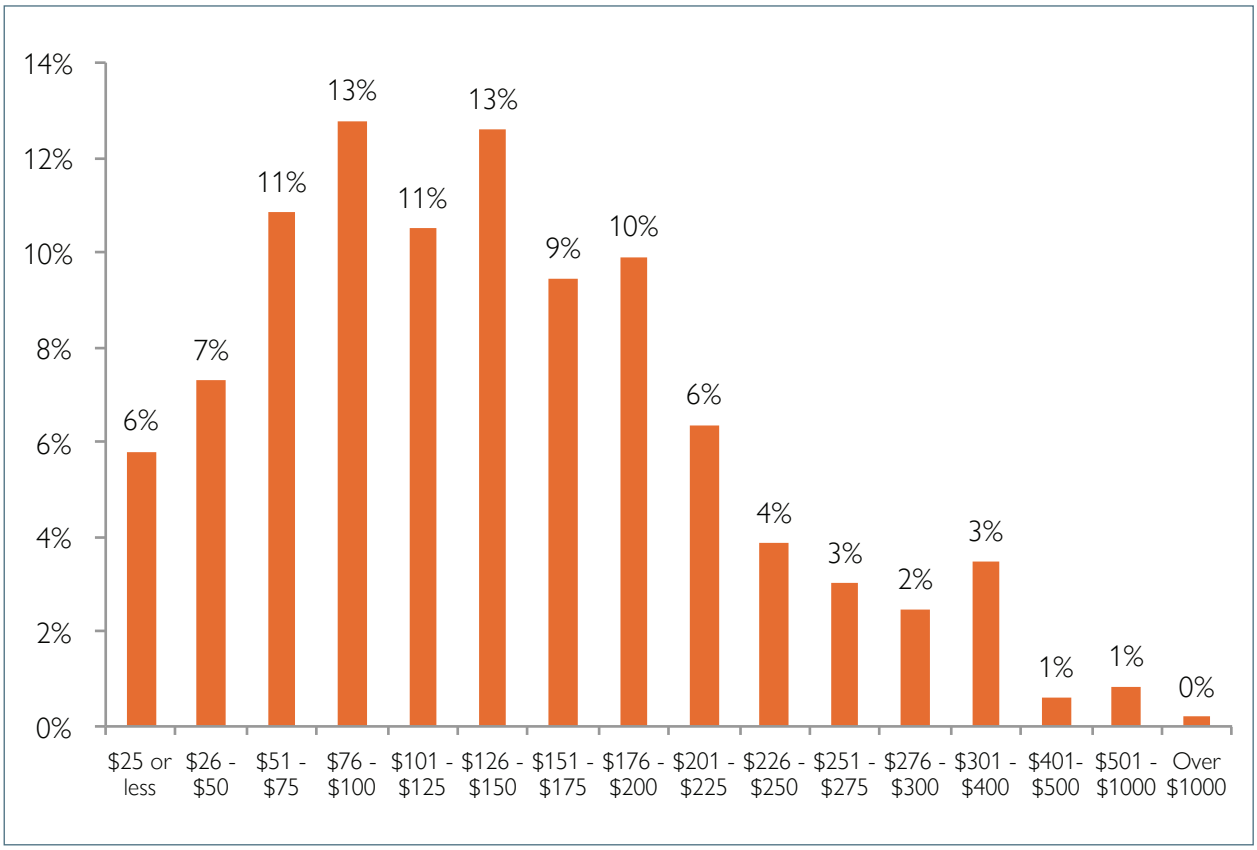
The 2015 workforce survey included two questions relating to income.

In addition to the original question asking about income from general practice a further question on income from all medical work has been added.[27,28] The income range bands in the 2015 survey have been adjusted to better fit the results obtained in the 2014 survey. Because of these two changes it is not possible to make robust comparisons of the results from the 2014 and 2015 surveys and we have not attempted to assess whether GP income is rising or falling.

Income from working in general practice

Figure 26 shows the percentage of respondents whose income from working in general practice fell within each of the income ranges.

Figure 26: Percentage of respondents within income bands ($000)



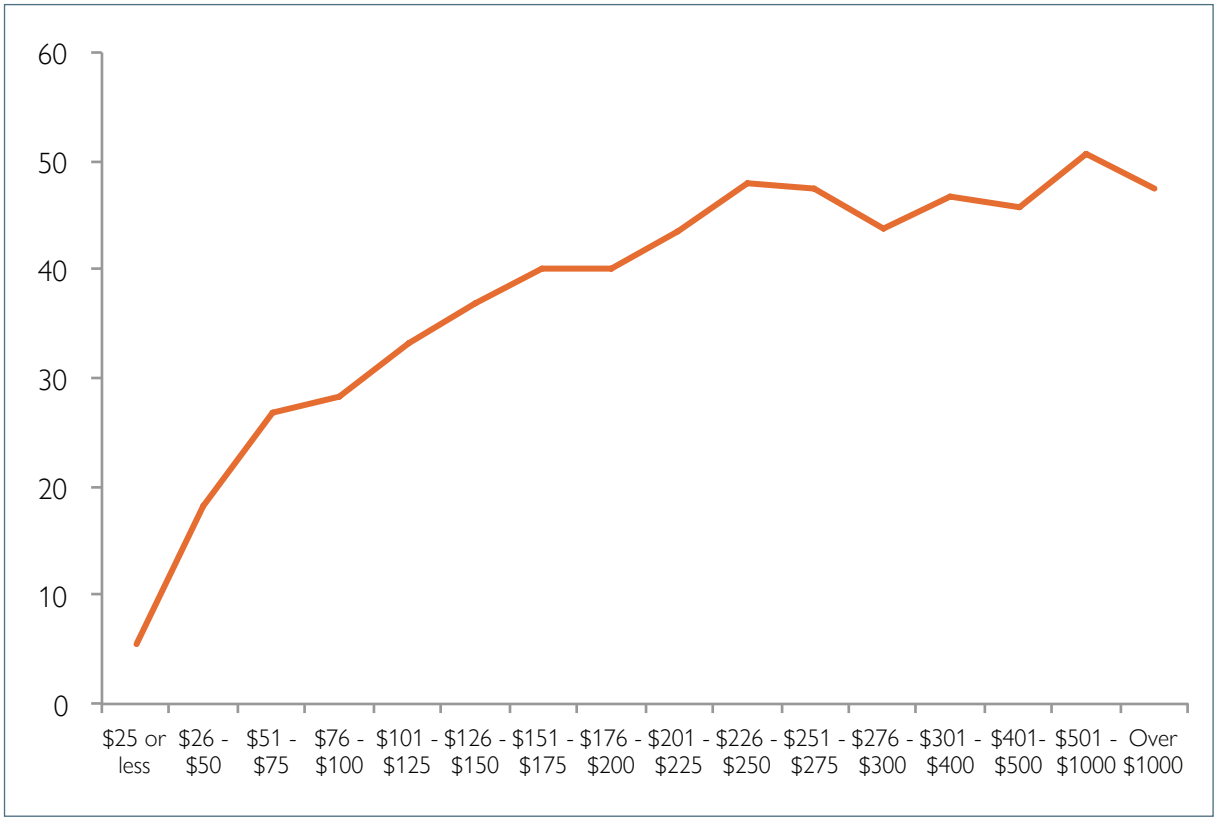
27 Wording of the question relating to income from all medical work. "Which of the following ranges corresponds to your personal annual before-tax income from **all medical work**? In addition to income from working in general practice, **include** income from all other employment or activities related to your expertise as a medical practitioner."

28 Wording of the question relating to income from working in general practice. "Which of the following ranges corresponds to your personal annual before-tax income **from working in general practice**? Include income from work within your practice such as teaching registrars or students and income from providing after-hours services. **Do not include** income from other employment or activities.

The average hours worked by those in each income band is shown in Figure 27.

This graph is based on the 863 respondents who provided information on their actual hours worked. Particularly in the lower income bands there is a steady rise in the hours worked as income increases. In higher income bands the hours worked appears to have a lesser effect, however numbers in the higher income bands are small, making this data is less robust.

Figure 27: Average hours worked in general practice by income band ($000)



Median personal annual before-tax income from working in general practice was within the $126-$150,000 range (Table 13).

For the 391 respondents working 36-40 hours per week in general practice, median income was within the range of $151-$175,000.

Many GPs work more than 40 hours per week however. If we add those working in excess of 40 hours per week so that we are analysing all those working over 36, rather than just the 391 of them working 36 to 40 hours per week, then the median annual before tax income from working full-time in general practice was $176-$200,000.

Table 13: Median Income from working in general practice

	Median income range
All respondents (2146)	$126 - $150,000
Respondents working less than 36 hours per week (1041)	$76 - $100,000
Respondents working 36-40 hours per week (391)	$151 - $175,000
Respondents working 36 or more hours per week (1105)	$176 - $200,000

The median incomes of practice owners and partners exceeded those of long term employees and contractors (Table 14). This difference remained when the analysis was restricted to those working 36-40 hours per week.

Table 14: Median annual income from working in general practice; comparison of owners and partners

	Median income range (number)	
	Practice owners and partners	Long term employees and contractors
All respondents	$176 - $200,000 (842)	$ 101 - $125,000 (947)
Respondents working less than 36 hours per week	$126 - $150,000 (247)	$76 - $100,000 (612)
Respondents working 36-40 hours per week	$176 - $200,000 (153)	$151 - $175,000 (152)
Respondents working 36 or more hours per week	$201 - $225,000 (595)	$151 - $175,000 (335)

The 2014 survey results revealed that male respondents had higher incomes than females (Table 15). A difference persisted when the analysis was limited to respondents working similar hours and with the same employment status.

The 2015 survey also showed that male respondents had higher annual incomes than female respondents.

Males earned $151-$175,000 per year but females earned only $101-$125,000.

When the analysis was limited to respondents working 36-40 hours per week the difference persisted but was less pronounced. The median annual income for males was $151-$175,000 and for females it was $126-$150,000.

Table 15: Median annual income from working in general practice; comparison of male and female respondents

	Median income range (number)	
	Female	Male
All respondents	$101 - $125,000 (1120)	$151 - $175,000 (1026)
Respondents working 36-40 hours per week	$126 - $150,000 (185)	$151 - $175,000 (206)

To further investigate the discrepancy between male and female incomes, respondents to the 2015 survey were asked to state the actual hours per week that they worked in addition to selecting the appropriate hours range. Forty percent of respondents provided this additional information. The actual hours worked by female respondents tended to be towards the lower end of the hours worked range than was the case for males.

The College also commissioned a statistical analysis of the income data. The findings of this analysis are below.

Analysis of the RNZCGP Workforce Survey 2015 indicates that after accounting for known confounding factors recorded within the survey there is a statistically significant difference between male and female respondents in average incomes from general practice.

Regression analysis of income on gender found that, on average before accounting for the potential confounding factors of hours worked, employment status and age range, there was an income gap of approximately $75,000 (three income brackets) between the genders.

The mean income for male respondents was within the $176,000 - $225,000 bracket, and for females, the mean was within the $101,000-$150,000 bracket. After accounting for these confounding variables, this income discrepancy decreased to one to two income brackets ($25,000 - $50,000).

Further analysis found that whether or not the respondent had taken parental leave in the last 10 years also had a significant effect on income. Among females, there was an income discrepancy of approximately $25,000 (one income bracket) on average between females who had taken parental (maternity) leave and females who had not, with females who had taken maternity leave earning less than those who had not.

When having taken or not taken parental leave in the past ten years was added into the analysis the income differences between the genders reduced still further, however, a statistically significant difference of one to two income brackets ($25,000 – $50,000) remained with the average earning form general practice for males falling within the $125,000 – $175,000 bracket and for females within the $101,000 – $150,000 bracket.

It is important to note that the attributes found to be statistically significant in accounting for the difference in average income based on gender may be acting as proxies for other real world behaviours. In particular, parental leave may be acting as proxy by identifying respondents who have children under the age of ten.

The relative importance of the four attributes from the survey found to be statistically significant in determining the difference in average income based on gender was as follows (most important first): hours worked, employment status, age range, and (parental leave).

There may be other variables that are relevant to the income differential but for which data was not collected in the 2015 College survey.

More research is required clarify the reasons behind the income differential between males and female respondents, and in particular to explore the association with having taken parental leave.

Information is needed on the number of weeks worked per year as currently weekly hours are being compared with annual earnings.

Australian research has shown that female GPs earn 54% less than their male colleagues. Among younger Australian GPs, females take 3.5 weeks more leave or holiday than their male colleagues.[29] We plan to conduct further research on income next year, and include an additional question in the survey about the number of weeks worked per year.

Income from all medical work

When income from all medical work was analysed, the median income ranges for female respondents were also lower than those for males (Table 16). A difference persisted when only those respondents working a total of 41-50 hours on all medical work were analysed.

Table 16: Median annual income from all medical work

	Median income range (number)		
	Female	Male	Total
All respondents	$101 - $125,000 (1135)	$176 - $200,000 (1029)	$126 - $150,000 (2164)
Respondents working 41-50 hours per week	$151 - $175,000 (76)	$201 - $225,000 (124)	$176 - $200,000 (200)

29 Stefanie Schurer, Daniel Kuehnle, Anthony Scott and Terence Chai Cheng. One Man's Blessing, Another Woman's Curse? Family Factors and the Gender-Earnings Gap of Doctors. Melbourne Institute working paper series no 24/12 https://www.melbourneinstitute.com/downloads/working_paper_series/wp2012n24.pdf

RETIREMENT

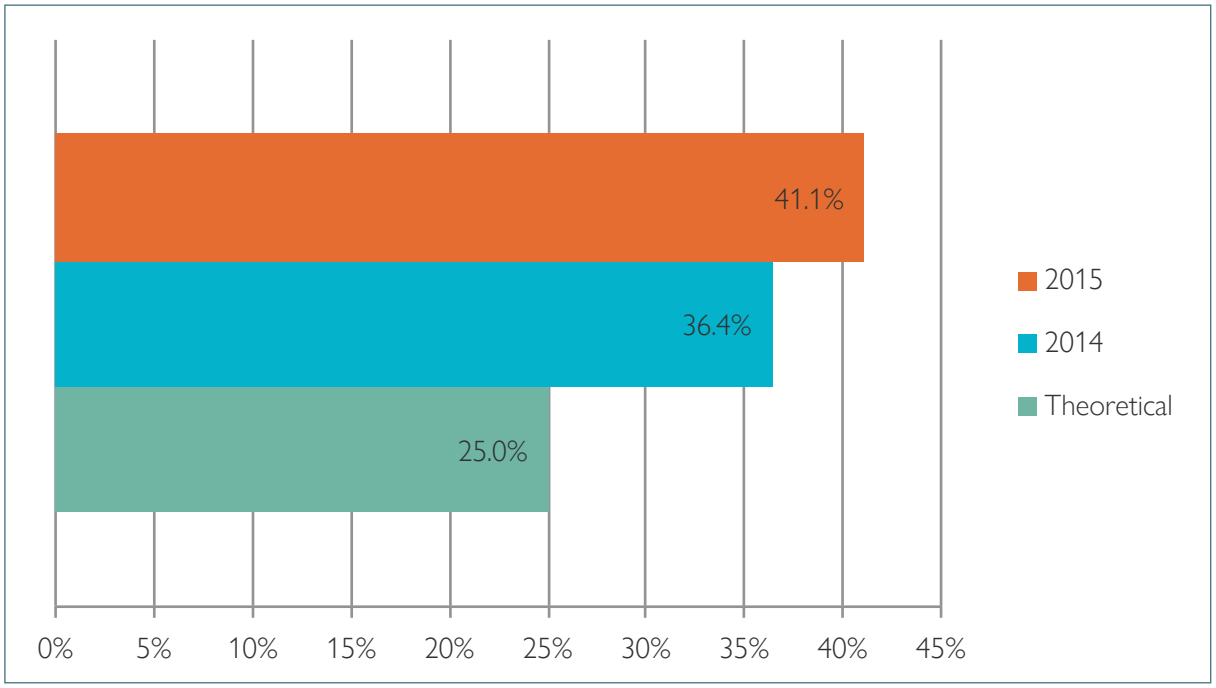
FORTY ONE PERCENT OF GENERAL PRACTITIONERS INTEND TO RETIRE IN THE NEXT 10 YEARS

RETIREMENT

The 2014 survey revealed that 36.4% of working respondents intended to retire in the next 10 years and this proportion has increased to 41.1% in the 2015 survey.

Figure 28 illustrates this and puts the results into context by comparing them with the 10 year retirement rate that would be expected in a theoretical workforce with an evenly distributed age profile and an expected working career of 40 years. Only 25% of the workforce would be expected to retire in any 10 year interval.

Figure 28: Proportion of GPs intending to retire in the next 10 years: comparison of 2014 and 2015



To a large degree, this high rate of intended retirement reflects the age profile of the workforce, which is dominated by a large cohort of GPs in older age groups.

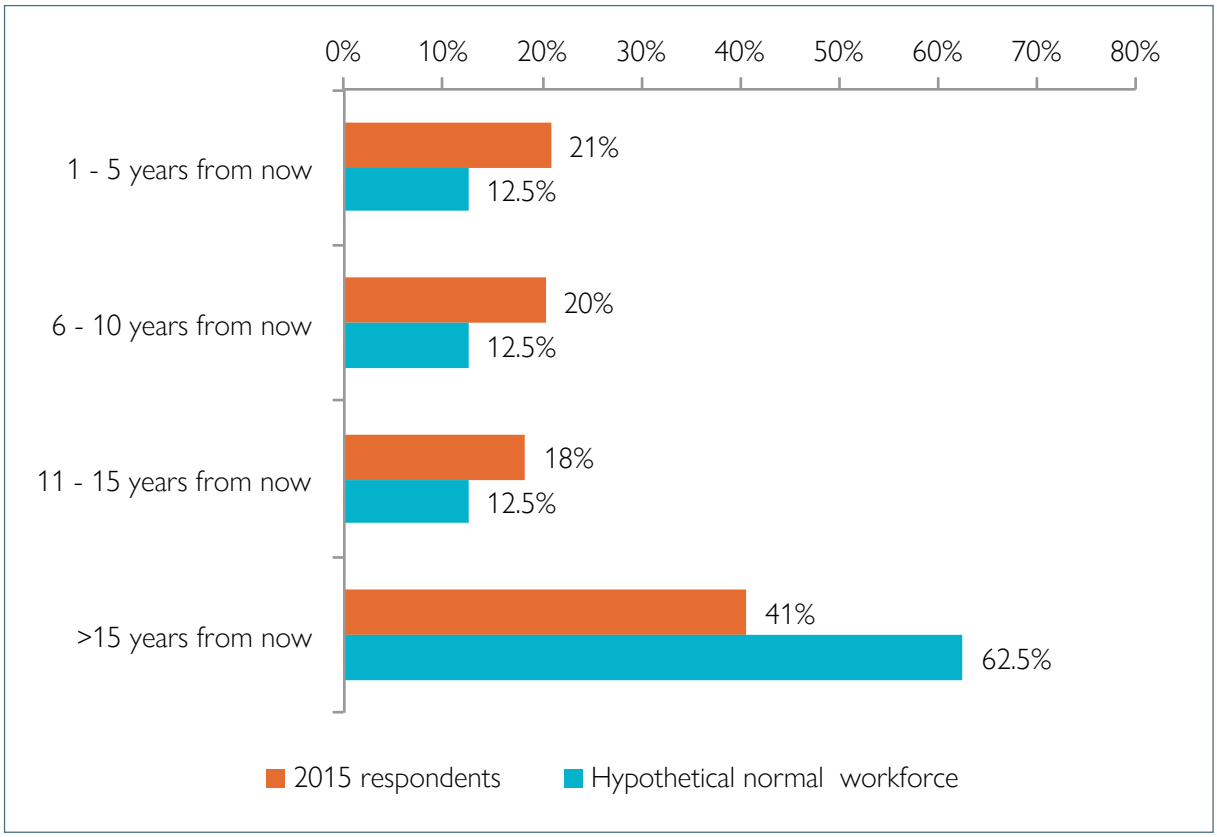
Numbers of GPs in younger age groups had been low until recently, but numbers are now increasing as more registrars graduate from the College's training programme. The College is seeking to train more GPs not only to replace those GPs retiring but also to address increasing demand due to an aging population (with co-morbidities) and increasing devolvement of secondary care services to primary care.

The fact that the proportion of GPs who intend to retire has increased since the 2014 survey means that it is even more urgent to train as many new GPs as possible to avoid increasing workforce shortages.

Consideration of numbers intending to retire in coming years reveals that the proportions intending to retire reduces from 21% in the next five years to 20% in the following five years and to 18% in 11-15 years' time.

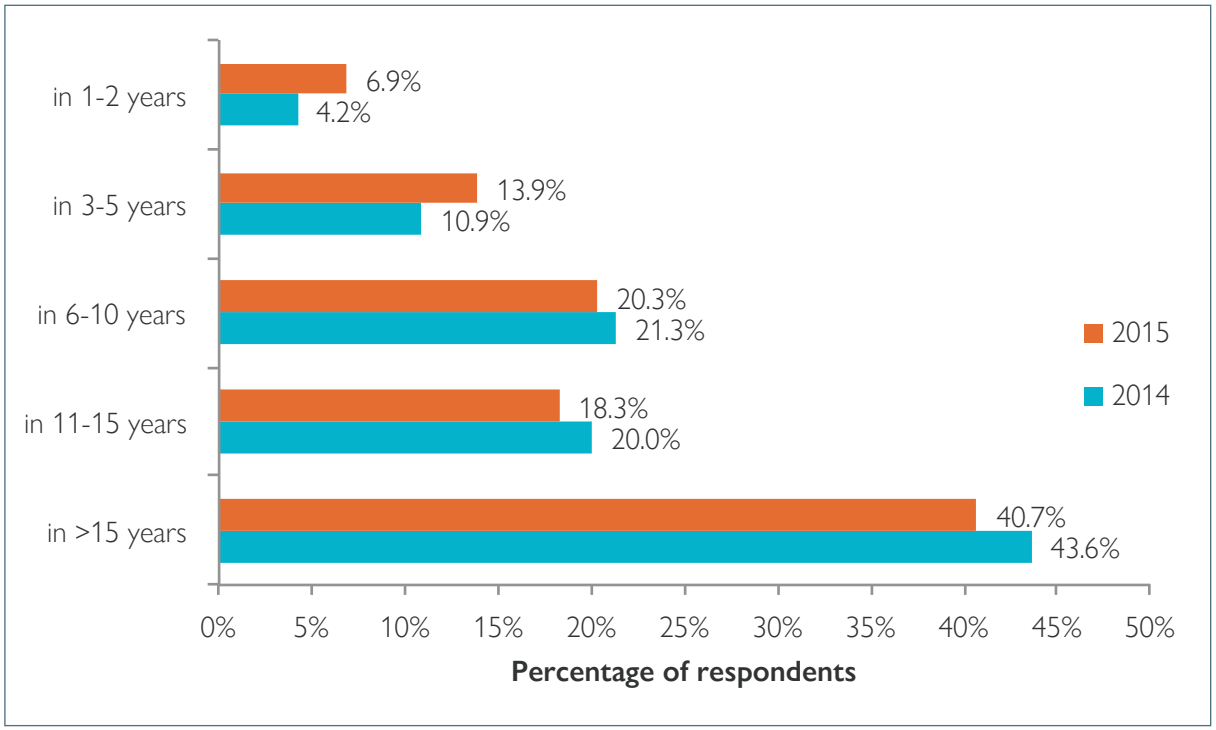
This decreasing proportion remains substantially higher than the 12.5% within five years that would be seen in an evenly aged workforce.

Figure 29: Comparison of actual propotion of respondents intending to retire with propotions in a hypothetical normal workforce



Most of the increase between the 2014 and 2015 surveys in the proportion intending to retire in the next 10 years arises from an increase in the proportion of those intending to retire in the very short term, with the proportion intending to retire in 1-2 years rising from 4.2% to 6.9%, and in 3-5 years' time rising from 10.9% to 13.9% (Figure 30).

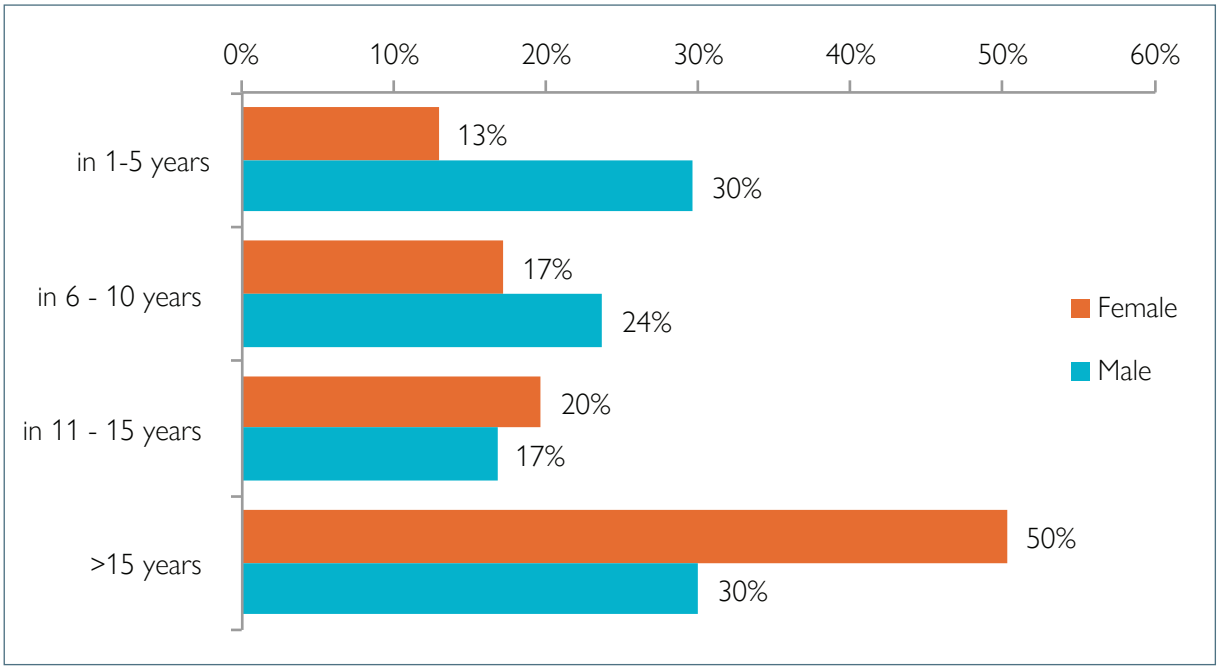
Figure 30: Retirement intentions: comparison of 2014 and 2015 RNZCGP survey results



As illustrated by Figure 31, the proportion of males intending to retire in the next five years (30%) is more than double the proportion of females (13%).

A staggering 54% of male respondents intended to retire over the next ten years.

Figure 31: Comparison of proportions of male and female respondents intending to retire



Reduction of hours towards retirement

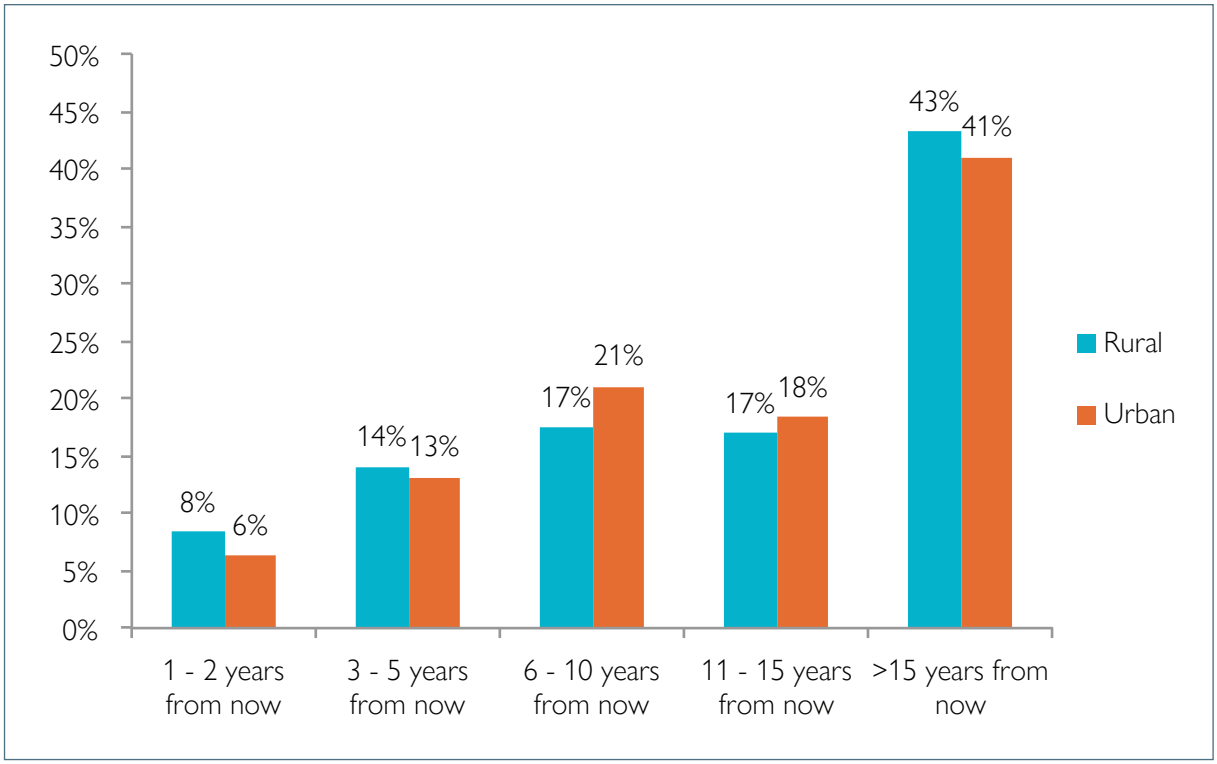
The extent to which GPs reduce their hours as they work towards retirement, and the timing of this, has an effect on the supply of GPs over and above the effect of retirement itself.

The survey provided information about the numbers intending to reduce their hours as they approached retirement and when they intended to do so.

Twelve percent of respondents stated that they had already reduced their hours as they approached retirement, and a further 47% intended to reduce their hours in the next 10 years[30].

As illustrated by Figure 32, over the next five years, rural respondents intend to retire at a slightly greater rate than urban respondents however the situation reverses in subsequent years.

Figure 32: Comparison of the intended retirement timing of rural and urban respondents



30 These numbers will include those intending to retire completely in the next 10 years.

INTEGRATION

PRACTICE CHARACTERISTICS

SPECIAL INTEREST AREAS

DISTRICT HEALTH BOARDS

INTEGRATION WITH OTHER HEALTH CARE PROVIDERS

The 2015 survey included questions that sought to explore the integration GPs have with other health care providers.

Respondents were asked whether they worked with health care providers, (apart from other doctors or registered and enrolled nurses). Respondents who answered 'yes' were presented with a grid of options comprising 14 practitioner types and seven ways in which respondents might be working with these practitioner types and were asked to select all the options that applied.

The majority (67%) of respondents stated that they did "work with health care providers".

Respondents from larger practices and rural practices were more likely to report doing so, as were younger GPs, recent graduates and GPEP1 teachers.

Among respondents working in practices with more than five FTE doctors, 84% reported working with other providers, whereas for respondents from smaller practices this was only 59%.

Among respondents from rural practices, 76% reported "working with other providers", whereas for respondents from urban practices this figure was 56%.

Types of providers

The most frequently reported relationship was with pharmacists. Thirty one percent (603) of the 1965 respondents who provided information on whether they "worked with other providers" reported that they worked with pharmacists in some way.

Table 17: Working with other health care providers

	Respondents reporting working with provider (of the 1965 GPs able to answer the relevant question)	
	Number	Percent
Pharmacist	603	31%
Physiotherapist	546	28%
Counsellor	506	26%
Podiatrist	412	21%
Psychologist or psychotherapist	402	20%
Nurse practitioner	388	20%
Medical lab technician or phlebotomist	350	18%
Midwife	310	16%
Dietician	289	15%
Practice assistant	260	13%
Social worker	177	9%
Physician assistant	50	3%
Occupational therapist	41	2%
Speech language therapist	23	1%

Free-text entries in this question reveal that general practices are also integrating with a wide variety of provider types additional to those listed.

Types of integration

The most frequent type of integration reported was working in the same building or premises (45% of all instances of integration) followed by working in the same practice (23%), sharing patient records (12%) and participating in joint practice meetings (7%).

The graph below (Figure 33) displays the types of integration as a proportion of all integration with each health provider type, for example, the 603 respondents who reported some integration with pharmacy. Many of these 603 respondents ticked more than one type of interaction with a pharmacist resulting in a total of 793 reports of integration. Fifty nine percent (473) of these involved working in the same building or premises.

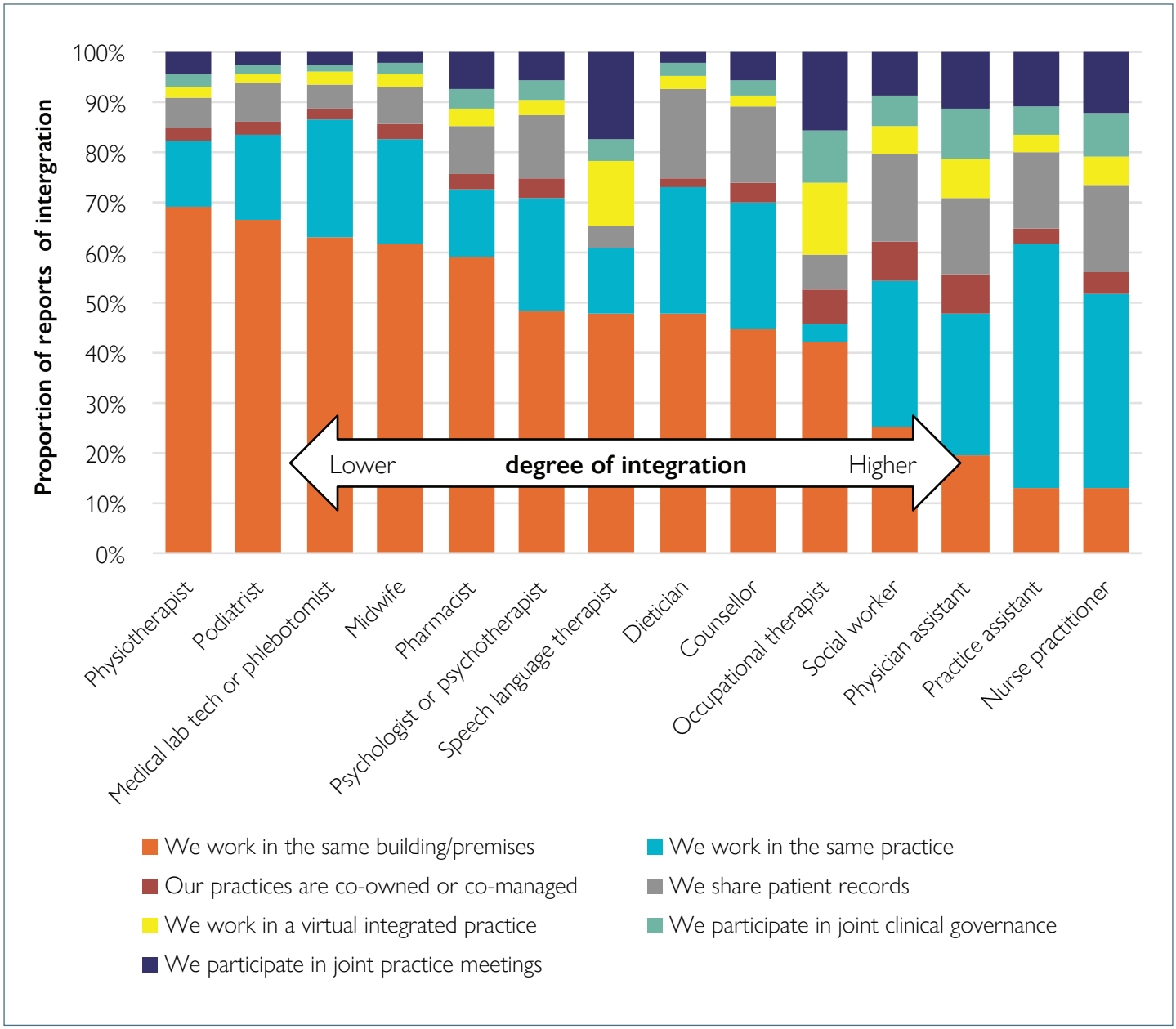
The graph displays practitioner types ranked by the percent of all instances of integration with that type of provider that involved working in the same building or premises.

It is possible to work in the same building as another provider but have no interaction at all. Hence sharing premises could be considered to indicate the least meaningful or significant level of integration. Where sharing premises only made up a minority of the reported integration with this provider type, we can hypothesise that more meaningful forms of integration predominated. The provider types which we hypothesise that respondents integrated the most meaningfully with are on the right of the graph in Figure 33.

The survey question which gathered this information was very complex.

A number of respondents appear to have chosen only one example of integration for each provider rather than all the options that applied. Individual respondents may also have differed in how they interpreted the "ways of working with" other practitioners. It is therefore necessary to interpret the findings with caution. The information gathered will guide the College in further research on integration.

Figure 33: Contribution of types of integration to total instances of integration for each health provider type



Career recommendations

Respondents were asked "how likely is it that you would recommend a career in general practice?" They were provided with a Likert scale extending from 0 (not at all likely) to 9 (extremely likely).

Figure 34 illustrates the proportion of respondents that chose each of the options and suggests that the majority of respondents would recommend a career in general practice.

Using the Net Promoter Score (NPS) methodology, the overall score of promoters (percentage in the two highest categories) – detractors (percentage in the six lowest categories) is 8.

Figure 34: GP career recomendation scores

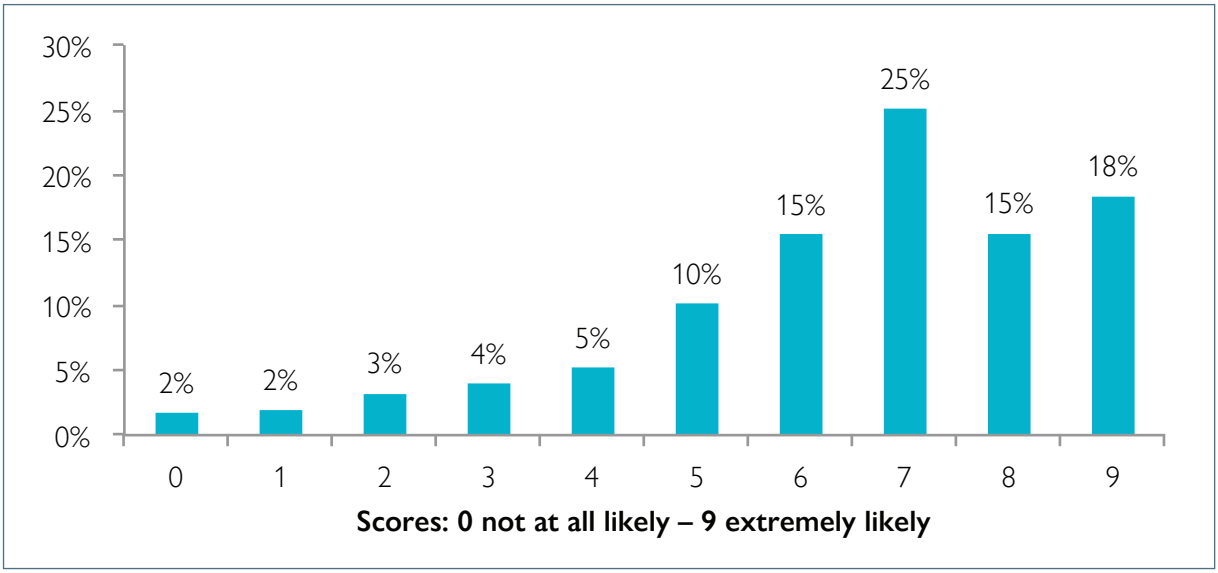
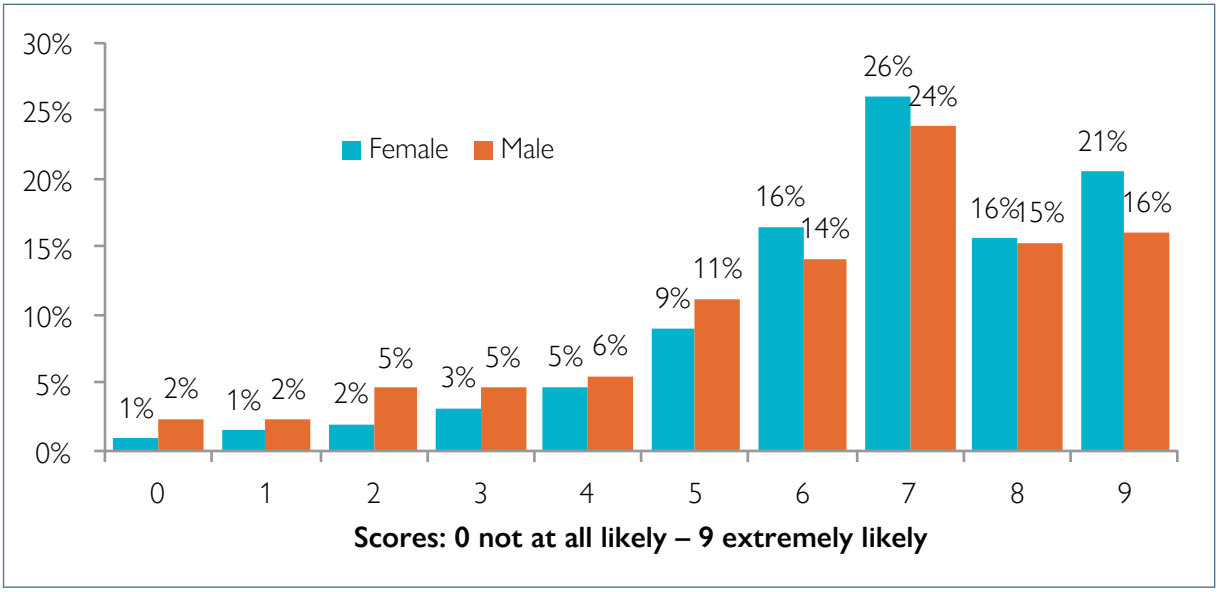


Figure 35: GP career recomendation scores by gender



Analysis of the scores by gender Figure 35 suggests that female respondents were more positive than male respondents. Using NPS scoring methodology female respondents had a score of 15 and male respondents had a score of 1.

PRACTICE CHARACTERISTICS

The information in this section relates to practices however it was collected from respondents. In large practices information relating to the same practice will have been reported by several respondents. The data should be interpreted to reflect this. In particular the proportion of respondents should not be read to mean the proportion of practices.

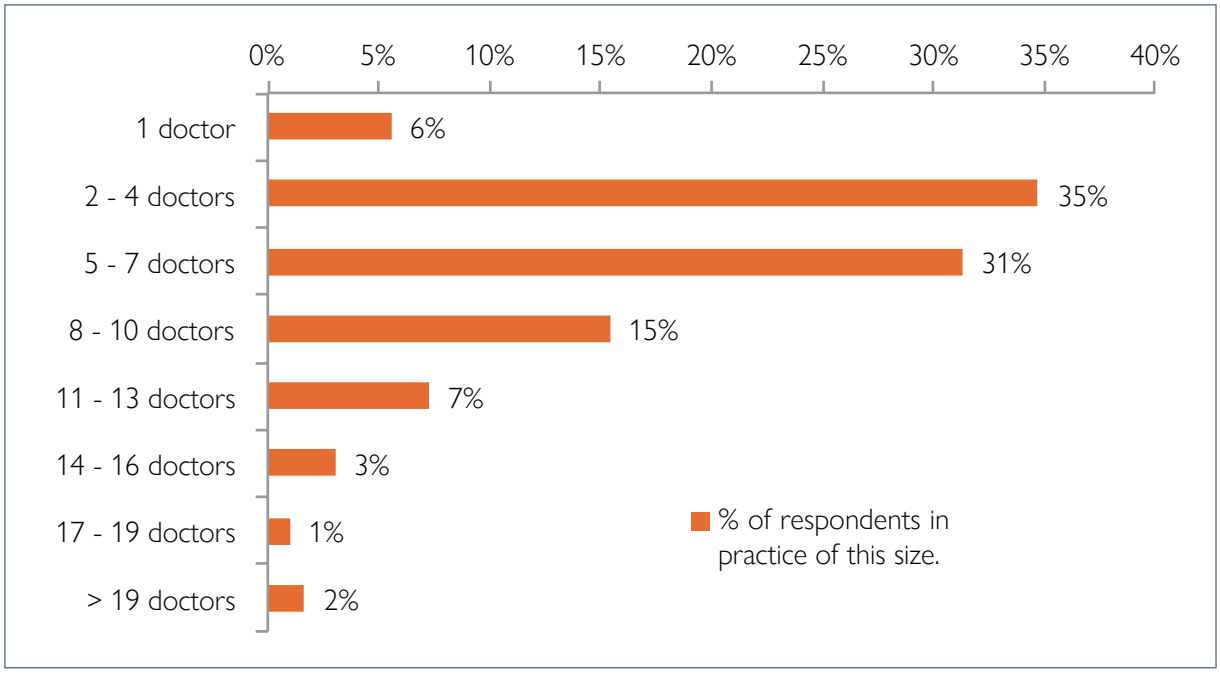
Practice size

Respondents were asked how many individual doctors usually worked in their practice as GPs. They were instructed to include part time doctors, registrars and locums.

The largest group of respondents (35%) worked in practices with two to four doctors. A considerable proportion (31%) worked in practices with five to seven doctors.

Note that, with the exception of the 117 one doctor practices, these figures do not provide information on how many practices are in each category.

Figure 36: Proportion of respondents reporting working in practices with various numbers of GPs



Respondents were also asked how many FTE doctors usually worked in their practice. Here the largest number of respondents was in the 1.1–3.0 FTE category.

Table 18: Numbers and percentages of respondents reporting working in practices with various numbers of GP FTEs

FTE doctors	Number	%
0 - 1 FTE doctor	186	9%
1.1 - 3 FTE doctors	683	34%
3.1 - 5 FTE doctors	565	28%
5.1 - 7 FTE doctors	304	15%
7.1 - 9 FTE doctors	185	9%
9.1 - 11 FTE doctors	63	3%
11-13 FTE doctors	26	1%
> 13 FTE doctors	22	1%
Grand Total	**2034**	**100%**

Respondents were also asked how many FTE nurses usually worked in their practice. Here the largest number of respondents was also in the 1.1–3.0 FTE category.

Table 19: Numbers and percentages of respondents reporting working in practices with various numbers of nursing FTEs

FTE nurses	Number	%
0 1 - 1 FTE nurse	229	12%
1.1 - 3 FTE nurses	704	36%
3.1 - 5 FTE nurses	510	26%
5.1 - 7 FTE nurses	260	13%
7.1 - 9 FTE nurses	122	6%
9.1 - 11 FTE nurses	65	3%
11.1 - 13 FTE nurses	28	1%
> 13 FTE nurses	39	2%
Grand Total	**1957**	**100%**

Respondents were also asked to select the size of the enrolled worked in the practice where they worked. The largest number of respondents (23%) selected the 3001 - 5000 enrolees category.

Table 20: Numbers and percentages of respondents reporting working in practices of various sizes

Number of enrolees	Total	%
< 1000 enrolees	50	3%
1001 - 3000 enrolees	363	19%
3001 - 5000 enrolees	432	23%
5001 - 7000 enrolees	321	17%
7001 - 9000 enrolees	191	10%
9001 - 11000 enrolees	170	9%
11,001 - 13,000 enrolees	131	7%
13,001 - 15,000 enrolees	81	4%
15,001 - 17,000 enrolees	54	3%
17,001 -19,000 enrolees	53	3%
19,001 - 21,000 enrolees	21	1%
21,001 - 25,000 enrolees	20	1%
25,001 - 30,000 enrolees	9	0%
30,001 - 40,000 enrolees	3	0%
>40,001 enrolees	12	1%
Total	**1911**	**100%**

Vacancies

Among those respondents who provided information on the timing of the last vacancy in their practice for a doctor, 22% reported a current vacancy. The proportion was higher (34%) among respondents from rural practices.

Seventy one percent of all respondents reported either a current vacancy or a vacancy within the last 12 months. This has risen since 2014 when 62% of respondents reported a vacancy currently or within the past 12 months.

Table 21: Comparison of the proportions of respondents from rural and urban practices reporting GP vacancies

Timing of last vacancy for a doctor	Rural		Urban		Total	
Currently	125	34%	295	19%	420	22%
Within the past 12 months	135	37%	674	42%	809	41%
Not within the past 12 months	104	29%	619	39%	723	37%
Grand Total	**364**	**100%**	**1588**	**100%**	**1952**	**100%**

A lower proportion of respondents reported that their practice had a current vacancy for nurses than was the case for doctors. Here again respondents from rural practice were more likely to report a current vacancy, and less likely to report no vacancies within the past 12 months.

Table 22: Comparison of the proportions of respondents from rural and urban practices reporting nurse vacancies

Last vacancy for a nurse	Rural		Urban		Grand Total	
Currently	65	18%	233	15%	298	15%
Within the past 12 months	175	49%	763	49%	938	49%
Not within the past 12 months	117	33%	571	36%	688	36%
Grand Total	**357**	**100%**	**1567**	**100%**	**1924**	**100%**

Practice ownership

A question on practice ownership was included this year for the first time.

Respondents were asked to select the option that best described the ownership model of the practice in which they worked. As illustrated by Table 23, the vast majority of respondents (73%) worked in a practice owned by one or more GPs who worked in the practice. The next largest category was fully or partially corporate owned at 7%. It will be informative to track this in coming years.

Table 23: Numbers and proportions of respondents working in practices with various ownership structures

Ownership structure of the practice in which you are working	#	%
Owned by one or more GPs who work in the practice	1609	73%
Fully or partially corporate owned	162	7%
Other	135	6%
Fully or partially owned by a PHO or a GP organisation	87	4%
Community owned	74	3%
Fully or partially owned by an iwi organisation	54	2%
Owned by a university (student health)	45	2%
Fully or partially owned by a DHB	39	2%
Total	**2205**	**100%**

SPECIAL INTEREST AREAS

Respondents were asked "Do you undertake clinical work in a special interest area?"

Table 24 shows that the majority of respondents (59%) answered no. The remaining 41% of respondents had a wide range of special interest areas many of which were not among the seven options provided.

Minor surgery was the most frequently selected option with 295 (13%) of respondents selecting this option. Among the free text responses of the 526 with special interests not listed among the options provided, the most common responses related to older persons health, sexual health, and travel medicine (each 2% of respondents). (Respondents were able to indicate more than one special interest hence the total number of responses exceeds the number of respondents).

Table 24: Number and percentage of respondents selecting special interests

Special interests	Number	% among all respondents
None	1306	59%
Minor surgery	295	13%
Palliative care	142	6%
Youth health	94	4%
Family planning	75	3%
Sports medicine	59	3%
Appearance medicine	28	1%
Obstetrics as a lead maternity carer	13	1%
I work in a special interest area not listed	526	24%
Total responses	2538	n/a
Total number of respondents who answered this question	**2202**	**n/a**

Most common free text responses	Number	% among all respondents
Older persons health	48	2%
Sexual health (including assault care)	44	2%
Travel medicine	41	2%
Skin cancer	33	1%
Occupational health	32	1%

DISTRICT HEALTH BOARDS

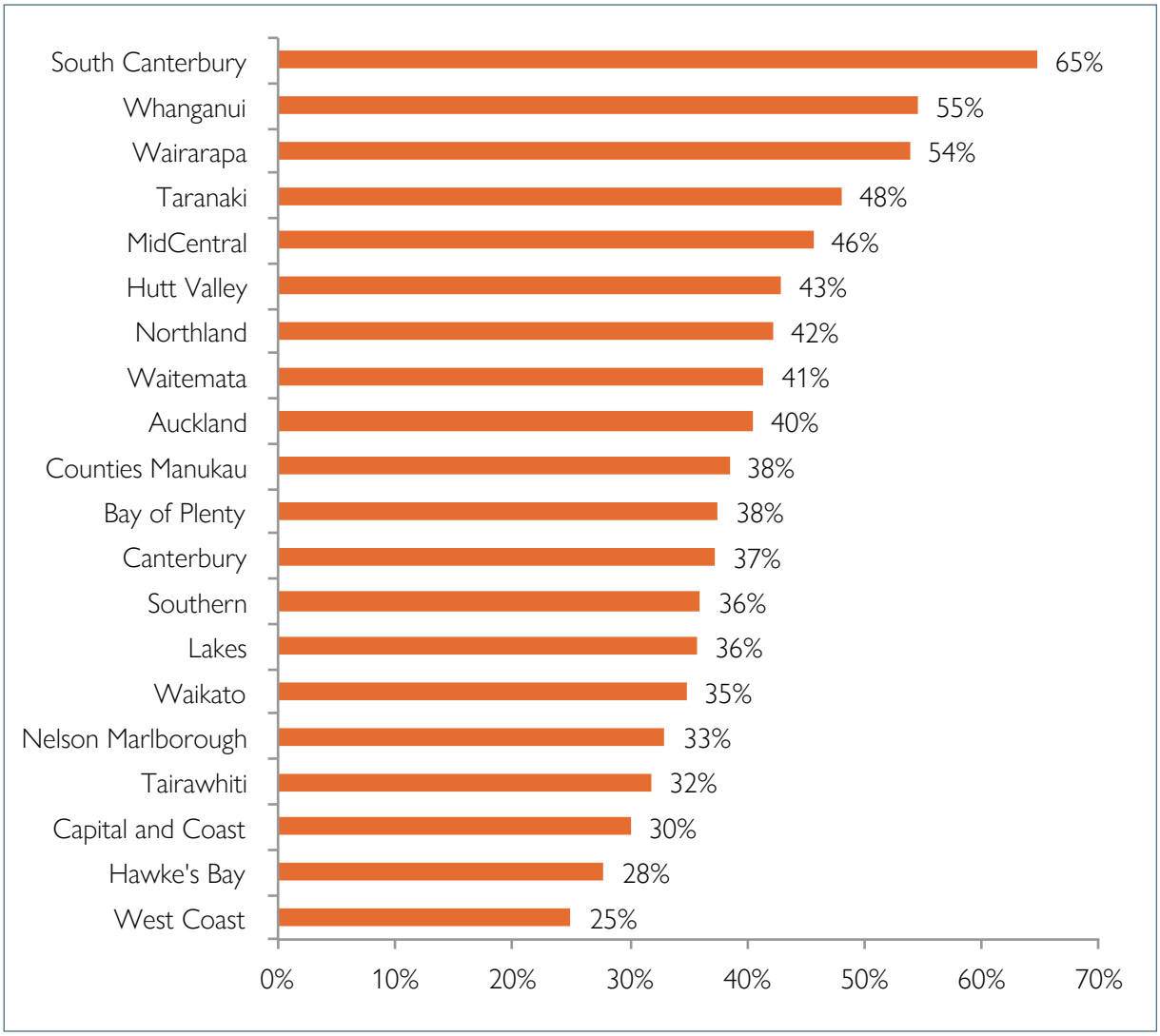
Survey respondents were asked to indicate the DHB that their practice was within. If they worked within more than one DHB they were asked to indicate the main or most recent DHB.

The number of responses received from each DHB appeared to be proportional to the number of GPs in each DHB when compared to data from the 2013 Medical Council workforce survey. Canterbury, Nelson Marlborough Waikato and Bay of Plenty DHBs had the highest response rates and Auckland, Capital and Coast, Waitemata, Lakes and Hawkes Bay had the lowest response rates.

Age

The age of respondents varied widely among DHBs, with the proportion of respondents aged 55 years or over ranging from 25% in the West Coast up to 65% in South Canterbury as illustrated by Figure 37.

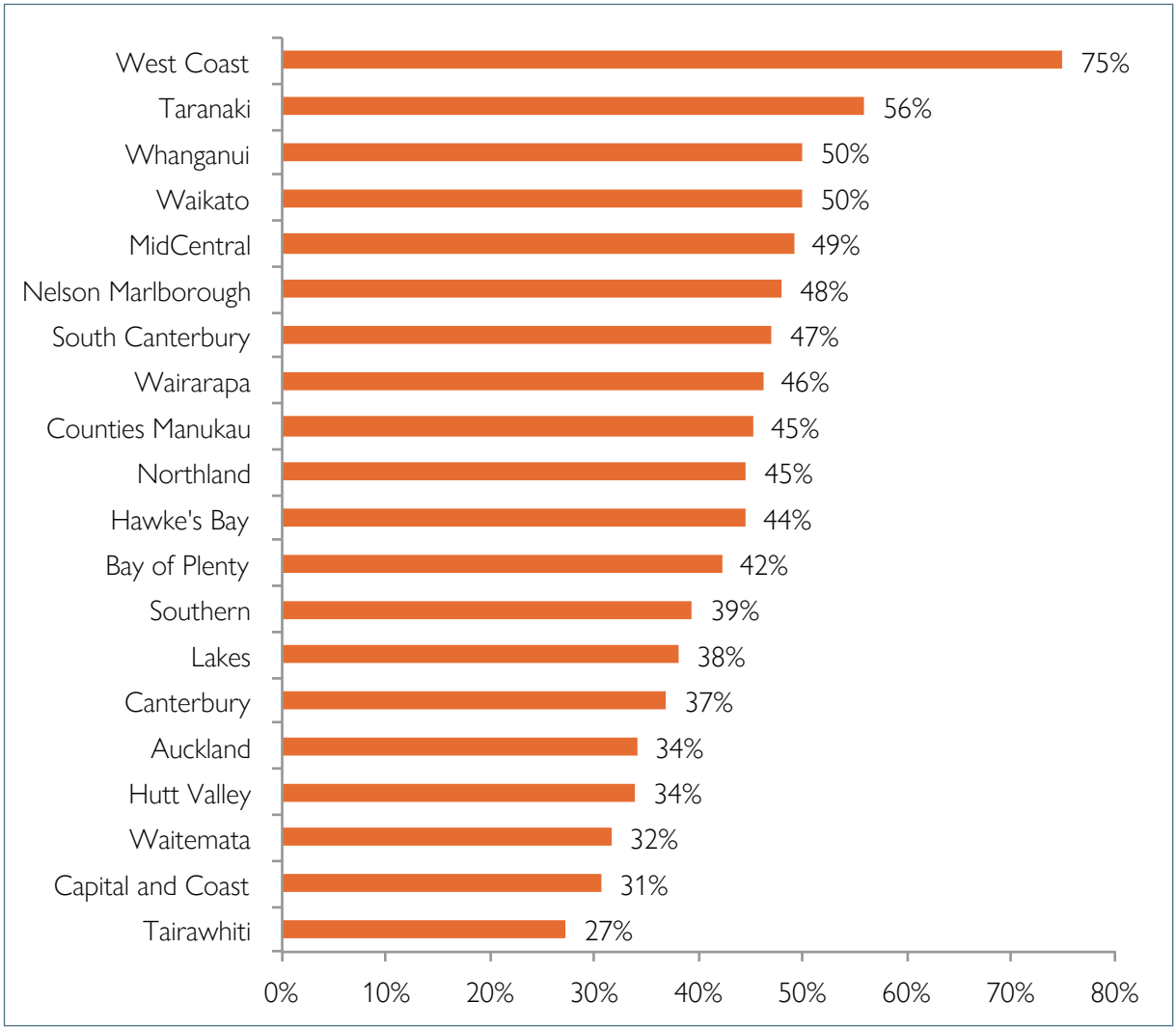
Figure 37: Proportion of respondents aged over 55 by DHB



The proportion of IMGs among respondents also varied, ranging from only 27% in Tairawhiti up to 75% in the West Coast as illustrated by Figure 38.

Those DHBs with a large rural population were among those likely to have a higher proportion of IMGs.

Figure 38: Percentage IMGs by DHB

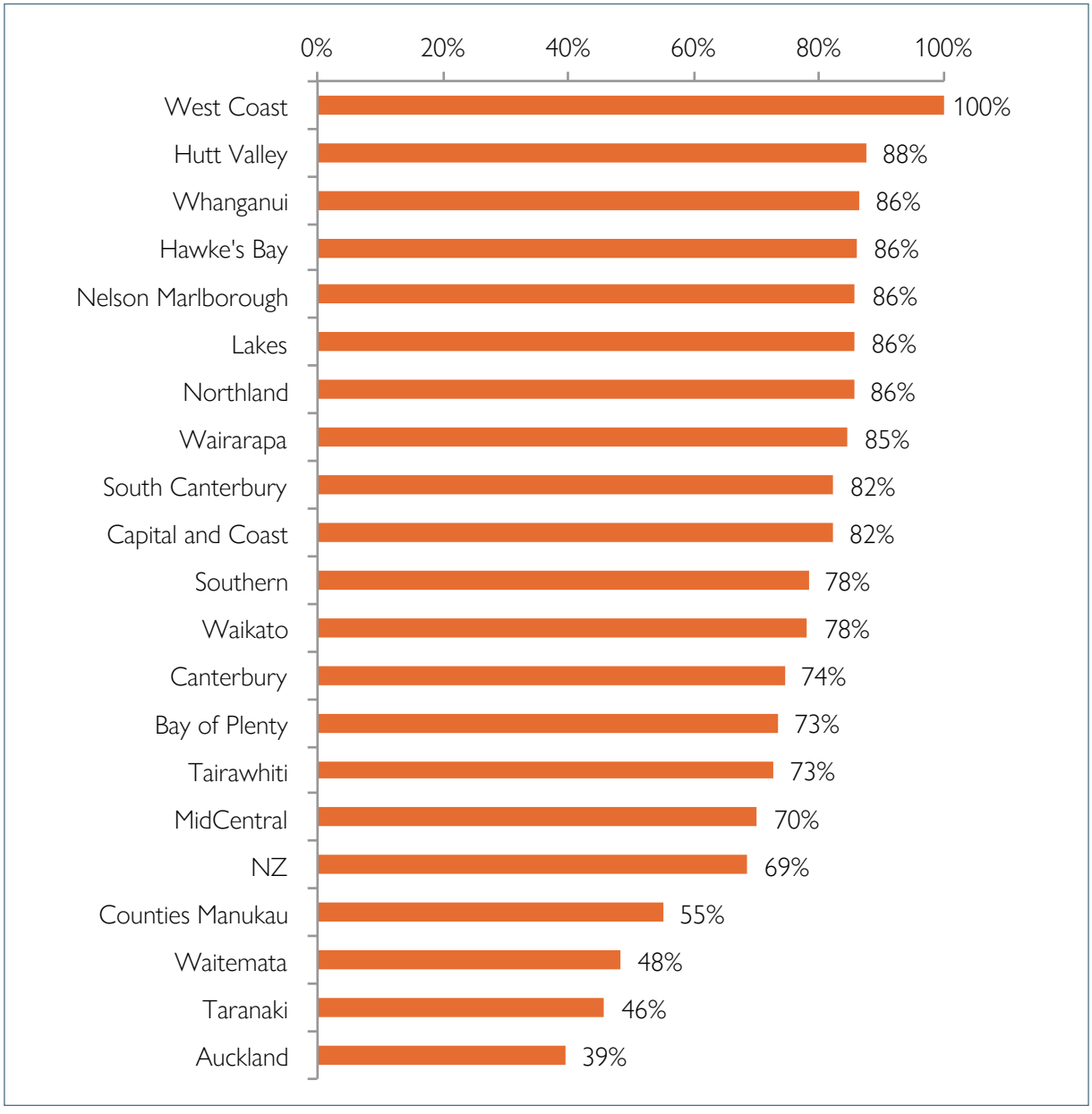


After-hours commitments

The survey included a new question on after-hours commitments.

Overall, 69% of respondents had some after-hours commitments. The proportion of respondents with after-hours commitments ranged from 39% in Auckland up to 100% in West Coast.

Figure 39: Percentage of respondents with after-hours commitments by DHB

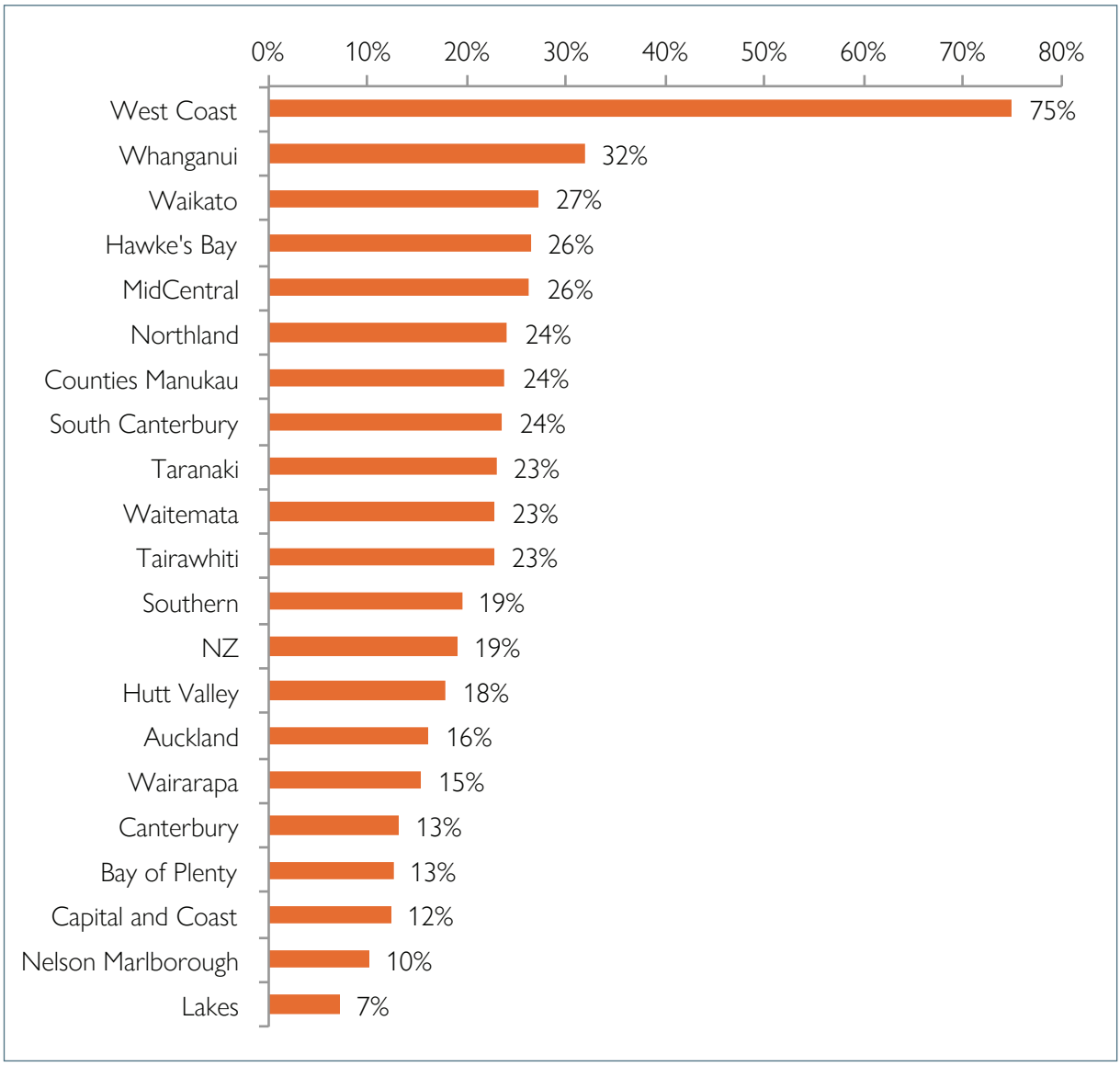


Overall 19% of respondents had weekly after-hours commitments.

Weekly after-hours commitments were most common among respondents from the West Coast and least common among Lakes respondents.

Although a high proportion of respondents from some DHBs e.g. Hutt Valley had after-hours commitments, the proportion with weekly commitments was much lower. Conversely although Taranaki respondents ranked towards the bottom of the list for any after-hours commitments, the proportion with weekly commitments was higher than the average for all DHBs.

Figure 40: Percentage of respondents with after-hours commitments every week by DHB



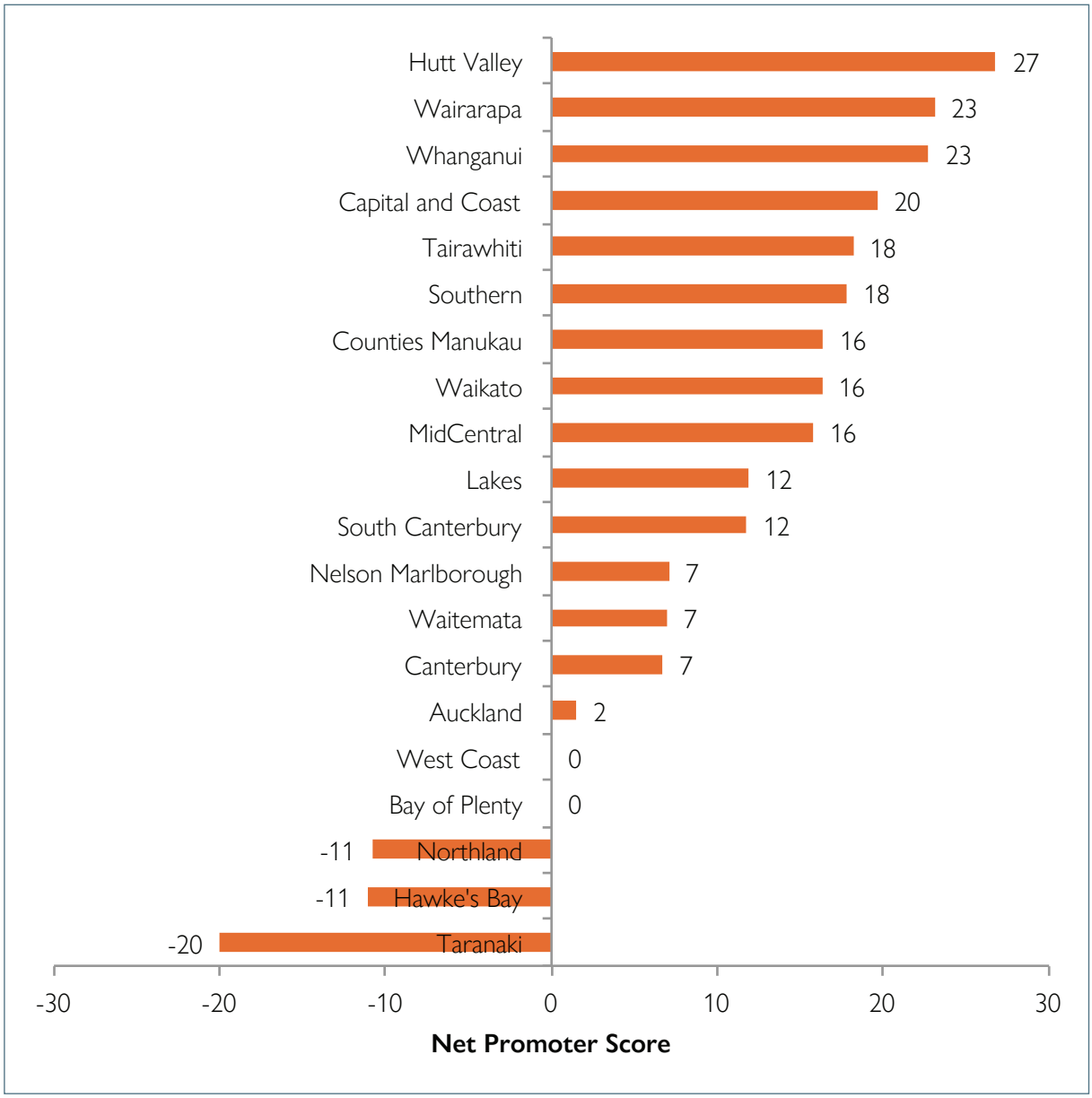
Career recommendation

In another new question for 2015 respondents were asked how likely was it that they would recommend a career in general practice. They were provided with a Likert scale extending from 0 (not at all likely) to 9 (extremely likely).

Figure 41 shows how the DHBs ranked according to the likelihood of respondents from that DHB recommending a career in general practice.

DHB rankings were assessed by ranking scores obtained using the Net Promoter Score methodology. This involves subtracting the percentage of detractors (the six lowest categories) from the percentage of promoters (the two highest categories). Respondents from the Hutt Valley were most likely to recommend a career in general practice and those from Taranaki were least likely.

Figure 41: Likelihood of respondent recommending a career in general practice by DHB



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